



**MNB Background Studies**

2005/1

Gábor P.Kiss - Péter Karádi - Judit Krekó

**STRUCTURAL POLICY CHALLENGES TOWARDS THE EURO: FISCAL  
POLICY♣**

January 2005

---

\* We wish to express our gratitude to Gergely Károly Tardos and Mihály Hoffman for their calculations of the impact of yield convergence on the central budget; Lajos Bokros for his valuable and useful comments and observations made in the discussion of the study. The authors are solely responsible for any remaining errors.

Online ISSN: 1587-9356

*Similarly to the other acceding countries, following accession to the European Union, Hungary has undertaken to become a member of the euro zone and introduce the common currency after a period of time. The Economic Department of the MNB is preparing studies analysing challenges to be met by economic policies in the near future, with a view to successfully implementing the convergence process and Hungary becoming a competitive, rapidly developing member state of the euro zone. The series was opened with the 2002/1 MNB background study entitled "Do food prices in Hungary conceal inflationary tensions? An analysis of the potential effects of EU entry on food prices", written by Barnabás Ferenczi, Zoltán M. Jakab and Nóra Nagy B.*

Gábor P. Kiss, Economics Department, Conjunctural Assessment and Projections

E-mail: [kissg@mnb.hu](mailto:kissg@mnb.hu)

Péter Karádi, Economics Department, Monetary Assessment and Strategy

E-mail: [karadip@mnb.hu](mailto:karadip@mnb.hu)

Judit Krekó, Economics Department, Monetary Assessment and Strategy

E-mail: [krekoj@mnb.hu](mailto:krekoj@mnb.hu)

The analyses reflect the views of the authors and do not necessarily correspond to the official opinion of the MNB.

Magyar Nemzeti Bank

1850 Budapest

Szabadság tér 8-9.

Phone: 428-2600

<http://www.mnb.hu>

## TABLE OF CONTENTS

SUMMARY	4
I. INTRODUCTION	6
II. IDEAL FISCAL POLICY: SUSTAINABILITY AND STABILISATION	7
<b>II. 1. Ideal level and path of national debt</b>	<b>9</b>
<b>II. 2. The stabilising function of budgetary policy</b>	<b>11</b>
<i>II. 2. 1. Automatic stabilisers</i>	<i>12</i>
<i>II. 2. 2. Discretionary measures</i>	<i>14</i>
<b>II. 3. Institutional issues in the EMU: the Stability and Growth Pact and quality aspects of the budget</b>	<b>15</b>
III. FISCAL CONSOLIDATION	19
<b>III. 1. Fiscal consolidation on the basis of theoretical considerations and international experience</b>	<b>19</b>
<i>III. 1. 1. International experience: stylised facts in the empirical literature</i>	<i>19</i>
<i>III. 1. 2. Experience of current EMU member countries</i>	<i>24</i>
<i>III. 1. 3. Experience of emerging and transition countries</i>	<i>28</i>
<b>III. 2. Fiscal consolidation in Hungary</b>	<b>30</b>
<i>III. 2. 1. The initial situation</i>	<i>31</i>
<i>III. 2. 2. Fiscal outlook</i>	<i>36</i>
<i>III. 2. 3. Aspects of quality of adjustment</i>	<i>43</i>
REFERENCES	46
ANNEX	50

## Summary

Sustainable fiscal policy which is flexible in reacting to economic fluctuations may considerably contribute to long term, stable economic growth and promote monetary stability. The member states of the European Economic and Monetary Union (EMU) have established institutional incentives for promoting sustainable national fiscal policies. The Stability and Growth Pact sets out the maximum permitted rate of the national debt and the budget deficit, and requires a structurally balanced budget (cyclically adjusted deficit close to zero), for the purpose of establishing a sustainable budget, but also allowing adequate margin for counterbalancing potential shocks affecting the economy.

Motivated by accession to the euro zone, most of the countries implemented significant adjustments, managing to reduce the budget deficit below the 3 per cent criterium in the reference period. The reduction of the deficit proved to be successful in the long term mostly in countries which decreased primary expenditure. Contrary to the above trend, adjustments based on tax increases were less successful, with the exception of countries in which the higher rate of revenue was the result of the widening of the tax base and not the raising of tax rates or the introduction of new taxes. It is particularly important whether in the course of adjustments, focus is on sustainable structural measures, promoting the improvement in quality and the reform of institutional solutions (e.g. introduction of rules on spending), or the fall in the deficit is only apparent and temporary, delaying a genuine adjustment and involving the clear risk of a reversal.

In some countries with a large debt and high risk premium, the fall in the budget deficit was significantly related to the improvement in the interest balance, reaching 2-3 per cent of the GDP in a few countries in the final years (e.g. Italy, Portugal, Greece). According to the study, the improvement in the Hungarian interest balance will likely be considerably smaller than in the above acceding countries, due to the lower initial credit balance and the progressive state of interest convergence. According to estimates, the improvement in the interest balance may reduce the rate of the ESA deficit by a total of 0.5%-0.9% of the GDP by 2008.

The study argues that the primary balance would worsen by 1 per cent of the GDP between 2004 and 2008 if, on the premise of no additional fiscal measures, only the known determinations and the expected balance of EU settlements are taken into account. If we also presume that obligations related to quasi-fiscal activities do not appear in the official deficit until 2008, then approximately 3 percentage points improvement is required in the primary balance, to achieve the 2.8 per cent deficit targeted for 2008 in the Convergence Program, updated in December of 2004. This means that if it is implemented through the reduction of expenditures, savings equalling 4 per cent of the GDP would have to be realised, taking the automatically lost tax amounts into consideration.

The assumptions of the calculation also indicate risks related to the rate degree of the necessary adjustment. In relation to tax bases, the structure of economic growth will not likely be favourable, for wages and consumption will rise at a more moderate rate, thus the current level of revenue could fall. In respect of quasi-fiscal amounts, a two-sided risk arises with regard to the degree of the necessary adjustment. If the financing of past quasi-fiscal activities (e.g. losses of state-owned companies) is indicated in the official deficit (e.g. in the form of debt assumption), a greater than expected fiscal adjustment would be required for the implementation of the set targets. On the other hand, the exclusion of

traditional state expenditures from the official deficit (e.g. through PPP solutions) can reduce the adjustment requirement in the short term.

We wish to emphasise, however, that the increase in quasi-fiscal expenditures and the application of other accounting solutions only reduces the budget deficit on a statistical level, but does not improve either long term sustainability or the external balance; it does not produce a genuine and lasting adjustment.

The above aspects also shift the quality of consolidation into focus; in addition to structural measures, institutional solutions are required which promote the lasting effect of results. For example, the consideration of quasi-fiscal amounts and the concurrent introduction of a rule limiting the rise in expenditures would enable the planning of a mid-term budget in a reliable framework. The application of the rule would also presume an internal accord reached with local governments.

## I. Introduction

Wide ranging theoretical consensus and practical experience suggest that prudent fiscal policy, as promoted by the countries of the European Economic and Monetary Union, may contribute to the long term and stable growth of the economy. In terms of fiscal policy, prudent behaviour is associated with establishing the ideal and sustainable rate of national debt which is fundamentally related to keeping the budget deficit within limits. In addition, fiscal policy may assume an important role in moderating short term fluctuations in the economy.

The Stability and Growth Pact (SGP), defining limits to the fiscal policies of member states, comprises one of the foundations of the successful operation of the European Economic and Monetary Union. Countries of the euro zone determine fiscal policy on a national level, but governments planning for the short term may be prompted to adopt imprudent fiscal policies. The Pact sets the target of defining a simple, transparent and easily monitored system of rules which assures the prudent development of a national fiscal policy but limiting member countries the least in applying an ideal, flexible and independent fiscal policy.

For the purpose of establishing the long term sustainability and the adequate flexibility of fiscal policy, Hungary must also draft budgets permanently complying with EMU requirements, with a view to establishing the structural balance in the long term. In the framework of an earlier study, the MNB published an analysis on fiscal challenges related to accession to the euro zone, and examined opportunities for convergence and stabilisation.<sup>1</sup> This study wishes to update the conclusions of the earlier analysis with the review of recent fiscal developments, supplementing these with additional aspects and international experience.<sup>2</sup>

In Part I of the study, we will examine the general principles of ideal fiscal policy and analyse whether the rules of the Stability and Growth Pact pose real limits to member states adopting prudent and flexible fiscal policies. In addition, we will analyse Hungarian characteristics in respect of the long term sustainability of fiscal policy and its stabilising function. Part II of the study explores issues related fiscal consolidation. Firstly, we will review conclusions drawn from international experience in fiscal consolidation, particularly the adjustments made by the member states of the euro zone. The second part of the chapter (II.2) analyses possibilities of fiscal adjustment in Hungary, the implementation of which is required for long term fiscal sustainability, in accordance with the requirements of the Stability and Growth Pact. In addition to theoretical considerations and international experience, we examine the trends of the past years, analysing the options of budgetary policy in meeting the 3 per cent Maastricht deficit criterion required for accession to the euro zone, including means of reducing the deficit permanently.

Our study focuses on the period 2004-2008; we will calculate the degree of adjustment required for reaching the deficit target defined in the convergence program. Thus, the calculations are based on the premise of a transitional phase in which the creative, quasi-fiscal items are not included in the deficit. We are not examining challenges posed by the

---

<sup>1</sup> Csajbók, A. and Csermely, Á. (2002), Chapters III.2.4 and V.1.1.

<sup>2</sup> The calculations were completed in November 2004, with the exception of estimates on interest expenditure. In respect of interest, we used information available in mid-January 2005.

necessity of further reduction of the deficit in the subsequent period. It is, however, important to emphasise that the adjustment requirement in the long term is increased by these creative items through payment obligations and debt assumptions, which are presently not reflected in official figures, but by way of which the deficit would have reached the steady rate of approximately 8 per cent of the GDP in the past years<sup>3</sup>.

We hope that our study will call attention to economic policy measures which may contribute to Hungary becoming a competitive member state of the euro zone, developing at a rapid pace.

## II. Ideal fiscal policy: sustainability and stabilisation

Wide ranging theoretical consensus and practical experience suggest that prudent fiscal policy, as promoted by the countries of the European Economic and Monetary Union, may contribute to the long term and stable growth of the economy. In terms of fiscal policy, prudent behaviour is associated with establishing the ideal and sustainable rate of national debt which is also fundamentally related to keeping the budget deficit within limits. In addition, fiscal policy may also assume an important role in counterbalancing short term fluctuations in the economy.

When analysing the effects of the budget deficit, it is expedient to apply the premise that the volume of private investment in a given year may be financed through three major sources: in addition to a budget surplus, the savings of domestic economic participants and credit drawn abroad. The above financing identity is defined by the formula below:

$$S+(T-G)=I+CA,$$

where  $S$  indicates domestic savings,  $T-G$  the budget surplus,  $I$  investments and  $CA$  the current account surplus. We should note that interest paid on outstanding national debt increases the level of government expenditures ( $G$ ), while interest paid on outstanding debt to foreign lenders raises the deficit in the current account ( $-CA$ ).

The economy's aggregate amount of savings is determined by the sum (left side of formula) of private ( $S$ ) and government savings ( $T-G$ ). Thus, the *direct* effect of the budget deficit reduces the aggregate amount of savings. However, the *indirect* effect of the deficit through private savings may be considerable; the Keynesian and non-Keynesian approaches suggest significantly different results in this respect. The non-Keynesian or Ricardian approach essentially argues that consumers planning for the long term, with no financial constraints, will react to the rise in the deficit with a corresponding increase in the amount of their savings, therefore the deficit will not influence the aggregate amount of savings. This approach is based on the premise that consumers recognise that the deficit increases the national debt which they – or their descendants – must eventually refund through higher taxes; and such considerations urge them to start accumulate savings. Contrary to the above, the Keynesian approach presumes that the savings are determined by the disposable income of consumers, therefore the rise in the deficit generally leads to the decrease in the amount of aggregate savings. According to the consensus view, the presumptions and

---

<sup>3</sup> In order to account for creative items, since 1998, the central bank has been regularly publishing the so-called supplemented deficit (SNA). The related calculation methodology is explained in greater detail in the publication entitled "Manual to Hungarian Economic Statistics" ([http://www.mnb.hu/dokumentumok/kezikonyv\\_magyar\\_gazd\\_hu.pdf](http://www.mnb.hu/dokumentumok/kezikonyv_magyar_gazd_hu.pdf)).

conclusions of the Ricardian approach are too stringent; there is general agreement that the budget deficit induces the fall in aggregate savings in the short term.<sup>4</sup>

A reduced rate of financing caused by the budget deficit can also be supplemented with the use of foreign funds which in turn increase the deficit of the current account ( $-CA$ ). The above step may raise the amount of foreign debt, and the interest and installments of such amounts can reduce the disposable income of the country in the future. The excessive deficit in the current account may lead to concerns related to the sustainability of the balance of payments potentially leading to higher interest rates and the devaluation of the exchange rate. A prolonged deficit may also necessitate a domestic adjustment process involving higher interest rates in the long term and a revalued exchange rate, fulfilling the above identity through the moderation of investments ( $I$ ) and the rise in domestic savings ( $S$ ).

Thus, a long term deficit may reduce the long term level of output and its growth through the increase of the long term interest rate. In addition, the interest rate may rise and the exchange rate fall further if market participants are of the view that fiscal policy superimposes short term objectives, in disregard of the limits of the long term sustainability of accumulated national debt. In reaction to the above, market participants may significantly raise the risk premium expected on their investments. It should also be noted that since the rate of national debt is generally determined nominally, the price level, inflation and nominal exchange rate affected by monetary policy also bears an impact on the sustainability of national debt. Consequently, imprudent fiscal policy poses a risk to monetary stability, as well, entailing the further increase of the rate of risk premium, for it may prompt monetary policy to inflate the debt or devalue the exchange rate, in case of limited independence of the central bank.

Thus, a long term budget deficit and accumulating national debt may lead to the long term fall in the income of the country. Firstly, a growth sacrifice may be caused by crowding out private investment. Secondly, if the deficit is financed with external funds, contributing to the rising current account deficit and larger net foreign debt, the repayment of the debt and interest thereon will lead to the fall in the national income in the long term.

Many European countries acquired valuable experience in recognising the importance of adopting prudent macroeconomic policies when confronting the period of the 1980s with high budget deficits, rising debts and low economic growth. In many instances, the persistently high deficit contributed to economic growth only to a very limited degree; the growing amount of debt added to the increasing strain on the budget, raising inflationary expectations and long term interest rates, and in many cases budgetary stringency was implemented in times when the easing of the budget would have been necessary for the purpose of economic stabilisation.<sup>5</sup>

In addition to the rate of the deficit and debt, the quality related aspects of the budget also impact the effect of fiscal policy on long term growth.<sup>6</sup> Under the term quality, we generally refer to the efficient use of available budget resources for defined strategic objectives. This definition refers to the minimisation of the distorting effects of the tax system, selection of priorities (education, research and development, modernisation of infrastructure) optimally,

---

<sup>4</sup> In relation to the review and numerical estimate of the importance of various channels, see e.g. European Commission (2004), part III, and Elmendorf and Mankiw (1998).

<sup>5</sup> See e.g. Buti – Sapir (1998).

<sup>6</sup> See e.g. Public Finances in EMU (2004), chapter 4.



improving productivity in the long term, and the adequate establishment of the institutional framework of implementation.

## II. 1. Ideal level and path of national debt

Determining the *ideal proportion of national debt* to output and its long term *path* comprises a decision requiring the consideration of various economic and social aspects; and their values may vary depending on national and periodic characteristics. Maintaining national debt allows the generational redistribution of the financing of budget expenditures. Sustaining debt, however, may cause various welfare costs which should be taken into account. A major problem may arise if credit-financed government expenditures reduce the stock of private capital through crowding out private investment. It reduces the level of long term output and the rate of growth, in case it is spent for government consumption or unproductive investments. Moreover, debt financing can be costly<sup>7</sup>, and if the figure is excessively high, it may become unsustainable as a result of major economic shocks.<sup>8</sup>

Thus, long term *sustainability* is a fundamental factor in the determination of the ideal level of national debt: the instalments and interest should not pose a burden for the government – even upon major macroeconomic or demographic shocks – which it is unable or unwilling to finance (even considering the political and economic costs associated with the loss in credibility resulting from government bankruptcy).<sup>9</sup> *Financing costs* also play an important role, not only impacting sustainability but also the degree of funds withdrawn from the economy in consequence of the debt. In addition to domestic and international interest rate levels, the risk of insolvency may also affect financing costs and the crowding out effect of the budget on private investment. The ideal level of national debt should further enable fiscal policy in reacting *flexibly* to economic fluctuations without compromising its sustainability and the need to confront a major rise in financing costs. If sustainability and flexibility is secured, the increase in the amount of national debt may be justified in relation to *structural reforms* – e.g. pension reform – where the costs of transition can justifiably be distributed among several generations. With regard to the degree of the national debt, the level of productive capital accumulated by the government plays a role, as well, for future generations also benefit from the return on *productive investments*. Therefore it is justified that these generations, too, contribute to the costs.

---

<sup>7</sup> By way of interest payable to foreign creditors and the distorting effect of taxes collected on a domestic level.

<sup>8</sup> In addition, the expectations of market participants also play a role in shaping the sustainability of national debt. In respect of debt denominated in foreign currency, for example, the major devaluation of the exchange rate can disable debt financing if such debt is of an excessive amount. Thus, there are instances – analysts claim that the case was similar in Brazil in 2001 – in which market expectations are self-fulfilling, i.e. if there is confidence in the sustainability of national debt, warranting a stronger exchange rate, the debt will, indeed, be sustainable; if confidence is on a low, however, and there is readiness to get rid of invested money even at a devalued exchange rate, such devaluation will, in fact, render the debt unsustainable. The rise in the interest rate – due to unsustainability concerns – can cause similar problems; this alone may contribute to unsustainability as a result of higher financing expenses. For the purpose of avoiding similar scenarios, it is expedient to keep national debt on a level which does not compromise sustainability in the event of major shocks.

<sup>9</sup> The Treasury of the United Kingdom defined sustainability as the level of national debt under which – with acceptable premises – current spending and income policies may be sustained indefinitely (HM-Treasury, 1998, chapter 3.2.4.). It should be emphasized that not only explicit debt is relevant in respect of sustainability, but also implicit debt – e.g. related pension or health benefits.

International practice has limited information to offer in relation to the ideal level or path of national debt in a country. The reason is that there are few countries which explicitly determine a long term target path for their national debt. Moreover, some countries of the European Union do not judge it necessary to determine independent, long term national debt targets due to the clearly defined and transparent requirements of the Stability and Growth Pact. Nevertheless, some member states of the European Union explicitly determine an independent debt target path on the basis of individual aspects. The fiscal authority of the United Kingdom, for example, wishes to maintain net national debt at a rate of 40 per cent of the GDP, in the average of the economic cycle (its current gross debt – the measure used by the Maastricht criteria – amounts to 51 per). Sweden did not define a constant target: partly in consequence of implicit national debt arising from aging society, fiscal policy wishes to maintain a 2 per cent primary surplus by 2020 (the current gross national debt/GDP rate equals 52 per cent, while the net debt rate presently approximates 0 per cent). Similarly, Denmark wishes to maintain a 1.5-2 per cent general budget surplus by the year 2010 (its debt rate is 47 per cent, but similarly to Sweden, it holds liquid assets in order to manage problems arising from the aging society). Among new member states, Estonia, with a national debt rate of roughly 7 per cent, considers it necessary to maintain a balanced budget in the long term, allowing a deficit only in relation to the reform of the pension system. *The behaviour of these countries suggests the adoption of prudent fiscal policies which, independently of the SGP, nevertheless in compliance with it, secure the long term sustainability of fiscal policy and the ideal rate of national debt on a national level.*

The determination of the ideal Hungarian debt path comprises a political decision, requiring the circumspect consideration of social aspects. Prudent fiscal planning, however, is in all cases conditional on securing the sustainability of national debt which may contribute to the long term, stable growth of the economy and monetary stability. The quantification of the criterion of sustainability is a complex task. Nevertheless, maintaining of the 60 per cent gross national debt/GDP proportion at all times, determined by the Stability and Growth Pact, could be an important starting point. In 2003, Hungary's gross national debt reached 59.1 per cent of the GDP, in compliance with the sustainability criterion of the SGP, but only a narrow margin is left for the government to further increase national debt. Sustainability is conditional on the government ensuring the long term financing of the subsystems of the budget – such as the pension system and health care – and in the event of foreseeable future deficits, it should duly reduce national debt for the purpose of creating a room for manoeuvre in the long term.

Long term demographic trends and the gradual rise of Hungarian income levels approximating those in developed countries will foreseeably cause major changes in the subsystems of the budget. The study of the OECD, prepared in 2000, comprehensively examined the long term sustainability of the subsystems of the budget, and provided numerical estimates.<sup>10</sup> It concluded that the health care system can pose the largest potential risk to fiscal policy in the long term. On the basis of the forecast, presuming an unchanged system, the 0.8 per cent deficit of the health care system in proportion to the GDP in 2000 would gradually reach 5.7 per cent of the GDP by 2050. The above trend is related to the fact that demand for health care products and services will – in line with international experience – likely rise at a higher rate than the aggregate income level, as a

---

<sup>10</sup> Organization for Economic Cooperation and Development [OECD] (2000), „OECD Economic Surveys: Hungary”, Chapter IV: Coping with ageing.

result of the gradual aging of society and the increase in income levels. Thus, the long term financing of the deficit of the subsystem might require the reform of the subsystem, or the gradual development of a long term room for manoeuvre. Implementation of the above is possible through the gradual reduction of national debt through the provision of budget surpluses. The 2004 Convergence Report of the Government also emphasises the long term necessity of the structural transformation of the health care system.

The reform measures of 1997 considerably reduced the anticipated long term deficit of the pension system. According to the calculations of Benczúr (1999), the reform produces a decrease in (implicit) debt, corresponding to 80 per cent of the GDP, roughly equalling a 1.5 per cent permanent reduction of the budget deficit. If left unchanged, the pension system will likely produce additional deficits in the long term: according to the Convergence Report, the 1.4 per cent deficit in 2004 will rise to 2.6 per cent by 2050, following an interim, moderate fall. The 1999 study of Benczúr confirms the long term deficit in the system; currently the implicit national debt linked to the pension system reaches approximately 40 per cent of the GDP. The 2001 analysis of Rocha and Vittas reaches a similar conclusion, forecasting a permanent deficit from 2030, corresponding to roughly 1 per cent of the GDP. Thus, for the purpose of sustaining national debt, specific elements (e.g. retirement age) of the pension system must be modified or the currently high rate of national debt reduced, allowing the ongoing financing of the subsystem.

## II. 2. The stabilising function of fiscal policy

The *budget deficit* – corresponding to government expenditures financed with loans – may offer two advantages: firstly, it may support the *stabilisation* efforts of the government in handling economic fluctuations, secondly, it may promote the predictable and stable trends in tax absorption causing distortions in the economy (tax smoothing). Presently, it is agreed that by way of a temporary deficit (or surplus), fiscal policy may contribute to the short term stabilisation of the economy, but a lasting deficit may lead to the falling rate of output and growth.<sup>11</sup>

Numerous factors impact the efficiency of budgetary stabilisation; the Keynesian and non-Keynesian theoretical approaches emphasise the importance of different channels.<sup>12</sup> The Keynesian approach assumes that consumers plan for the short term, and face liquidity constraints; thus, the most important impact is related to the demand-channel, caused by changes affecting disposable income. According to this approach, the direct demand effects of changes in government expenditures may be intensified by indirect effects on consumption through disposable income. This concept follows the category of the cash flow deficit (borrowing requirement), for it is irrelevant whether a measure is of a temporary nature, or whether it would affect another period under an accrual approach. The non-Keynesian approach assumes that consumers have rational expectations and adequate liquidity, they plan for the long term and take the impact of budgetary policy on supply into consideration, as well. On the basis of this approach, the effect of the fiscal measure is fundamentally influenced by the fact whether consumers judge the measure to

---

<sup>11</sup> There is a difference between the short term stabilization of cyclical fluctuations and long term stabilization. The latter process corresponds to the moderation of macroeconomic imbalances (e.g. long term deficit of the current balance of payments) leading to sustainability concerns.

<sup>12</sup> For a detailed review of this issue, see, for example, P. Kiss (2002) or Capet (2004).

be of a temporary nature and to establish the mid-term impact of the measure on supply<sup>13</sup>, for in some cases, the fiscal multiplier may become negative. Attempts are made to integrate the Keynesian and non-Keynesian approaches to be more in line with empirical observations. An attempt, for example, assumes heterogeneous households, for some households do, indeed, have limited liquidity and plan for the short term, while other rational households have higher liquidity and plan for the long term<sup>14</sup>.

The openness of an economy also bears a considerable impact on the stabilising abilities of fiscal policy. Depending on the openness of the economy, part of the demand increased by fiscal policy is manifested in the demand for imports, therefore it does not contribute to the smoothing of domestic output.

The balance of the budget plays a fundamental role in determining the trend of the rate of national debt to the GDP; trends in the deficit (and surplus) significantly impact the sustainability of fiscal policy in the long term. The following equation may be established for the rate of change of national debt to output ( $\dot{b}$ ):  $\dot{b} = \eta - (\pi + q)b$ , where  $\eta$  corresponds to the total budget deficit,  $\pi$  is the rate of inflation and  $q$  is economic growth.<sup>15</sup> On the basis of the formula, if the government wishes to remain within a defined national debt/output rate in the long term, the structural deficit may not exceed the reference level which is determined by multiplying the growth of the economy with debt. With a 60% national debt/national debt rate ( $b$ ), 2% inflation ( $\pi$ ) and 3% real growth ( $q$ ), such reference level equals 3%, for example. This, however, also means that if the deficit exceeds such reference level in the period of an economic slump, thereby moderating the recession, in the period of recovery the deficit must again be lower than the above level, which in turn reduces the increased rate of national debt. Such behaviour is in accordance with the stabilisation role which aims at moderating excessively negative and excessively positive fluctuations. It is worth noting that productive government investments do not pose a risk to fiscal sustainability if their long term social return is warranted. Since, however, return generally remains uncertain, it is not simple to separate productive investments from expenditures deemed to be government consumption; such differentiation may also seem questionable to market participants financing government expenditures, and might increase the risk premium expected on their investments.

Changes in the specific indicators of the deficit (e.g. primary balance, cyclically adjusted deficit, CAB) are considered when deciding whether fiscal policy stabilises the economy or is, in fact, producing a procyclical effect. Three fundamental factors may determine changes in the deficit: firstly, the function of *automatic stabilisers*, secondly, the effect of *discretionary government measures*, and thirdly, the passive behaviour of the government related to the *institutional solutions* and *rules of the budget*. The effects of the above three key theoretical factors are very difficult to separate and quantify in practice.

## II. 2. 1. Automatic stabilisers

Fiscal policy may carry out its stabilising function by way of automatic stabilisers or discretionary measures. The automatic stabilisers represent rules on expenditures or

---

<sup>13</sup> Such impact on supply is manifested if, for example, the reduction of the wageincrease in the government sector (also decreasing government expenditures) leads to a lower wage rise in the private sector, thereby improving competitiveness.

<sup>14</sup> See e.g. Mankiw (2000), Gali et. al (2004), Bilbiie-Straub (2004).

<sup>15</sup> See e.g. Buitier and Grafe (2002) for the deduction of the formula and other useful budgetary-arithmetical equations.

revenues which modify the balance of the budget, in accordance with the cyclical fluctuations of the economy. Tax and contribution systems can be considered revenue rules which warrant that the revenue side of the budget remain in proportion to economic performance and income. Moreover, the rising rate of (progressive) income tax also increases the average tax rate without any need for additional decisions, therefore it automatically reduces the unreasonable increase in demand, securing budget revenue rise in excess of the rise in income. In the event of falling income, on the contrary, the average tax rate, and thus the rate of income absorption, is automatically reduced, which in turn moderates the fall in demand. While the progressivity enhances the impact of automatic stabilisers, the regressive elements of the tax system (ceilings, itemised determination of taxes) weaken these. The effect of automatic stabilisers is bolstered by (e.g. unemployment related) anticyclic expenditures, and weakened by expenditures moving in the direction of the cycle (e.g. indexed for real variables). Automatic stabilisers have the advantage of not requiring special decision making – often involving major delays, and they are levelled off in the average of the economic cycle, consequently not imposing a risk to sustainability.

The estimates of automatic stabilisers in various countries made by different institutions (EU, ECB, OECD, IMF) vary considerably. When estimating cyclical fluctuations, it is necessary to estimate the trends of potential growth or specific real economic variables (ECB), and to determine the cyclical flexibility of specific items of the budget. The simultaneity between the deficit affected by the cycle and economic growth impacted by the deficit comprises a common problem of the standard methods. Furthermore, these methods disregard the fact the nominal and real variables may trend in opposite directions (e.g. in the event of an inflationary surprise). The estimation of budget flexibility is also based on simplifications, for it can filter out the asymmetric and lagged effects of the tax and expenditure system only with difficulties.<sup>16</sup> There are alternative approaches which do not consider the cyclical exposure of the revenue side as a basis, but rather its inverse, the stability of the expenditure side. In this case, the difficulty is mostly related to the means of determining the neutral fiscal policy serving as a basis of comparison.<sup>17</sup>

The general result of earlier empirical studies pointed to the greater stabilising role of a larger budget. This is partly explained by the greater share of the government within the GDP (composition effect), and partly by the role of households with liquidity constraints (Andrés, Doménech and Fatás, 2004). On the basis of the alternative definition, however, empirical analysis can find non-linear effects of stabilisers. According to the results of Silgoner and the co-authors (2003), the automatic stabilisers do not reduce cyclical fluctuations above a specific level of expenditure as a proportion of GDP. We may call it as the diminishing return of smoothing which, according to their estimates, emerge above the 38 per cent rate of GDP-proportionate expenditure. A simulation has also been carried out on the basis of a definition focusing rather on the revenue side, indicating that in relation to GDP-proportionate taxes, there are threshold values above which the budget may have

---

<sup>16</sup> Thus, for example, the indexing of expenditure may be retrospective, or the size of negative corporate tax (due to losses) is limited to zero tax liability therefore negative taxes are spread over time depending on tax liabilities on next years' profits. The period of unemployment benefit may also be shorter than the term of the cycle, therefore the boom does not produce similar savings – there is an asymmetrical effect in relation to expenditures.

<sup>17</sup> There are practical approaches, filtering out all fluctuations from the time-series, defining these as discretionary. This is all the more a simplification, for in this case, the cyclical effects (e.g. unemployment expenditures) arising on the expenditure side are also filtered (Silgoner and co-authors, 2003). According to other definitions, neutral fiscal policy indicates an unchanged rate in proportion to the GDP, i.e. expenditures would follow the actual rate of growth (Von Hagen and co-authors, 2001).

a destabilising effect in the event of supply shocks (Buti and van den Noord, 2003). The threshold depends on the level of openness; the greater the openness of the economy, the smaller the stabilising effect and the greater the destabilising one.

Based on a Hungarian estimate similar to the method of the ECB, it may be established that currently the automatic stabilising effect of the budget is smaller than average (P. Kiss-Vadas, 2004). This is partly due to the fact that the expenditure side is linked to the cycle at a higher than average rate, as a result of the indexing of pensions to real wages. In addition, despite the high proportion of tax revenue to the GDP, a major degree of revenue is not linked to the cycle such as taxes paid on government wages, taxes on government procurements and nominally determined taxes (itemised excise tax, health contribution). Since the role of fiscal stabilisers is enhanced after the introduction of the euro, in this respect it would be favourable to change the tax and expenditure system (e.g. strengthening its progressivity) to heighten the cyclical sensitivity of the budget.

## **II. 2. 2. Discretionary measures**

In the event of contingent economic shocks, the fluctuations of the economy can justifiably be counteracted by discretionary measures. Their efficiency can be analysed on both theoretical and practical grounds. The impact of the measures is fundamentally influenced by the aforementioned features of the private sector – e.g. financial constraints of consumers and their planning horizon, and the openness of the economy.

Irrespective of the private sector's characteristics, institutional factors of the budget reduce the effects of the fiscal multiplier. These factors include timing, controllability and subsequent evaluation of the discretionary measures. For this reason, it is important that adequate functioning of automatic stabilisers reduce the necessity of discretionary measures, thereby greatly contributing to the predictability of fiscal policy and limiting the risk of mistakes in economic policy.

Discretionary measures require circumspect preparation, taking into account the expected economic impact of the measure, the time requirement of the decision, the degree of delayed economic impact (to avoid, for example, that the effect of a measure mitigating regression is only felt in the period of recovery, thereby increasing fluctuations) and whether the measure may be modified in the future, if necessary.

Controllability may pose a serious problem because the lower levels of the budget (local governments, budgetary units) may have a high degree of independence. In this respect, central government can often influence only the framework of operation, and therefore, in the course of implementation, deviations may occur from the plan. Subsequent evaluation may also cause difficulties, for the accurate filtering of the effect of automatic stabilisers would require a clear definition of neutral behaviour in fiscal policy – allowing the determination of a discretionary measure.<sup>18</sup> Numerous problems arise – from the valorisation of nominal elements in the tax system to the determination of the neutral path of specific expenditures. The impact of planning mistakes (over- or underestimation of growth, inflation, tax bases) on the deficit is subsequently confused with the effect of

---

<sup>18</sup> According to a possible approach, neutral fiscal policy corresponds to the sustaining of expenditures at an unchanged proportion to the GDP. This means that expenditures would be increased at the current rate of economic growth and inflation, instead of potential growth and the consistent rate of inflation. In this approach, Buti and Van den Noord (2003) define the growth and inflation “dividend” as the difference between current and potential rates, and define the remainder value as the so-called “genuine” discretionary policy.

discretionary measures defined in the traditional sense. The fiscal inertia arising from planning and implementation related problems may not only cause delays in relation to discretionary measures, but can also cause systematic deviations from the fiscal target. We will examine this issue in greater detail in the chapter on fiscal consolidation.

### **II. 3. Institutional issues in the EMU: the Stability and Growth Pact and quality aspects of the budget**

The Stability and Growth Pact (SGP), setting constraints to the fiscal policies of member states, represents one of the fundamental pillars of the European Economic and Monetary Union.<sup>19</sup> The institutional safeguard of prudent common monetary policy is established by the other pillar – the European Central Bank (ECB) – which functions independently of other EU institutions and member states, and has the primary objective of price stability.<sup>20</sup> Contrary to monetary policy, fiscal policies are determined on national levels. This institutional structure, however, may prompt governments, planning for the short term, to adopt imprudent fiscal policies.<sup>21</sup> One reason is that since the common monetary policy covers the whole euro zone, the larger budget deficit of a member country may contribute to growth in the short term, without facing any substantial monetary contraction. In addition, the behaviour of the market indicates that despite provisions prohibiting explicit bail outs, they attach a minimal chance of a eurozone member state becoming insolvent independently of the others.<sup>22</sup> As a direct consequence, imprudent fiscal policy of a member country leads to the increase of interest paid on its debt only to a limited extent, influencing, nevertheless, the long term level of the interest rate in the euro zone.<sup>23</sup> Thus, in place of the disciplinary powers of the market and national monetary policies, the Stability and Growth Pact is there to support the sustainability of the fiscal policy of member countries.

The Stability and Growth Pact is set up to respect the different political and social needs of member states, therefore it does not determine rules regarding the size of the budget or its composition. Nevertheless, with a view to sustainable long term fiscal policy, the Pact limits the permitted rate of the annual balance and the national debt, and sets out financial sanctions in the event of their severe and prolonged infringement. According to the SGP, the (cyclically adjusted) structural balance of the annual budget must show a balance or a surplus, and the budget deficit for a given year may not exceed 3 per cent of the GDP. The gross national debt/GDP proportion is maximised by the Pact at 60 per cent. These requirements of the Pact are set out to define a simple, transparent and easily monitored system of rules which allows the prudent drafting of national fiscal policies, minimally obstructing member countries in adopting an ideal and flexible, independent fiscal policy.

The ambiguous criteria on long term fiscal sustainability are substituted with a simple rule of the Stability and Growth Pact: the proportion of gross national debt to the GDP may

---

<sup>19</sup> See, for example, ECB (1999) for SGP rules and summary of implementation.

<sup>20</sup> If the ECB deems this objective to be secured, it also assumes the responsibility of moderating short term economic fluctuations. (ECB (2004), p. 44)

<sup>21</sup> See e.g. Alesina and Perotti (1995) in respect of political-economic considerations leading to imprudent fiscal policies.

<sup>22</sup> Bernoth et. al. (2004) established a non-linear relationship between the level of debt and the interest premium, concluding that the expected risk premium is reduced upon accession to the euro zone, provided the given country did not adopt a severely imprudent budget policy in the past.

<sup>23</sup> See Faini (2004).

not exceed the 60 per cent limit. Although the specific level is of an ad hoc nature<sup>24</sup>, and perhaps it would be warranted, theoretically, to consider the net national debt, instead of the gross figure<sup>25</sup>; the rule, nevertheless, sets a clear and easily monitored criterion, and long term compliance with this rule does, in fact, secure the sustainability of fiscal policy. Rules limiting the annual degree of the budget deficit also promote sustainability. On the premise of a 5 per cent long term nominal rise in the GDP<sup>26</sup> – considered excessive by today's standards – the maximisation of the budget deficit at 3 per cent, for example, ensures that the GDP-proportionate national debt does not exceed the 60 per cent limit in the long term. The rule imposing structural balance or surplus, however, sets a more stringent requirement which could, in itself, might reduce the level of national debt. It should be pointed out, however, that the aging society leads to anticipated future obligations in the countries of the European Union, posing a risk to sustaining current levels of national debt. According to the calculations of the European Commission – coordinated with member states – if the member countries of the euro zone would not comply with the SGP, and would not maintain a structural balance, fiscal policy, in most states, would become unsustainable.<sup>27</sup>

The 3 per cent budget deficit limit wishes to provide flexibility for member states implementing stabilisation policies. Although the 3 per cent level is, to a certain extent, of an ad hoc nature, as well, on the basis of the past behaviour of EU member states and assuming a structurally balanced budget, it would not have posed a real limit<sup>28</sup>, excluding exceptionally high recessions.<sup>29</sup> Although the elimination of an independent monetary policy may theoretically necessitate greater room for fiscal actions, the problems of countries<sup>30</sup> currently infringing the 3 per cent limit primarily arise from the fact that they were unable to establish a structural balance for the budget prior to the economic recession.

According to the simulations of the OECD, the average figures of OECD countries indicate that in the 1990s, discretionary measures reduced cyclical fluctuations by half. Within the above average, however, countries in the euro zone – in reaction to stringent

---

<sup>24</sup> The selection of the limit could be linked to the fact that in 1992, in the course of defining the Maastricht criteria, the average gross national debt/GDP rate in EU countries reached 60.7 per cent.

<sup>25</sup> Net debt also includes government loans. It is warranted to weight the value of such loans according to their riskiness, however, which is a complex task and would, in any case, reduce the transparency of the rule. In practice, the budget may also subsidize unprofitable companies with loans and transfers whereby such amounts are not indicated in the deficit or only at a later time (debt remission). On the other hand, the above is immediately reflected in the gross debt, indicating the problem in advance. (Of course, this figure may be misleading, as well, if companies receive loans with a government guarantee.) Practically, an indicator is required which is composed of the balance of gross debt and market debt (deposits). This indicator, however, would presumably not vary significantly from the current figures, for many countries use their financial assets to temporarily reduce the amount of debt for the purpose of producing a more favourable debt indicator at the end of the year.

<sup>26</sup> The value is produced as the sum of 2 per cent inflation and 3 per cent long term, real growth. According to Thygesen (2002), this rate was considered realistic in 1992.

<sup>27</sup> See European Commission (2004).

<sup>28</sup> See e.g. Buti and Sapir (1998).

<sup>29</sup> The SGP offers an exemption from compliance with the criteria in the event of major recessions. The exemption is automatic upon a 2 per cent real decrease in economic performance; in relation to a recession reaching a rate between 0.75 per cent and 2 per cent, the Council of Economic and Finance Ministers decides on granting the exemption, on the basis of the proposal of the Commission. According to the current proposal of the Commission, a member state would be granted exemption even in the event of prolonged slow growth.

<sup>30</sup> E.g. Germany, France.



fiscal policy – experienced the contrary effect; actual fluctuation exceeded by nearly double the estimated value which would have realised without fiscal consolidation (Van den Noord, 2000).

One of the recent analyses of the Commission indicates the apparent growth of procyclicality (EC, 2004). If, however, their estimate included the debt – as the other determinant of discretionary fiscal policy – among variables, such growth could not have been established. Neither has occurred a fall in procyclicality, however; unfunded tax cuts implemented under favourable cyclical conditions, had to be compensated with tightening measures under adverse circumstances. Estimating fiscal rules, the econometric analysis of Gali and Perotti (2003) concluded that in EMU countries, the budget, on the whole, became increasingly anticyclical in the period following the introduction of the euro.

In the EU, changing fiscal behaviour resulted in a deficit reduction after 1994, corresponding to 1 per cent of the GDP on average. Applying the QUEST model, In't Veld and Turrini (EC) examined potential scenarios with a lack of fiscal discipline. According to their results, national debt would have significantly increased, and in the most optimistic case (without the rise in risk premium), the lack of discipline would have increased the GDP by only 0.5 per cent. Moreover, this impact would have quickly subsided (In't Veld and Turrini, 2004).

The aforementioned analyses, however, have not examined whether the changing observed fiscal behaviour was a result of a genuine decrease in the deficit or it was caused by temporary and formal measures (creative accounting). Many EU countries made efforts to reduce the deficit through the use of loopholes offered by statistical definitions.<sup>31</sup> This supports the observation of Goodhart which suggests that the indicator applied to measure the target becomes distorted.<sup>32</sup>

There is an ongoing debate in the EU on type of modifications required in the SGP to improve its efficiency without jeopardizing its goals.<sup>33</sup> According to a communication<sup>34</sup> issued by the European Commission, the requirements of 3 per cent deficit and the 60 per cent rate of the national debt are to remain in place; in fact, debt criteria are to be assured an enhanced role in the future. According to the proposal, the Commission would elaborate explicit recommendations for member states on the ideal level of the structural balance, taking into consideration country-specific requirements for securing long term sustainability, including the initial rate of debt, expected growth, anticipated costs arising from aging and the reasonable level of productive budgetary investments.<sup>35</sup> The above measure would be of particular importance for transition countries, for these economies generally grow at a rate higher than the EU average, possibly warranting larger budgetary investments. If such investments are productive and contribute to economic growth, often

---

<sup>31</sup> To avoid this problem, statistical definitions are becoming increasingly specific and fixed. Creative accounting has been transformed, but not eliminated. The statisticians of the IMF, for example, have raised the issue of rigid definitions in relation to sector borders (IMF, 2003). Putting more emphasis on substantive aspects could serve as an alternative. The next chapter will refer to the problem of creative accounting.

<sup>32</sup> On Hungarian experience, see the fiscal chapter in the publication entitled “Manual to Hungarian Economic Statistics”.

<sup>33</sup> For a summary, see e.g. Orbán-Szapáry (2004), Buti et. al (2003), Franco – Balassone – Francese (2003), Ongena – Winkler (2003).

<sup>34</sup> European Commission (2004).

<sup>35</sup> In this respect, it may react to criticism of SGP, which would entrust the promotion of sustainability to “living organizations” and not to “dead rules”. See, for example, Fatás and his co-authors (2003) who would support an independent European “Sustainability Council”.

unforeseeable in relation to investment decisions, the guarantee of repayment could be established in the long term, therefore they do not necessarily pose a risk to the long term financing of national debt. Moreover, such investments worsen the structural deficit only to a limited degree, for the EU provides financing for these with considerable amounts.<sup>36</sup> But on the whole, the budget of transition countries does not indicate such positive balances (with negative balances in some cases) due to payments made to the European Union.

The EU places an emphasis on the quality of budgetary finances in the Lisbon strategy, as reflected in the Broad Economic Policy Guidelines. In the process of assessing Convergence Programs, the EU also monitors the quality aspects of fiscal policy. The 2004 Public Finance Report attempts to specify quality related considerations, focusing on the relationship between fiscal policy and long term economic growth as the most important issue. With the summary of current empirical data, it determines that the comparison of costs (higher taxes) and profit (economy and implementation of social policy targets) is of fundamental importance. The results, however, vary with regard to the most important issue – separation of productive and non-productive expenditures; different analyses determine productive budget expenditures to range from 5 per cent to 44 per cent of total expenditures in EU countries.

Trends in the expenditure structure indicate that the effects of aging are already apparent, for the rate of health care and social (pension) expenditures, primarily, have increased in the past decade. With a view to promoting quality aspects, it is necessary to improve the current distribution and control of funds. For the above purpose, in addition to ensuring control over the predefined, mid-term path of expenditures, the application of cost-benefit analyses and performance based budgeting is essentially important.

---

<sup>36</sup> See e.g. Sapir et. al. (2003) p. 141, Coricelli – Ercolani (2002).

### III. Fiscal consolidation

#### III. 1. Theoretical considerations and international experience

When reviewing empirical literature on fiscal adjustments and the experience of current EMU member countries, we are predominantly searching for factors which affect the success of adjustment. The criterion of success is primarily determined by the *endurance* of the improved budget balance, and the growth sacrifice of adjustment is also analysed.

##### III. 1. 1. International experience: stylised facts from the empirical literature

On the basis of extensive empirical literature analysing fiscal adjustments implemented by developed countries in the past decades, the success of adjustment is affected by various endogenous and exogenous factors whose impact may not be isolated in general.

A potentially essential characteristic of consolidation, is the reasons and goals of its realisation. Some fiscal consolidations were linked to the accession to the EMU, while some were motivated by the necessity of macroeconomic stabilisation. The distinction is important because fiscal consolidation – corresponding to the improvement of the budget balance – does not necessarily imply macroeconomic adjustment. Such stabilisation, instead, is caused by those measures of the consolidation which produces a real macroeconomic impact, improving, for example, the external balance. The cut in budget expenditures implemented by increasing quasi-fiscal expenditures, for example, improves only the official deficit figure and that only in the short term, because quasi-fiscal debt may not be increased indefinitely – sooner or later it will be reflected in the deficit.

*Main message of empirical analyses: the structure of adjustment is important*

The methods of analysis examining consolidation are not uniform. Nevertheless, the general results of the analyses indicate that the *structure* of consolidation fundamentally impacts success.

Most of the analyses prepared on this topic conclude that fiscal adjustments on the expenditure side proved to be lasting, whereas adjustments implemented through the raise in taxes did not produce enduring consolidation.<sup>37</sup> The durability of adjustment is also influenced by the specific types of expenditure reduced during the tightening. Several analyses have pointed out that the probability of success is increased if the cut in expenditures affects the size of the workforce and wages in the public sector or influences other welfare and social expenditures. On contrary, this probability is reduced however, if, for example, the direct investment expenditures of the budget are reduced, which could improve the productivity of the economy. The durability of adjustment is particularly reinforced if the public sector wage cuts are supported by comprehensive wage agreements in the private sector.<sup>38</sup>

These studies generally explain the endurance of expenditure reducing consolidations with the fact that in this case the *growth sacrifice* of adjustments was, on average, smaller. Moreover, in some cases the GDP increased during the adjustment or in the subsequent

---

<sup>37</sup> See e.g. Alesina and Perotti (1995,1996), Perotti (1996), von Hagen(2001), Alesina and Ardagna (1998).

<sup>38</sup> Alesina and Ardagna (1998).

year, i.e. the adjustment was not restrictive.<sup>39</sup> (See Box 1.) Despite the robustness of this finding, this result is only acceptable with reservation, for there are factors which were disregarded by most of these studies.

- Logically, the analyses applied official expenditure and revenue data, therefore they were unable to consider quasi-fiscal expenditures, although the cut in expenditures frequently simply covers the removal of expenditures from the budget. Since in this case, the impact of the budget on demand is not reduced, it is not surprising that no growth sacrifice is involved. Thus, the analysis of *quality aspects* is disregarded, similarly to the *institutional solutions of the budget* (e.g. fiscal rules), which may substantially influence the long term endurance of consolidations.
- The analyses did not examine the persistent characteristics of the *initial situation*. Instead, they compared figures to the data of the year preceding adjustment, irrespective whether these were in line with trends and or rather related to temporary factors. In the event of a tax increase, for example, the results are not equivalent if the measure raises the long term trend itself, or just restores conditions corresponding to the previous trend, following a temporary downturn.
- Most of the studies examined the wider *macroeconomic context* only to a limited degree. They did not analyse, for example, whether the fall in GDP-proportionate expenditure is the result of a nominal cut in expenditures or just the lack of inflation compensation (possibly deliberate inflation). An inflationary shock following a major nominal devaluation, for example, results in a considerable fall in GDP-proportionate expenditures through the inflation of nominally determined expenditures. In this case, the growth sacrifice may be counterbalanced by the temporary improvement in competitiveness resulting from inflation.

*Box 1: non-Keynesian impacts of fiscal consolidation*

Since the 1980s, the so-called non-Keynesian effects of the budget are popular topics in theoretical and empirical literature, offering theoretical explanations as to why the growth sacrifice of adjustment remains moderate under certain circumstances, potentially even inducing a positive impact on growth.

The expansionary – *non-Keynesian* – effect of tightening measures may arise from several sources – from both the demand and supply sides. Expectations play a prominent role on the demand side. In the event of a genuine tightening measure, the expected level of future tax burdens might reduce, resulting in an expected rise in future disposable income of the households. This might lead to the rise in current consumption. In addition, a tightening measure which is judged to be of a lasting nature may reduce the risk premium, and thereby decrease the long term interest rates, inducing higher investments. According to empirical analyses, expenditure cutting measures (with a focus on wages and public benefits) produced a more favourable impact on expectations, since cuts affecting politically sensitive areas reflect intentions for genuine adjustment. Thereby, the wealth-effect and the impact on credibility is stronger if the tightening influences the expenditure side.<sup>40</sup> The positive effect on growth may originate from the supply side<sup>41</sup>; the cut in

<sup>39</sup> See e.g. Giavazzi and Pagano (1990), Alesina and Ardagna (1998), EC (2003), Giudice et.al. (2003), Giavazzi et.al. (1999), Perotti (1997), Alesina and Perotti (1997).

<sup>40</sup> See e.g. Giavazzi and Pagano (1990), McDermott and Wescott, Alesina and Ardagna (1998), Giudice et.al. (2003), Alesina and Perotti (1996).

<sup>41</sup> E.g. Alesina and co-authors (2002).

expenditures – particularly if it involves a reduction in public wage-rise, in parallel with an extensive wage agreement – causes a fall in the unit labour cost. The rise in labour taxes, however, may result in the growth of real wages and a drop in labour demand, particularly on a well organised labour market.

The practical relevance of expansionary fiscal contractions should be interpreted with care, despite its considerable literature. Reviewing the literature of on the topic, Prammer (2004) concludes that there is no clear empirical evidence on the existence and origin of non-Keynesian effects. The author points to the fact that the reduction of the deficit was in many cases part of a comprehensive economic policy package, thus the growth effect of the tightening measure may not be separated from other elements of the package (e.g. changes in the exchange rate system, foreign exchange liberalisation, etc.). The absence of growth sacrifices, or expansions following consolidation, are in many cases not related to the stringency measure itself, but to the other elements of the package. When analysing the long term effects of fiscal expenditures on growth, Blanchard and Perotti (2002) conclude that expansionary effects may, indeed, be found with respect to specific elements of the GDP, but there are no significant non-Keynesian effects in relation to the whole output.

### ***Initial situation***

#### *Initial structure and size of budget*

Studies finding the success of the expenditure-based adjustments do not obviously claim that the cut in expenditures in itself guarantees the success of adjustment, nor that only expenditure reducing adjustments can be enduring, nor that such adjustments always induce smaller growth sacrifices. It is clear that the optimal structure of adjustment may not be isolated from either the initial structure of the expenditure and the revenue side, or the size of the budget. Both the 1980s (e.g. Denmark) and the 1990s (e.g. Belgium, see in sections below) provide examples on the success of revenue-increasing adjustments. In these cases, the high deficit was primarily caused by the inefficient and distorting tax system and the high rate of tax evasion. Thus, a comprehensive tax reform, increasing, for example, the tax base, resulted in higher revenue – even upon falling marginal tax rates.

Changes affecting the rate of income redistribution are also important aspects of fiscal consolidation. Although the optimal size of the public sector is affected by numerous structural factors (e.g. openness, per capita income, etc.), there is increasing consensus that the rise in the rate of income redistribution in developed countries from the 1960s to the 1980s was excessive adversely affecting economic efficiency. Several analyses have pointed out that the increasing level of subsidies and transfers generally do not achieve their goals, while the distorting taxes required for funding the expenditures result in the loss of efficiency.<sup>42</sup> In other words, if the redistribution rate is high, an improvement in welfare may be achieved through the parallel reduction of revenues and expenditures. For this reason, revenue-increasing adjustment strategies also involving increased level in redistribution, may be less favourable for the long term growth.<sup>43</sup>

In practice, however, the redistribution rates of individual countries allow only a very limited comparison due to the specific characteristics of the tax and benefit systems.

---

<sup>42</sup> See e.g. OECD (1995), Zandavakili (1994); Tanzi and Schuknet (1998).

<sup>43</sup> See e.g. Tanzi and Schuknet (1998), Tanzi(1995).

Countries, for example, which provide benefits partly through the tax system, e.g. by way of tax benefits, apparently produce lower revenue and expenditure rates.

#### *Initial debt, deficit*

For achieving success, the rate of the initial budgetary imbalance may not be disregarded. Results typically indicate that countries where the initial debt/GDP ratio (or its rate of growth characterising years preceding the adjustment) was higher, the rate of success is higher, with a more pronounced impact of non-Keynesian effects (e.g. von Hagen et.al. 2001, 2004 and Perotti 1999). This result is presumably related to the fact that in the event of a shift from an adverse position and an unsustainable fiscal path, the fall in risk premium is higher and the impact of expectations on consumption may be greater, as well.

### ***Quality aspects and budgetary institutions***

#### *Size, speed*

The size and speed of adjustment are frequently analysed characteristics influencing the success of consolidation, perhaps because that these are easier to measure than other quality and institutional characteristics which, though, may, on occasion, seem more important. The results, however, are not concurrent regarding these factors, possibly indicating that their impact on the success of adjustment is uncertain.

According to the results of Giavazzi and Pagano (1990), and Giavazzi et.al. (2000), larger adjustments have a higher probability of success resulting from the non-Keynesian effects: a larger adjustment produces a stronger impact on expectations, thus, there is a greater likelihood of a resulting rise in consumption. Von Hagen et.al. (2001) also concluded that the longer a tightening measure is delayed, the higher the probability of the reversal or failure of the stabilisation process. Faster and greater tightening measures more frequently produce a long term effect. It should be noted that in the aforementioned empirical analyses, the budgetary adjustments were analysed in periods in which the balance fell by at least 1-2 per cent of the GDP. Slower consolidations, applying a more gradual approach, were not included in the samples, therefore the characteristics of these are less known.

The majority of the studies (e.g. Alesina and Ardagna, 1998; Alesina and Perotti, 1996), however, did not establish major differences between the size of the tightening measures implemented in the course of successful and unsuccessful stabilisations, and concluded that the size of adjustment is a less important factor than its structure.

#### *Actual size, quality*

As noted above, the success of adjustments cutting expenditures may be related to more commonplace reasons; the fall in expenditures may cover the “outsourcing” of certain expenditures from the budget. Thus, in this case, the drop in budget expenditures merely conceals the rise in quasi-fiscal amounts which are not indicated in the budget statistics, but which influence demand.

Public private partnerships (PPP), for example, may serve this purpose – fixed investments and operation financed by the participation of private capital. In respect of Spain, for example, Torres and Pina (2001) observed that roughly 30 per cent of services provided by regional governments were outsourced into PPPs. This process, reducing the official deficit on a temporary basis, commenced when the central government limited subsidies to local governments in the course of fiscal consolidation.

### *Budgetary institutions*

We maintain the view that a key factor impacting the success of the tightening measure is whether institutional solutions ensuring endurance (e.g. rules regulating the growth of expenditures) are introduced. The role of budgetary institutions and rules determining the drafting and implementation of the budget have received little emphasis in literature on empirical adjustment. According to analyses, these rules played a key role in several countries in keeping the reduced deficit at low levels.<sup>44</sup>

The prediction of the macroeconomic path is a common problem arising in the planning process of the budget. Rates of inflation, growth, etc., significantly diverging from planned figures, may considerably modify the fiscal outcome. According to the latest analyses, in recent years, the prediction errors not only increased in the countries of the euro zone<sup>45</sup>, but the predictions were also biased; the planned macroeconomic path resulted in a consistently more favourable balance than revealed by actual trends.<sup>46</sup> According to the analysis of Jonung and Larch (2004), the best method for resolving the problem could be the establishment of an institution, independent of the ministry, to forecast the most important macroeconomic variables.

Following the planning and prediction phase, the approval phase of the bill follows in which the budget may explicitly or implicitly become loosened relative to the original target. In Italy, for example, a rule was introduced in 1990 which stipulates that parliamentary proposals may not modify the deficit, thus, funds must be provided to cover extra expenditures. In practice, this frequently lead to the acceptance of optimistic assumptions (Milesi-Ferretti, 1996). According to empirical results, fiscal performance is significantly affected if the macroeconomic program is determined with mandatory effect prior to the debate on the budget (Alesina et.al., 1995).

Additional deviations may occur in the implementation phase from to the approved fiscal target. This may occur in countries where amounts carried forward may be flexibly transferred between years (e.g. in Italy), where trends of some expenditures may change flexibly (open ended) or local governments enjoy major independence. In less flexible countries, however, differences may arise if the revenue side – e.g. due to the aforementioned prediction related problems – nominally deviates from the plan, while the expenditure side remains fixed.<sup>47</sup> According to some empirical analyses, such behaviour can be judged as passive: the prediction errors and the rigidity of implementation are jointly responsible for the marked difference between the forecasted deficit and actual figures in the four large EU countries. (Larch and Salto, 2003)

The evaluation and transparency of the budget are also important factors – not only in relation to follow up, but also regarding constraints introduced in the process of drafting the budget. The detailed indication of particular activities settled off the budget, for example, or the guarantees provided for in the budget items, are important factors of transparency (Milesi-Ferretti, 1996). The relevance of the problem is underlined by the subsequent data revisions of specific countries (e.g. Portugal, Greece). Although some problematic items (e.g. transfers among cash flow and accrual figures, or the mixing of

---

<sup>44</sup> E.g. Alesina-Perotti (1996b).

<sup>45</sup> ECB monthly bulletin, September 2004, box 9., EC, *Quarterly Report on the Euro Area*, October 2004.

<sup>46</sup> Jonung and Larch(2004).

<sup>47</sup> For example, the rise in the deficit due to overly optimistic revenue plans may not be counterbalanced with the immediate curbing of expenditures.

above the line deficit figures with below the line financing items) have been excluded from the official deficit figures, they were immediately included in the gross national debt. Other items (unprofitable state companies, government guarantees, government liabilities resulting from investments financed by companies in a PPP solution), however, are not indicated immediately in either the deficit or the gross national debt, only with major delay.

### ***Macroeconomic circumstances***

The complex interaction among the various elements of macroeconomic processes and economic policy (fiscal, monetary and exchange rate policies) greatly limits the independent analysis of fiscal consolidations. Therefore, in the course of analysing the impact of adjustments, it is essential to examine exogenous factors which are not influenced by the budget, but may, nevertheless, affect the success of adjustment (e.g. monetary policy, external economic circumstances, oil prices). According to the results of Von Hagen et.al. (2001 and 2004), the success of adjustment was not affected by the tightness of *monetary policy* during the adjustment, measured by the real interest rate. In the sample analysed by Alesina and Ardagna (1998), the degree of exchange rate devaluation was similar in both the successful and the unsuccessful adjustments, therefore it seems that the exchange rate, in itself, is not an explanatory factor. Nevertheless, authors of several case studies point out that in most of the major expansionary and successful tightening measures, fiscal adjustment was preceded or accompanied by significant devaluation/depreciation, greatly contributing to the favourable growth effect.<sup>48</sup>

Von Hagen et.al. (2001 and 2004) argue that *favourable external economic circumstances* increase the likelihood of the success of adjustment. Many studies, however, did not take into account the cyclical position of trade partners, albeit favourable external demand may contribute to the improvement of the budget.<sup>49</sup> It should be noted that if the cyclical position is not adequately considered in the estimate of structural deficit related data, the obtained “structural” data may reflect cyclical impacts. Therefore, it is possible that these indicate consolidation in cases where only automatic stabilisers were functioning.

### **III. 1. 2. Experience of current EMU member countries**

The pre-accession experience of EMU countries is particularly important for Hungary. In the early 90s many current member states faced major fiscal imbalance – in the year of the Maastricht Treaty, 1991, the budget deficit reached an average of 5 per cent in the EMU12. Thus, substantial efforts were required in most of the member states to implement fiscal convergence stipulated by the treaty. Fiscal consolidation and convergence commenced with the Maastricht Treaty, and from 1993, the budget balance improved in all member countries of the EMU. The adjustments, however, were not even across the cases; in several countries, the reduction of the deficit was mostly implemented in the 1-2 years directly preceding the reference period. Although in most cases, the improvement in the interest balance contributed to consolidation – on the whole, the improvement in the primary balance was more modest than the fall in the total deficit – the improvement in the primary balance approximated 2-3 per cent in several countries in the final two years.

---

<sup>48</sup> E.g. Giavazzi and Pagano(1990).

<sup>49</sup> E.g. von Hagen et.al. (2001).



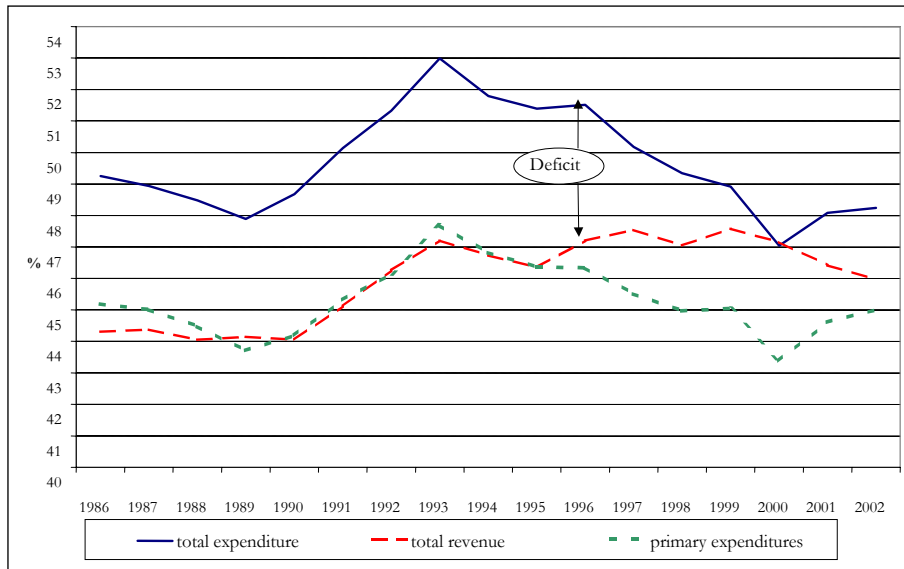
Experiences of the period succeeding the introduction of the euro are contradictory: following the establishment of the EMU, several countries witnessed a rise in the deficit or a unvariable rate at around 3 per cent (Portugal, Italy, Germany, France). Thus, the period which elapsed since the introduction of the euro indicates that although all countries (with the exception of Greece) fulfilled the deficit criteria of Maastricht, fiscal consolidation did not remain lasting in all member states. By studying adjustments, we not only examine the method and degree of the reduction of the deficit to the desired level, but also – examining the experience in the years following the introduction of the euro – the factors determining the long term success of such adjustments, and whether the flexibility of the budget was established / maintained.

We present below the general conclusions drawn from the experience of EMU countries relating to their fiscal adjustment. The *Annex*, attached to the study, discusses in more detail some successful and failed consolidation attempts in the form of case studies, focusing on countries which required major tightening measures in the final years to fulfil the convergence criteria – where there was a major deficit just a few years prior to the introduction of the euro.

### ***General characteristics of fiscal consolidations in EMU member states***

The consolidation periods preceding the introduction of the euro show a heterogeneous picture with respect to both the initial situation of the countries (initial debt and size of budget) and the method of adjustment (timing, structure). Regarding the average figure in the euro zone, fiscal consolidation in the full period extending from 1990 to 1997 can, on the whole, be defined as revenue-increasing: in 1997 the GDP-proportionate rate of primary expenditures was on a level similar to the figure in 1990. In the breakdown of the period, however, we may establish that while expenditures and revenues increased roughly in parallel in 1991-1993, from 1994 to 1997 – towards the completion of EMU convergence – primary expenditures fell by approximately 1.5 per cent of the GDP, with revenues remaining at approximately similar levels. Thus, by the 1997 reference period, the average deficit fell to 2.6 per cent, below the 3 per cent criterion (see Chart 1).

**Chart 1: Budget revenues and expenditures – EMU average**  
(In percentage of GDP)



Source: European Commission, Ameco

The analysis of Briotti (2004) – focusing on the study of fiscal consolidation in EMU member states from 1991 to 2002 – concludes that the structure and the size of fiscal consolidation, and the initial situation also influenced the effectiveness of the adjustment program. Briotti argues that the experiences of EMU countries mostly support the conclusions drawn by empirical literature discussed in the first chapter. Generally, in the years following the introduction of the euro, stabilisation failed and the fiscal position worsened predominantly in countries which applied adjustment strategies based on tax increases and temporary measures (Italy, France, Portugal). Contrary to this, countries in which the improvement of the balance was mostly linked to expenditure cuts (e.g. Spain, Finland, Ireland and non-EMU countries, such as Sweden and Great Britain), the budgets have remained balanced since 1998. The rate of redistribution has fallen considerably in these countries; savings accomplished through the long term transformation of the social systems frequently enabled the moderation of the revenue side as well.<sup>50</sup> In these cases – particularly in Finland and Sweden, for example – the long term endurance of adjustment was supported by the fact that in addition to the expenditure cuts, institutional frameworks were set up in order to regulate the process of planning and/or implementing the budget, thereby strengthening budgetary prudence (Alesina and Perotti, 1996).

It should be emphasised, however, that there are countries in which revenues increased in a sustainable manner. In such cases, in the initial situation, the rate of tax revenue was either too low (e.g. Greece) and/or the source of growth was primarily related to the structural transformation of the tax system. In Belgium, for example, the significant reduction of the deficit was primarily implemented through the rise in revenues, and the budget remained balanced in the period following the introduction of the euro.

<sup>50</sup> It is important to note that the redistribution and centralization rates of individual countries may be compared only to a limited degree, due to the characteristics of national tax systems (e.g. tax benefits, etc.).

According to the other claim of Briotti (2004), countries with a higher initial national debt maintained, on the whole, a much larger primary surplus in the period extending from 1992 to 1997, and the improvement in the primary balance was also greater. This is not surprising, in fact, for these countries had to make much greater efforts in fulfilling the deficit criteria due to the high rate of interest expenditures (see table). In partial disagreement with the results of von Hagen et.al. (2001), we maintain the view that the initial amount of debt does not provide a clear prediction for the period succeeding the introduction of the euro. The fiscal position of some of the countries with high debt (e.g. Italy) almost immediately worsened after 1997, whereas the stabilisation efforts of Belgium and Ireland, for example, seem to be successful in the long term. Thus, not only the amount of debt and the degree of the initial structural deficit have explanatory power, but also whether these countries reacted to their greater adjustment requirements through temporary measures or the more extensive restructuring of revenues and expenditures.

Regarding the success of adjustments, the question arises as to the impact of stringency measures on automatic stabilisers and on the flexibility of the budget. Theoretically, the fall in the rate of redistribution, the reduction in unemployment benefits and the increase in indirect taxes to the disadvantage of income taxes and contributions – changes generally supporting successful adjustments – may reduce the automatic stabilising strength of the budget, leading to the procyclicality of fiscal policy. Empirical literature analysing the experience of member states in the euro zone, however, does not support this hypothesis (see chapter II.3).

Obviously, few analyses have been carried out so far on the growth related impact of the adjustments of EMU countries, and the results are far from conclusive. Studies examining the issue (e.g. von Hagen et.al. (2001 and 2004)) suggest that a smaller growth was sacrificed during the European stabilisation measures in the 90s than was the case in the 80s. Moreover, the impact of budgetary policy changes on growth was insignificant which, according to the authors, indicates the presence of non-Keynesian effects. According to the analysts, the absence of growth sacrifice is certainly related to the fact that on the road leading to the euro, economic players – confident in the restrictive force of the Maastricht Treaty – judged these stringency measures to be of a long term nature, therefore expectations produced a more favourable effect on demand. The institutional frameworks – discussed above – regulating the drafting to the budget presumably contributed to this process. We are of the opinion that in addition to the favourable impact of positive expectations on domestic demand, other factors are also responsible for the moderate contraction effect.

Firstly, in most of the EMU countries, the improvement in the interest balance resulting from interest convergence greatly contributed to the improvement in the budget balance, primarily in the years 1996-1997. This impact was particularly strong in countries with high debt rates - Portugal, Italy, Belgium and Greece – in which the improvement in the interest balance reached 2-3 per cent of the GDP in the last two years, and further improved in 1998-2002. The marked supporting effect of monetary conditions, however, is somewhat contradictory regarding the quality of fiscal adjustment: the reduction caused by the interest balance possibly contributed to the fact that these countries were less motivated to reduce primary expenditures further.

Secondly, the rapid fall in the deficit is related in several countries to one-off measures and “creative accounting” solutions, which – through the application of accounting tricks – contributed to the reduction of the deficit by even 0.5-1 per cent of the GDP, without a

real improvement in the fiscal position.<sup>51</sup> One of the typical solutions involves the formal concealment of off-budget expenditures related to state companies, or the manipulation of interest expenditures by the modification of the maturity and interest payment structure of national debt.<sup>52</sup> The one-off measures were accomplished to reduce the costs of the consolidation, but the disregard of long term consolidation strategy posed risks to the sustainability of the budget. It is underlined by the fact that some of the countries applying creative accounting – e.g. Italy, France, Germany, Greece – continued to confront fiscal problems following the introduction of the euro, although this is less true of Belgium which also achieved major savings through creative accounting.

Finally, we should make note of transfers originating from the EU which undoubtedly represented a major source of revenue, primarily in less developed EU countries.<sup>53</sup> The impact of revenue originating from structural and cohesion funds on the overall fiscal position was not necessarily positive as a result of co-financing and other regulations. Moreover, regarding the direct impact, it could, on the whole, even worsen the budget balance. The reason is that access to transfers originating from structural funds is partly conditional on the real value of domestic investment expenditures of a given country reaching the reference value, which, in turn, is jointly determined by the member state and the Commission, on the basis of the expenditures of previous years (principle of additionality).

### III. 1. 3. Experience of emerging and transition countries

Compared to developed countries, much fewer studies have been carried out on the experience of the adjustments of transition countries. Purfield (2003) analysed the consolidation of 25 transition countries from 1992 to 2000. The author primarily attempted to determine whether factors judged to be of significance in the literature summarising the experience of developed countries, e.g. rate and composition of adjustment, are of relevance in transition countries, as well.

---

<sup>51</sup> See e.g. Milesi-Ferretti (1999); Dafflon and Rossi (1999).

<sup>52</sup> In France, for example, the 1997 GDP-proportionate budget improved by 0.5 per cent through the one-off payment of the state owned France Telecom to the budget, accomplished by the company in exchange for the assumption of future pension obligations. With the approval of Eurostat, Greece recorded subsidies provided to specific state-owned companies as an increase in their capital which thereby did not influence the annual deficit. Greece accomplished major savings on interest expenditures through the issue of zero coupons – non-interest-bearing government bonds. The above two accounting measures reduced the deficit by a total of 1 per cent of the GDP. Italy earned savings equalling 0.2 per cent of the GDP by retroactively recording pensions in arrears – actually burdening the 1997-2000 budget – awarded in court, to 1993-1995, the period in which the obligation arose. Additional savings amounting to roughly 0.5 per cent of the GDP were produced by the reclassification of the debts of the state rail company and the restructuring of interest on postal savings coupons. At the end of 1997, Belgium placed government bonds to state companies for three days, achieving a cut in the deficit in excess of 1 per cent of the GDP. In Germany, due to the disagreement of the central bank and adverse public opinion, the upward valuation of central bank reserves and the payment of the margin to the budget produced a profit only in 1998, following the reference year. Other accounting tricks, however, were implemented – e.g. cancellation of the debt of the state privatization company from the budget – and these reduced the 1997 budget deficit by a total of approximately 0.7 per cent of the GDP (Milesi-Ferretti, 1999; Dafflon-Rossi, 1999).

<sup>53</sup> Between 1994 and 1999, the so-called cohesion countries (Greece, Portugal, Spain, Ireland) received transfers from the structural funds, corresponding to 1.5-3.7 per cent of their GDP.

By adopting the method of Alesina and Perotti (1995), Purfield produced partly similar results: according to his econometric analysis, the size and composition of adjustment proved to influence the success of adjustment significantly. Similarly to the experience of industrialised countries, stabilisation measures of transition countries which cut expenditures were more likely to be successful than strategies aiming for higher revenues. Contrary to the results of Alesina and Perotti (1995), however, adjustments of a larger scale were clearly more successful than smaller measures which may suggest that the initial imbalance in these countries was greater than in industrialised countries. The authors did not find any expansionary effects, although the adjustments did not cause major growth sacrifices, either. This may be explained by the fact that under genuine adjustments, yields fell to a considerable degree, favourably affecting interest expenditures and the opportunity cost of investment expenditures.

Baldacci et.al. (2004) analysed the consolidation experience of 25 emerging countries between 1980 and 2001. First, they established that success was primarily determined by the cut in expenditures, but this, in itself, was insufficient for the mid-term sustainability of the fiscal position – a rise in revenue was also required. Second, they concluded that consolidations concentrating on the second half of the adjustment periods (back-loaded) were more successful than those concentrating on the beginning of the period (front-loaded). This was explained by the fact that social costs were better distributed in the first case. Interestingly, the analysis chose less stringent definitions when selecting consolidations. The consolidation period was defined to be a year in which the GDP-proportionate primary balance improved by at least 0.5 per cent. In order to examine robustness, their estimations were repeated with the 1 and 1.5 per cent threshold values. The main results did not change, but the role of various other variables in the success have turned to be relevant – for example, the initial level of the primary balance or big-bang adjustments.

### III. 2. Fiscal consolidation in Hungary

Under the Stability and Growth Pact, Hungarian general government will have to achieve a close-to-balance or in-surplus position within a set period of time. Practice, however, suggests that when stability and convergence programmes are officially evaluated, as regards general government finances, quality aspects are also taken into account. Such aspects include the sustainability of fiscal consolidation, which is only feasible through structural reforms enhancing long-term growth through infrastructural fixed investment and tax cuts.

The reason why the evaluation of quality aspects is crucial is that financial consolidation, which is synonymous with improving general government position, does not necessarily mean macro-economic adjustment. Only such part of consolidation leads to stabilisation that exerts an actual impact on macro-economy, e.g. one that improves external balance. In order that such an actual impact can be measured, the MNB has adopted an economic and analytical indicator that is called the augmented (SNA) deficit (see Manual to Hungarian Economic Statistics).

Thus, Hungary has an obligation to implement fiscal consolidation. On the other hand macro-economic stabilisation is necessary in the economic sense. As we can see no reason for assuming that the corporate or the household sector will be able to improve their savings position to an extent that leads significant improvement in the external balance, a major part of stabilisation will have to come from fiscal consolidation. Based on the results of our model simulations, fiscal consolidation, conducive to stabilisation through contraction of demand, is likely to exert a minor impact on prices; however, it may be able to improve the balance of payments to an extent that represents half of the extent of consolidation already in the first year. In the short run, it also puts a brake on economic growth to an extent that may amount to approximately one-third of consolidation in the first year.<sup>54</sup>

In what follows, we focus on the next four years in the process of fiscal consolidation, examining the room for manoeuvre for fiscal policy. Without estimating an alternative interest rate and macroeconomic path, following the principle of an unchanged fiscal policy, i.e. focussing on fiscal determinants, our path serves as a relative basis for comparison to establish the extent of fiscal measures to be taken in the interest of consolidation. By way of introduction, adopting our analytical approach, we discuss an initial fiscal situation as we assess it; we then go on to provide a projection for envisaged determinants in the coming period as well as possible developments in factors outside the control of fiscal policy, e.g. interest rates and fiscal effects of EU membership. In addition to presenting a favourable scenario, we point out the risks that we perceive as such. For

---

<sup>54</sup> For a detailed discussion of the topic, see the Current Topics section in the November 2001 and February 2003 issues of the *Report on Inflation*. A simulation performed with the NiGEM model examined the effects of fiscal expansion in 2001 and 2002, which had a composite structure, i.e. it materialised mainly through an increase in fixed investment, wage and transfer expenditure. The simulation arrived at the conclusion that most of the short-term impact was exerted on GDP already in the year in question; 1% GDP-proportionate increase in expenditure translated into approximately 0.3% increase in GDP. Since Hungary is a small open economy, the largest portion of the impact materialised as deterioration in the balance of payments.

purposes of illustration, we outline a possible version of fiscal consolidation, which could be implemented through restraining expenditure mechanically.

We accept as an initial assumption that consolidation *will* materialise, which is reflected in our estimate for a decrease in interest expenses. No consistent alternative macro-economic or fiscal paths have been prepared in which no consolidation materialises. No further actual assumptions have been made as to the details, structure or quality of assumed consolidation or macro-economic stabilisation, which represents a further impediment to the preparation of consistent macro-economic paths. The aim of our analysis is to present trends and magnitude; what would go beyond this is raising the issue of detailed measures aimed at consolidation. It should, however, be pointed out that measures based on quality aspects and taken in order to create sustainable consolidation are key to the implementation of macro-economic adjustment.

### **III. 2. 1. The initial situation**

The current situation can be characterised on the basis of our estimate for the structure of GDP-proportionate revenue and expenditure, deficit, debts, quasi-fiscal liabilities and the institutional framework of the budget.

As the official deficit reflects more lasting trends only in part, we follow our standard methodology.<sup>55</sup> The ‘augmented SNA deficit’ under the economic and analytical methodology incorporates the impact of quasi-fiscal items, but it excludes purely ‘accounting’ items such as a subsequent repayment of quasi-fiscal debts or temporary impacts like the discretionary scheduling of VAT refunds. Our own analytical methodology was adopted to study both deficit and trends in revenue and expenditure.

#### ***Structure of revenue and expenditure***

A review of the trends in revenue and expenditure between 1990 and 2003 reveals that increasing revenues, though an attempt at doing so only characterised the initial part of this was not successful.<sup>56</sup> Expenditure and, within it, primary expenditure did not move in conjunction with declining GDP (thus, there was a GDP-proportionate increase in it). Then, in 1995, at the time of surprise inflation, both its real and GDP-proportionate values were corrected. From 1995 to 2001, primary expenditure remained stable, and then it exceeded GDP growth.

In order for a more detailed analysis to be performed, further breakdown is needed. One possible method of classifying expenditure items differentiates between interest expenses, corporate current subsidies, other current expenses (e.g. operational expenses and household transfers) and capital expenditure.<sup>57</sup> Past trends in expenditure reveal that,

---

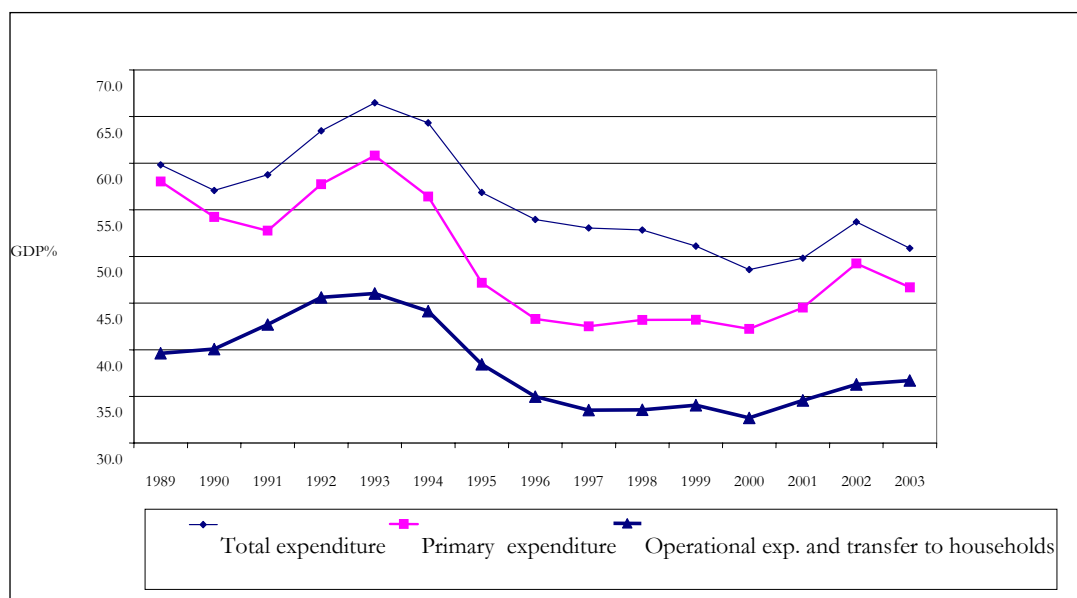
<sup>55</sup> For details, see Manual to Hungarian Economic Statistics ([http://www.mnb.hu/dokumentumok/kezikonyv\\_magyar\\_gazd\\_hu.pdf](http://www.mnb.hu/dokumentumok/kezikonyv_magyar_gazd_hu.pdf)). The updating and a more detailed treatment of fiscal methodology are currently underway.

<sup>56</sup> Revenue and expenditure as a proportion of GDP are high in an international comparison; however, for actual comparison to be made, various types of adjustment ought to be performed. For instance, general government items ought to be fully consolidated, i.e. both revenue and expenditure ought to be calculated less of VAT and contributions paid by general government institutions. On the other hand, however, tax expenditures on the revenue side ought to be recognised as expenditure. As the importance of these items vary from one country to the next, comparison remains biased.

<sup>57</sup> Economically, there is no sharp demarcation between the individual expenditure items, since certain services (provided by corporations in e.g. transport) are similar, as is the case with general government

compared to other categories, operational expenses and household transfers are more rigid downward in nominal terms. The reason why they diminished significantly as a proportion of GDP during the adjustment in 1995 and 1996 was that surprise inflation reduced nominally fixed expenditure both in real terms and as a proportion of GDP.

**Chart 2 Expenditure adjusted by temporary and quasi-fiscal items**



Source: the authors' own calculations augmenting official statistics

**Table 1 Structure of expenditure adjusted by temporary and quasi-fiscal items**

**1998-2003**

(as a percentage of GDP)

	1998	1999	2000	2001	2002	2003
Expenditure total	52.8	51.1	48.6	49.8	53.7	50.9
Interest and losses of the Central Bank	9.3	7.6	6.1	5.2	4.5	4.2
Investment and housing	5.0	4.9	5.2	6.0	7.0	5.1
Current and capital transfer to corporate sector	4.6	4.1	4.1	3.9	5.9	4.9
Operational exp. and transfer to households	33.9	34.5	33.2	34.7	36.3	36.7

Source: the authors' own calculations augmenting official statistics

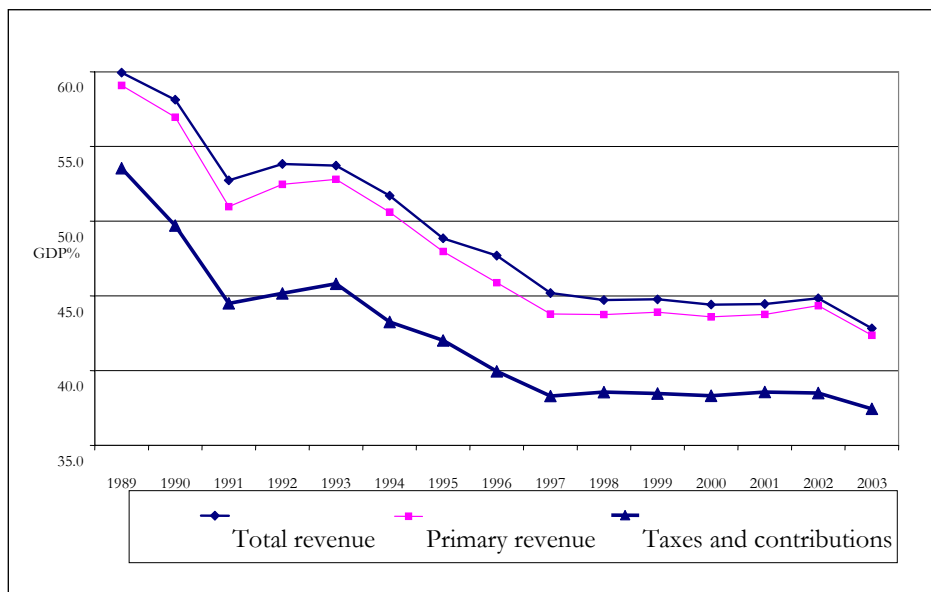
operational expenses. As these expenses are covered by current subsidies only in part, a certain part of them are recorded in capital expenditure that settles losses subsequently.



Of more determined current expenditures (i.e. those that can be the least reduced), operational expenditures, following the wage increase in the public sector from 2002 onwards, stabilised at a higher level in 2002 and 2003; so did household transfers that followed a similar path. Not even reduction in interest expenditures, augmented with the MNB deficit, in 2002 and 2003 was able to offset this or to reduce the overall expenditure (and deficit). In consequence, the amount of corporate subsidies and the volume of fixed public investment had to be reduced in 2003. Reduction in fixed investment proved, however, temporary, as fixed investment started to increase in 2004, when indirect taxes (mainly VAT and excise duties) were raised.

Trends in revenue reveal that, except for a few years, revenues from taxes and contributions declined steadily before 1997, and then they remained broadly flat until 2002. In the wake of the tax cuts in 2002 Q4, revenue fell below an earlier unchanged level. Raises in indirect taxes in 2004 were also able to bring about a turnaround in this change only partially.

**Chart 3 Expenditure adjusted by temporary items**



*Source: the authors' own calculations supplementing official statistics*

### ***Deficit, debts and quasi-fiscal liabilities***

The above changes in revenue and expenditure, excluding temporary impacts and augmented by quasi-fiscal items, are only partly reflected in official statistics. The initial fiscal position in 2003 and 2004 can be evaluated on the basis of the ESA deficit excluding temporary items and including quasi-fiscal items.

**Table 2 Fiscal indicators**

(as a percentage of GDP)

	2002	2003	2004
	fact	preliminary fact	projection (November issue of Report on Inflation)
<b>1. ESA deficit</b>	<b>-9.3</b>	<b>-6.2</b>	<b>-5.6</b>
2. Exclusion of temporary items	2.6*	-0.9	-1.0
3. Quasi-fiscal expenditure	-2.3	-1.1	-1.3
<b>4. Augmented (SNA) deficit 1+2+3</b>	<b>-8.8</b>	<b>-8.2</b>	<b>-7.9</b>
<i>Memo: stock of quasi-fiscal liabilities</i>	<i>0.1</i>	<i>1.2</i>	<i>2.5</i>

\*Subsequent payment of quasi-fiscal liabilities

ESA deficit incorporating temporary impacts (see Row 2), e.g. discretionary delays in refunding VAT, do not reflect the fact structural tax revenues<sup>58</sup> fell below earlier levels in 2003, or that, despite increases in indirect tax rates in 2004, they approximate this level only slowly. Nor do ESA statistics on revenue for 2004 necessarily correspond to the 'underlying' level that would follow from trends. The reason for this is that they depend on whether or not delayed VAT refunds will be reversed after its postponement beyond the statutory deadline during the period serving as the basis for simple cash-adjusted accrual accounting (i.e. in January and February 2005).

Since, for the time being, the ESA deficit does not reflect quasi-fiscal expenditure (see Row 3), official statistics suggest lower corporate subsidies and government fixed investment than what, in effect, the case is (e.g. losses incurred by MÁV (Hungarian Railways) and BKV (Budapest Mass Transport Company), delayed payments, PPP-type outsourcing<sup>59</sup>). In the light of this, the adjusted fiscal position (see Row 4), an indicator of trends, amounted to 7.9% of GDP even in 2004.

Public debt is slightly below 60%, which, compared to the average debt of new member states, is high. Accordingly, so is the proportion of interest expenditures. By contrast, the stock of contingent liabilities (guarantees) is much lower than the average of new EU member states.<sup>60</sup> Since the most recent instance of debt assumption (at end-2002), the stock of (only formally contingent) liabilities arising from quasi-fiscal expenditure (MÁV, BKV and PPP fixed investment) was still below earlier levels in 2004 (see Table 2, memo item).

<sup>58</sup> In 2003, because of the scheduling of VAT refunding (i.e. its postponement until 2002 and 2004 respectively), revenue looked 1% of GDP more favourable than did its 'underlying' level.

<sup>59</sup> Public Private Partnership, i.e. fixed investment and operation financed through the inclusion of private capital. For a detailed treatment of PPP, see IMF (2004b). For a brief overview of the topic, see Section 4.4 in the MNB's November 2004 issue of *Report on Inflation*.

<sup>60</sup> For the stock of guarantees in the other new member states, see S&P: 'Fiscal Challenges for Acceding Countries' (14 April 2004).

### *Institutional issues*

As regards the initial situation, the institutional framework of the budget (i.e. planning, legislation and implementation) carries significant risks. Both our own experience (*P.Kiss, 1998, ÁSZ (State Audit Office) 2004*) and international comparison suggest that Hungary is in an unfavourable situation<sup>61</sup>. Based on a single indicator, Hungary only slightly falls behind EU average or that of a few candidate countries (*Yläoutinen 2004*); however, overall indices computed by the ECB reveals that Hungary only ranks higher than Romania (*see Gleich, 2003*).<sup>62</sup> Comparisons point to the fact that a higher degree of decentralisation may contribute to higher deficit. (*Yläoutinen 2004*)<sup>63</sup>

As a rule, deficit targets and actual outturns have a systematic difference, and may amount to several percentage points of GDP. Average deviation from continuously higher targets set by Pre-Accession Economic Programmes was also above 1.6% of GDP during the period between 2001 and 2003, which was only exceeded by Greece (1.97%)<sup>64</sup> among EU15. Such significant slippage was attributable partly to the upward revision or assumption of quasi-fiscal items, which is, however, only a seemingly one-off transaction. In effect, quasi-fiscal activity has been an on-going one.

---

<sup>61</sup> Before 1998, certain studies (Branson, Macedo and von Hagen, 1998) ranked Hungary as one in the mid league among both the CEECs under review (Poland, the Czech Republic and Slovakia) and EU member states, where it preceded Greece, Portugal and Spain. Within an index comprising four components, the centralisation of implementation represented the highest value (12, the maximum being 16), which looks unrealistic, given the degree of autonomy of local governments and budgetary units.

<sup>62</sup> According to a simple comparison, which used the role of the minister of finance as approximation to the degree of the centralisation of fiscal processes, of the 25 EU member states, Hungary ranked as 3 to 5, 15 to 18 and 24 to 25, in that order, as regards decision making, legislation and implementation respectively. Based on this comparison, as for decision making, Hungary only precedes Bulgaria, in respect of legislation, however, it comes before both Bulgaria and Romania. The ECB also studied these three stages (decision-making, legislation and implementation), only it employed 13 different criteria. Of 10 countries, Hungary ranked as 6 to 7, 6 and 9, in that order, as regards decision making, legislation and implementation respectively; overall, based on an average of these 13 criteria, it ranked 9.

<sup>63</sup> The centralisation of the budgetary process may be of key importance. One common approach relies on commitment, which means that at the start of the budgetary process the various ministers agree on targets and legally binding limits on budgetary aggregates. Under another standard approach, significant powers are delegated to the prime minister or the minister of finance in budgetary matters. There is also a less common practice of decentralisation called the 'feudal system', under which the autonomy of ministries implementing expenditure is significant; however, there is no mechanism that would allow for the possibility of taking into account the objectives of the budget as a whole. The deficit in percentage of GDP of the latter countries was 3.8% in contrast with the 2.2% deficit of more centralised countries. The difference is especially striking under the commitment-based approach, in which case average deficit amounted to 1.6%.

<sup>64</sup> See Box 9 in the September 2004 issue of the ECB's Monthly Bulletin. Data for Greece are unlikely to reflect the most recent upward adjustment of the deficit. Comparison can only be made in a rough and ready manner, since in the case of EU member states it was the 1999-2003 Convergence Programmes, whereas in the case of Hungary it was PEPs that served as references against which the meeting of the deficit target could be checked. In our case, the one-off debt assumption in 2002 represents an apparent upward bias; in effect, its extent comes close to the amount of the off-the-budget quasi-fiscal activities during the period between 1999 and 2003.

Deviation was also attributable to the characteristics of *planning*; some open-ended expenditure plans (e.g. pensions and medicine, etc), for example, usually turn out to be over-optimistic. As for revenue, plans are pessimistic in some years and optimistic in others, for which the underlying reasons include an inaccurate projection for the base year, projections for the expected macro-path and the efficiency of official measures (e.g. the efficiency of collection). Pessimistic revenue projections were often the results of the undershooting of inflation (as was the case in 1996, 1998, 2000 and 2001), which only allowed for moderated growth in expenditure appropriation. Optimistic revenue projections (as was the case in 2003 and 2004) allowed for the possibility of delays in adjustment of the increasingly determined expenditure appropriations; curbing them would have been a necessary measure in the interest of major reduction in the deficit.

A third cause of the deviation is the *legislation* phase, when deficit targets do not change formally; nevertheless, the likelihood of achieving them may diminish as excess expenditure that is certain to materialise is occasionally offset by more uncertain items.

Finally, deviation can, to a large extent, also be ascribed to the relatively large flexibility that local governments, budgetary units and the government have in the *implementation* phase. What made across-the-board discretionary spending possible in 2002 was an amendment under which deficit was allowed to deviate from the approved target to an extent amounting to 5% of total expenditure without a draft supplementary budget having to be submitted. Effective from 2005, a further amendment stipulates that in the event that such deviation amounts to 2.5%, the approval of the Parliament shall be obtained.

### **III. 2. 2. Fiscal outlook**

In respect of the ESA deficit, the initial year-2004 situation is unlikely to be significantly different from what is included in the updated Convergence Programme; however, only after March and September 2005 respectively can a more definitive assessment be made. The impacts of current temporary measures (e.g. discretionary delays in VAT refunding) and quasi-fiscal items point to a higher future ESA deficit. Furthermore, other future impacts, e.g. legislative decisions and impacts attributable to Hungary's EU accession, must also be taken into account. We assume that the effects of these factors, which, overall, add to the deficit, will be offset by stronger consolidation measures. If this turns out to be the case, the deficit will be reduced to some extent by savings from interest expenditures.

A standard method of quantifying determinants is the establishment of a risk-based path assuming *an unchanged fiscal policy*. Under this method, the regulations governing projections stipulate that, in addition to the impact of macro-economic trends on taxes and that of automatic budgetary responses and indexing mechanisms of expenditure, the impact of legally approved and/or detailed *measures* can be taken into account when a risk-based scenario is presented. In other words, this method assumes that no further measures, increasing the deficit, will be taken during the years for which no approved budgets are available either in order to improve the deficit situation or for other reasons. This is different from a risk-based path of the 'worst-case scenario' (since there will always be further upward risks to the deficit). Rather, it only contains a certain range of highly probable risks.

As we have no complete macro-economic projection for the entire period leading up to 2008, we employ a simplified version of this rule-based method in assuming that, unless

measures are taken, tax revenues as a proportion of GDP will not change<sup>65</sup>. We will revisit the issue of uncertainty arising from this assumption later in this study.

We also allow for the fact that there are expenditure items over which the government have no full control. They include, for instance, the expenditure of local government and budgetary units with a certain degree of autonomy, for which estimates must allow for past trends, as well as interest expenditures, which can be assessed on the basis of the forward yield curve and the consolidation path. Though incorporating consolidation expectations runs counter to the principles of the rule-based path, we did not wish to provide too many scenarios for interest expenses (see Appendix). A new impact, independent of fiscal policy and hard to quantify, the impact of Hungary's EU accession on the budget should also be taken into consideration. Based on these principles, a fiscal risk, compared to an established deficit target and not yet covered by fiscal measures, can be quantified at a given time.

The coverage of budgetary items determined by existing legislative decisions is relatively narrow over the medium term. The reason for this is that decisions are mostly made a given fiscal year. Rarely are they made on measures to be taken in years to come. Naturally, the impact of measures taken in a given year may have a full-year effect on the following period, as is the case with across-the-board wage increases or increase in surviving spouse's pension, full-year effect on the following year, or with the most recent instance of corporate tax preference, which will exert its impact gradually over the years to come. There are examples of such statutory measures or measures stipulated by the National Council of Collective Conciliation (OÉT) that are in force for several years, e.g. the gradual introduction of the 13-month pension and the abolition of health care contribution. Furthermore, the disappearance of the impact of temporary measures will have to be taken into account in the years to come. Such measures taken to improve the deficit temporarily included the discretionary postponement of refunding VAT until the statutory deadline in 2003, the discretionary temporary delays in refunding VAT beyond the statutory deadline in 2004 and the discretionary postponement of the payment of the 13-month wages from 2004 to 2005. It should also be borne in mind that measures affecting expenditure may automatically affect revenue and vice versa. Thus, for instance, the postponement of the payment of the 13-month wages reduces both expenditure and revenue by 0.5% and 0.1 to 0.2% of GDP respectively. This only affects one single year; then, with the year gone, the former status quo is restored, i.e. other discretionary expenditures<sup>66</sup> and other revenues are likely to be the same as before.

---

<sup>65</sup> Over a longer time horizon, the nominally determined features of the budget, e.g. lump-sum taxes and tax brackets, may also pose a problem. According to a rule-based projection they would not change under the baseline scenario, thus, all these nominal components would generate a major loss of revenue, because of taxes (e.g. excise duties); simultaneously, because of bracket-creeping effects of fixed tax brackets, they would mean excess revenue in the case of income tax revenues. For reasons of simplicity, we apply the principle of 'neutral policy' to such a case, i.e. we assume the valorisation of nominal features.

<sup>66</sup> The so-called discretionary expenditure is non-determined expenditure, i.e. total expenditure less of interest rate, pension-related and NATO-related expenditures as well as the minimum expenditure related to the EU, determined by additionality, EU funds and related co-financing.

**Table 3 Determinants of revenue and expenditure as a proportion of GDP**

	<b>2004 estimate</b>	<b>2008 unchanged fiscal policy</b>	<b>2004-2008 change</b>
<b>Total revenue</b>	<b>43.6</b>	<b>43.7</b>	<b>0.1</b>
Health care contribution	0.8	0.0	-0.8
Customs duties	0.2	0.1	-0.1
EU-related revenue	0.8	1.7	0.9
Other revenue	41.8	41.9	0.1
<b>Total expenditure</b>	<b>49.0</b>	<b>49.6</b>	<b>0.6</b>
Fixed EU-related expenditure*	4.6	5.9	1.3
Interest expenditures	4.4	3.9	-0.5
Pensions	9.2	9.0	-0.2
NATO-related obligations	1.7	1.8	0.1
Other discretionary expenditure	28.5	28.1	-0.4
Of which, local governments spending	11.5	11.7	0.2
<b>Changes with no measures taken</b>			<b>0.5</b>
Of which, deterioration in the primary balance			1.0

\*EU-related expenditure, transfers and expenditures covered by co-financing, supplemented with average minimum expenditure due to additionality.

Our calculations are fundamentally influenced by the fiscal impact of Hungary's EU membership. We took into account official projections, made after accession negotiations, for transfers between the EU and Hungary only for the period until 2006; as for the periods to follow, we assumed that changes would be less rapid<sup>67</sup>.

In 2005 and 2006 the use of EU funds will still serve as replacement for earlier expenditure, since the extent of additionality established for this period is low.<sup>68</sup> Our table of determinants includes the category of what is called fixed EU-related expenditure, which is the sum total of EU-related expenditure, average minimum expenditure due to additionality, EU funds used up and co-financing. In our interpretation the impact of the replaced portion of expenditure means that the range of other discretionary expenditure items may shrink as a proportion of GDP even if consolidation measures are not taken. Later, however, due to a higher extent of additionality, excess expenditure will increase the deficit. As, however, for the time being, we have no knowledge of the degree of the increase, we assume that the actual limits of additionality may remain insignificant.

<sup>67</sup> In 2005 the balance of transfers between the EU and the general government will remain slightly positive; however, compared to 2004, deterioration in it may amount to 0.2% of GDP. Add to this a 0.1% increase in co-financing. By contrast, the balance may improve by as much as 0.1% in 2006, most of which will, however, be offset by increasing co-financing.

<sup>68</sup> Additionality means that EU structural funds cannot replace member states' general government or other corresponding structural expenditure.

As regards fixed investment expenditure, a stable GDP ratio can be assumed only if increasing EU financing and co-financing allow for the possibility of internal rearrangements. Barriers to this include the reference values established by the EU for measuring additionality, the autonomy of local governments in fixed investment activities and the proportion of postponed fixed investment (in areas such as health care and rail services). As for automatic budgetary measures, we only anticipate the index linking of pensions to wages and pension inflation. We could not take into account such determinants that arose from specific legislation (e.g. the Act on Education) or the tasks of and normative sums granted to local governments. Although the latter two may represent determinants of local government subsidies, they do not affect final expenditure (i.e. local governments' operational expenses and fixed investment expenditure) directly.

In the case of *local governments and budgetary units with some degree of autonomy* and with no automatic government control over them we allow for both government subsidies and past trends. Such uncontrolled items include the operational expenditures, fixed investment, sales and fee revenues as well as sales of assets in this category. Local governments' standard behaviour, e.g. the impact of local elections, should also be taken into account. During the two years immediately following such elections expenditure is consistently low; fixed investment activity is more buoyant in the next two, however. Such an impact, which would add to deficit, will not materialise in 2008 as it is not an election year.

To sum up, the categories of expenditure determinants and the fiscal impact of Hungary's EU membership will have deteriorated the primary balance by 1% of GDP by 2008. (Table 3)

The question may arise how changes in the macro-economic path are likely to affect the results. In providing a projection for revenues, we accorded very low likelihood to indirect revenues from faster economic growth in connection with Hungary's EU accession, consistent with the fact that our projection also allowed for a moderate increase in fixed investment. Naturally, if we established a high reference value for additionality, economic growth and tax revenues would also be higher; this, however, could offset the deficit-increasing impact of resultant excess fixed investment expenditure only to a small extent

Furthermore, consolidation measures also exert both direct and indirect impacts on macro-variables such as wages, consumption and fixed investment. Curbing expenditure automatically decreases revenues through its direct tax content. Over the short term, the indirect impacts of reduction in expenditure also decrease revenues through curbing domestic demand.<sup>69</sup> By contrast, fiscal consolidation focussing on structural measures may even increase potential GDP; however, the analysis of such a scenario has not been included in the objectives of this study.

With the primary balance calculated, we now turn to providing a projection for interest expenditures. Interest expenditures are, in part, still determined in 2005 and 2006; as, however, we follow the time horizon further on, we can only provide an estimate for an increasingly large portion of them. Assuming that fiscal consolidation *does* occur, diminishing interest expenditures are expected to account for savings amounting to a total of 0.5% of GDP before 2008, which may edge up even to 0.9% under a very favourable

---

<sup>69</sup> For purposes of providing an illustration of magnitude, we wish to point out that, according to an earlier simulation that we performed, 1% GDP-proportionate fiscal contraction generates an approximately 25 or 1/3 decrease in GDP during the first year. This, in turn, means that GDP-proportionate revenue also declines by at least 0.1%.

scenario (Tardos, 2004, see Appendix)<sup>70</sup>. We did not quantify an interest rate path associated with an unchanged fiscal policy, since in this case not only debt, but also yields would be higher. In addition, it is difficult to provide an estimate for the extent of the latter

It should be emphasised that the figures presented do not include any quasi-fiscal items, which are reflected in the official deficit only upon subsequent debt assumption and which, nevertheless, influence demand continuously. Apparently, such items are under no full government control. In effect, however, they are associated with subsidies, granted to finance loss-making companies (e.g. MÁV and BKV), fixed investment and loans, that are of quasi-fiscal nature, as they are provided under government control and with a government guarantee. Nor does unchanged fiscal policy mean in this case that, with the effect of current decisions worn off, these items disappear. If this were the case, we would have an identical assumption of fixed investment and subsidies to corporations, which are included in the budget with an identical content. Accordingly, based on past trends, these items should be estimated at a level that can be financed. The problem is that, depending on the type of financing, quasi-fiscal activities are reflected in official accounts at different intervals. Debt assumption occurs as an “extraordinary event” every few years. Disbursements related to PPP’s involving private financing are on a continuous basis and spread over time.

---

<sup>70</sup> The calculations in this paper yield values lower than the ones in a study by Orbán and Szapáry (2004). The latter puts improvement in the interest balance position arising from yield convergence at 1 to 2.1/ in Hungary. A major portion of the difference is attributable to the fact that the authors quantified the fall in interest expenses relative to the 2003 the interest balance position; they expect a 0.5 to 1.6 fall in the interest balance compared to the 2004 balance. The remaining portion of difference can be ascribed to the fact that the rule of thumb in the study referred to above does not allow for the fact that the interest burden on fixed-rate bonds which have already been issued, but which will not mature before 2009 is determined, or the fact that fall in the interest balance interacts with the debt path.



### *How much consolidation can be generated by curbing expenditure? An example*

Given the initial situation, the risk-based path, which allows for the determinants presented and no measures taken, would reveal further deterioration until 2005 and 2006, then slow improvement. Without any further adjustment, the ESA deficit would, even under a favourable scenario, i.e. with interest expenditures falling, grow by 0.5% prior to 2008 and, within this, the primary balance would deteriorate by 1%.

If, consistent with the baseline scenario, the deficit situation improved at the same rate as targeted in the updated Convergence Programme, the deficit should be 2.5 percentage points lower, which, based on determinants, would require 3-percentage point improvement in the primary balance. If this were concentrated on the expenditure side, due to the tax content of this expenditure, reduction in public spending amounting to approximately 4% of GDP would be necessary<sup>71</sup>. This exceeds the reduction in primary expenditure experienced in EU countries prior to their EMU entry.

The introduction of a budget rule in the case of expenditure (covering a wide range of discretionary expenditures) could be a component of the reform of budgetary institutions.<sup>72</sup> Of budgetary expenditure item, the rule could govern all discretionary (non-determined) expenditure items. In this case, some realistically sustainable ceiling should be introduced on aggregate increase in these expenditure items. For instance, it could be stipulated that growth in aggregate expenditure should not exceed inflation.

In our estimate, discretionary (non-determined) expenditure items may account for 28% of GDP in 2008 (see Table 3). Compared to 2004, 13-month wages, which were temporarily excluded from them in 2004, increase expenditure; by contrast, expenditure items replaced with EU funds reduce it (see increase in fixed EU-related expenditure), because of the currently low value of additionality.

In respect of expenditure items accounting for 28% of GDP, the rule of keeping real value constant would mean that approximately 3.5% average annual economic growth would allow for the possibility of 3.7% GDP-proportionate reduction in expenditure, i.e. an additional 0.3% could be saved. Due to further risks not taken into account by the baseline scenario, this may not be adequate because of the impact of other factors increasing deficit.

Under our most restrictive assumption, discretionary expenditure includes the direct expenditure of local governments and budgetary units, which the central government can control indirectly. Budgetary units are more subject to such control, whereas in the case of local governments control is indeed more indirect. As discretionary local government expenditure (less of estimated expenditure included in fixed EU-related expenditure) may amount to nearly 12% of GDP; without this, the category of expenditure to which any rule may apply narrows to 16%. For an expenditure rule to fully apply, an internal pact between the central government and local governments, an example of which can be found in several EU member states, ought to be made.

---

<sup>71</sup> The tax content of government expenditure (e.g. income tax, contributions and VAT), which translates into a loss of revenues on the revenue side, must also be taken into consideration.

<sup>72</sup> A similar attempt was a few years ago the raising of the issue of adjusting public sector wages to half of economic growth rate. Although this attempt did not lead to the formulation of any official rule, it was reflected in the agreements concluded with trade unions (e.g. in 2001).

### *Sources of further uncertainty*

Relative to the baseline scenario, of the risks emerging, difference in *interest expenditures* may point to two directions. One is that yield convergence and decline in expenditure may be favourable to the extreme.<sup>73</sup> However, a back-loaded fiscal consolidation and/or more partial yield convergence may add to the need for consolidation.

A further risk that is difficult to quantify and that points to a higher deficit is expected developments in the cyclical component. The evaluation of the impacts of the business cycle on the general government position will be based on an estimate by the Commission, which takes into consideration the average cyclical sensitivity of the budget. As it has also been pointed out by the Commission, this method cannot be applied satisfactorily to what is called atypical situations.<sup>74</sup> In an atypical situation the composition of the business cycle is different from average composition; for instance, when either internal or external demand exerts a dominant impact. The period between 2002 and 2003 was an example of the former, while 2004 is likely to have been an example of the latter. In cases like this, the method of desaggregation, in a breakdown by tax base categories, can be applied to the situation at hand.<sup>75</sup> The identification of such situations is crucial as wages and consumption, due to a higher tax burden, play a more important role among the revenues of the budget than in GDP. As the Convergence Programme also suggests that wages and consumption will grow at a slower pace than will GDP in the years to come, based on the composition effect, GDP-proportionate revenues may decline. Therefore, this poses the risk that, unlike the period between 2002 and 2003, the coming years may see the business cycle exert a negative rather than a positive impact on the general government position despite a relative favourable turn (i.e. growth) in GDP; in order that objectives can be attained, this may necessitate a more significant structural fiscal adjustment than what is presented in the baseline scenario, with the difference amounting to even 0.6 of GDP.

Furthermore, EU transfers pose an upside risk to the deficit. If EU transfers to the budget exceed our conservative estimate, they will not improve the deficit position on average, since, faced with the limits of additionality, they will mean excess expenditure during the period as a whole. Depending on future additionality values, this may further deteriorate the balance. Deficit is further increased by co-financing, the impact of which is, however, somewhat offset by excess tax revenues.

Developments in creative and quasi-fiscal items are a source of further downward and upward risks. The official (ESA) deficit situation cannot be improved continuously compared to the 'underlying' deficit, the latter including a wider range of government liabilities from an economic point of view (e.g. formally contingent liabilities, losses generated by state-owned companies, other quasi-fiscal activities and deferred payments). In consequence, in establishing a medium-term path, we should allow for the risk posed by the fact whether or not deferred payments and quasi-fiscal items, excluded from official recording earlier, are sustainable in the period under review, or they will occasionally be

---

<sup>73</sup> The fall in interest expenditures under the most favourable scenario as presented in the Annex amounts to 0.9% of GDP, which does not differ significantly from the amount of savings assumed as a baseline scenario in the Convergence Programme.

<sup>74</sup> European Commission (2000) "Public finances in EMU – 2000" Report of the Directorate-General for Economic and Financial Affairs, No. 3.

<sup>75</sup> Such methods include the one employed by the ECB and our own method (PF-MCHP). See P.Kiss-Vadas, "Mind the gap – watch the ways of cyclical adjustment of the budget balance", *MNB Working Papers*, 7/2004.

included in ESA accounts as, for instance, debt assumption.<sup>76</sup> If the latter is the case, the need for adjustment may be greater than that outlined in the baseline scenario.

On the other hand, these items may be financed continuously from outside the budget until 2008, especially if newer forms of quasi-fiscal activities become more relevant.<sup>77</sup> Based on the experience of other countries, they may include the spread of government obligations over a longer term, i.e. 10 to 20 years. This may be true for PPP fixed investment, which, though it does not alter the present value of liabilities, it may mean a lower level of obligations over a horizon of a couple of years. We wish to emphasise that if quasi-fiscal activity remained unchanged at the current level or even heightened, this would make continuous reduction in the deficit in the longer run (after 2008) and the establishment of a balanced position stipulated by SGP significantly more difficult.

### III. 2. 3. Aspects of quality of adjustment

As we noted in the introduction, the manner in which measures aimed at consolidation are implemented is of key importance to macro-economic effects. Short-term and long-term impacts of these measures may be significantly different.

A favourable scenario could materialise if, rather than temporary and formal measures, *structural* measures, i.e. sustainable measures improving quality and, hence, long-term growth, were a main factor of consolidation. Although these incur excess expenditure (e.g. dismissal pay and fixed investment), overall, they improve the ratio of productive expenditure, the importance of which was also highlighted in *Report on Public Finances in EMU* in 2004. Some international organisations, e.g. the OECD and the IMF, formulated even more concrete proposals for measures aimed at fiscal consolidation in Hungary. They also underscore the importance of the aspects of quality, such as reducing the distorting impact of taxes and increasing the productivity of general government expenditure, which influence longer-term economic growth.<sup>78</sup> As regards the productivity of expenditure, a number of structural problems can be pointed out, e.g. the low proportion of health care-related fixed investment within fixed investment as such. The estimated size of under- and overfinancing may, however, grow further if insufficient fixed investment in transport (e.g. the upgrading of the road and railway networks) and environment protection is taken into consideration. The productivity of expenditure could be greatly enhanced if savings attributable to structural measures were used to increase such expenditure<sup>79</sup>.

Longer-term growth will be favourably influenced by an upswing in infrastructural fixed investment boosted by EU financing. However, given that there will be loss of tax content even four years' savings in the case of primary expenditure are unlikely to be adequate for the sustainable consolidation.

---

<sup>76</sup> The question is when the debt of state-owned companies and loans (e.g. to the agrarian sector) granted against government guarantee are recorded as expenditure in the budget. Such debt was last assumed in 2002 (for the stock accumulated since then, see memo items in Table 2).

<sup>77</sup> It should be borne in mind, however, that some of the quasi-fiscal items are also borderline cases statistically. Later, subject to decisions on the ESA methodology, they may be subsequently included in the deficit of the relevant year.

<sup>78</sup> A recent analysis by the IMF (IMF 2004a) proposes a 3.1 to 3.6 reduction on the expenditure side. The introduction of co-payment, according to the IMF study, could improve the balance of health care by 0.5% of GDP.

<sup>79</sup> Naturally, productivity also grows if such excess expenditure is financed through PPPs. The only problem is that in this case the excess burden imposed by this remains hidden in the short run, since there is no change statistically in the deficit position.

The requirement to reduce the deficit on a continuous basis also restricts the possibility of sustainable tax cuts. Tax competition is less relevant in the case of taxes and contributions paid by households. As the distortion impact of the tax regime is not, in itself, linked with a high ratio of centralisation (average tax burden), rather, it is attributable to uneven distribution and high marginal tax burden; thus, in principle, the distortion impact can be reduced even if revenues remain unchanged<sup>80</sup>. Despite high VAT rates, revenues are relatively low, because of tax evasion.<sup>81</sup> The efficiency of the tax regime could be improved through a gradual narrowing of tax benefits and the widening of the tax base; meanwhile, revenues may also be increased to a minimum extent if needed. Within this increase, the reform of co-payment due from those relying on government services could qualify as a structural measure.

Implementing structural measures may be time-consuming and expensive, however, formal and temporary ones not only cause a delay in actual adjustment and carry the risk of a potential reversing, but they may also result in certain shortcomings, as also pointed out by the State Audit Office, in project and institution financing as well as PPP's.

One type of *temporary* measures is the collection of one-off revenues another is the postponement of expenditure and projects. The latter can be achieved through the curbing of expenditure outlined above, which, unlike reforms, only lead to underfinancing. Postponing fixed investment may generate temporary savings; however, a mandatory minimum requirement (i.e. additionality) of EU-financed (and co-financed) fixed investment and a high proportion of autonomous local government fixed investment restrict such postponement.

*Formal* measures and creative accounting have their limitations, and the ESA deficit position can be improved for only a limited period of time for two reasons. Past experience shows that items recorded in accounts other than the official ones (i.e. quasi-fiscal items) had to be recognised subsequently as their financing would, sooner or later, face constraints. Temporary improvement is also actually limited by the fact that it takes burden off the budget inasmuch as it means the 'outsourcing' of earlier expenditure. In other words, additional quasi-fiscal fixed investment cannot reduce fiscal deficit even in the short run. The minimum requirements that we referred to in connection with the EU (the volume of fixed investment cannot fall below a certain level and limited corporate subsidisation) impose limitations on the outsourcing of earlier expenditure.

Economically, the problem that quasi-fiscal items pose is that, although they do improve the ESA deficit position temporarily, they cannot improve the net present value of future taxes and exert an immediate adverse impact on the balance of payments. It is important

---

<sup>80</sup> A high ratio of centralisation is also misleading in a certain sense, as it is closely related to the relatively high tax content of government expenditures. For example, taxes and contributions on wages are paid in full in the general government, in contrast to the private sector. VAT must be paid on government fixed investment, which is not the case in the corporate sector.

<sup>81</sup> Based on the comparisons, effective VAT burden was lower only in Romania. This reflects that high rates encourage tax evasion, on the one hand, and that tax authorities were less efficient than in other CEECs, on the other hand. The underlying reason for this is that the threshold value above which tax payment is mandatory is lower in Hungary; thus, the number of tax residents has always been higher here than elsewhere. (Jack, 1996)

that this should be taken into account when selecting from among various measures and paths.<sup>82</sup>

Finally, experience (*Alesina and Perotti, 1996*) reveals that, in order that the results of consolidation can be sustained, it is inevitable that institutional solutions should be reconsidered. The proposals by both the State Audit Office<sup>83</sup> and the IMF ought to be taken into account (*Allan and Parry, 2003*). Thus, for instance, in respect of planning, efficiency could be improved through reliable projections included in medium-term budget frameworks in a manner that accountability is ensured, a conservative estimate for the base year that excludes temporary impacts, the adoption of a consensus macro-path and a conservative estimate for the effects of fiscal measures.

Furthermore, as has been mentioned, uncertainty could be reduced in the legislative stage if a budget rule on aggregate expenditure were introduced. At this stage it would be essential that a comprehensive and regular analysis of fiscal risks be performed, with special respect to quasi-fiscal items, including local governments. Predictability could be increased in the implementation stage if an internal pact could be concluded with local governments in order to avoid any surprise change in the local deficit.

Putting an end to quasi-fiscal activities would obviate the need for the adoption of an expenditure rule. Therefore, either they ought to be abandoned immediately, which would add to the deficit, or limitations, similar to those stipulated by the expenditure rule, ought to be put in place in a transparent manner in the case of these items as well. The supplementary disclosure of quasi-fiscal liabilities would be crucial, e.g. contingent liabilities that are most likely to be paid could be recorded. This would be only informative however, if not only changes in them were recorded, but also new liabilities (quasi-fiscal deficit) and old ones (debt assumption) were recognised separately.

---

<sup>82</sup> Over the longer term, PPP may exert only a minor impact on general government, although, depending on costs and efficiency, such an impact may be either favourable or unfavourable. There are international examples for both; the risk of an unfavourable impact is on the upside, owing to the fact the short-term advantages of reducing the deficit may prove to be more important factor of decisions than longer-term implications.

<sup>83</sup> In 2003 the State Audit Office provided a summary of the problems it identified in the planning and implementation of the government budget as well as the operational and organisational structure of the general government over the past 15 years of pursuing its supervisory activity.

## References

- Alesina, A. and S. Ardagna (1998), "Tales of fiscal adjustment", *Economic Policy*, No. 27.
- Alesina, A., Ardagna, S. – Perotti, R. and Schiantarelli, F. (1999) "Fiscal Policy, Profits and Investment", NBER Working Paper, 7207
- Alesina, A. and Perotti, R. (1995a), "The Political Economy of Budget Deficits", *IMF Staff Papers*, 42, 1-31.
- Alesina, A. and R. Perotti (1995b), "Fiscal expansions and adjustments in OECD countries", *Economic Policy*, No. 21.
- Alesina, A. and R. Perotti (1996), "Fiscal adjustments in OECD countries: composition and macroeconomics effects", NBER Working Paper No. 5730.
- State Audit Office: (2004), "Report on the Monitoring of the Implementation of the Budget of the Republic of Hungary" in Hungarian
- Allen, W. and T. Parry (2003), "Fiscal Transparency in EU Accession Countries: Progress and Future Challenges" IMF working paper August 2003
- Andrés, J., R. Doménech and A. Fatás (2004), "The Stabilizing Role of Government Size" CEPR working paper May 2004
- Antzak, M. (2003), "Do Acceding Countries Need Higher Fiscal Deficits?" Center for Social and Economic Research, Warsaw, 2003
- Backe, P. (2002), "Fiscal Effects of EU Membership for Central European and Baltic EU Accession Countries" Focus on Transition 2/2002
- Baldacci, E., B. Clements, S. Gupta and C. Mulas-Granados (2004), "Front-Loaded or Back-Loaded Fiscal Adjustments: What Works in Emerging Market Economies?" IMF working paper
- Bilbiie, F. O. and Straub, R. (2004), "Fiscal Policy, Business Cycles and Labour-Market Fluctuations", MNB Working Papers, 2004/6.
- Branson W. H., J. B. de Macedo and J. von Hagen (1998), "Macroeconomic Policy and Institutions during the Transition to European Union Membership" NBER working paper May 1998
- Briotti, M. G. (2004), "Fiscal adjustment between 1991 and 2002: stylised facts and policy implications", ECB Occasional Papers No9.
- Benczúr, P. (1999), "Changes in the implicit debt burden of the Hungarian social security system", MNB working papers, 1999/8, in Hungarian
- Bernoth, K., von Hagen, J. and Schuhknecht, L. (2004), "Sovereign Risk Premia in the European Government Bond Market, ECB Working Paper, 369.
- Buti, M. and Sapir, A.. (1998), "Economic Policy in EMU" – A Study by the European Commission Services, Clarendon Press, Oxford
- Buti, M. and P. van den Noord (2003), "Discretionary Fiscal Policy and Elections: the Experience of the Early Years of EMU" OECD working paper

- Buti, M. and P. van den Noord (2003), "What is the impact of tax and welfare reforms on fiscal stabilizers? A simple model and an application to EMU" EC Economic Papers No.187.
- Buiter, W. H. and Grafe, C. (2002), "Patching Up the Pact: Some Suggestions for Enhancing Fiscal Sustainability and Macroeconomic Stability in an Enlarged European Union" CEPR Discussion Paper, 3496
- Capet, S. (2004), "The Efficiency of Fiscal Policies: A Survey of the Literature" CEPII working paper, No. 2004/11
- Coricelli, F. and Ercolani, V. (2002), "Cyclical and Structural Deficits on the Road to Accession: Fiscal Rules for an Enlarged European Union", CEPR Discussion Paper, 3672.
- Csajbók, A. – Csermely, Á. (ed.) (2002), "Adopting the euro in Hungary: expected costs, benefits and timing", MNB Working Papers, 24
- Gali, J. – López-Salido, J. D. and Vallés, J. (2004), "Understanding the Effects of Government Spending on Consumption", ECB Working Paper Series, 339.
- Elmendorf, D. W. and Mankiw, N. G. (1998), "Government Debt", in Taylor, G. B. and Woodford, M, Handbook of Macroeconomics, Amsterdam, Elsevier
- European Commission (2000), (2001), (2002), (2003) and (2004a), "Report on public finances in EMU", European Economy
- European Commission (2003), "Broad Policy Guidelines"
- European Commission (2004b), "Strengthening economic governance and clarifying the implementation of the Stability and Growth Pact", Brussels, 3. September 2004.
- European Central Bank (1999), "The implementation of the Stability and Growth Pact", megielent: ECB Monthly Bulletin, May
- Faini, R. (2004), "Fiscal policy and interest rates in Europe", Roma, mimeo
- Fatás, A., von Hagen, J., Hallett, A. H., Strauch, R. R. and Sibert, A. (2004), "Stability and Growth in Europe: Towards a Better Pact, CEPR Monitoring European Integration 13
- Ferenczi B. and Jakab Z. (ed.), (2002), "Manual to Hungarian Economic Statistics", MNB
- Franco, D. – Balassone, F. and Francese, M. (2003), "The Debate on European Fiscal Rules", Focus on Transition, I/2003, OeNB
- Giavazzi, F., T. Jappelli and M. Pagano (2000), "Searching for non-Keynesian effects of fiscal policy: evidence from industrial and developing countries", NBER Working Paper No. 7460.
- Giavazzi, F. and M. Pagano (1990), "Can severe fiscal adjustments be expansionary? Tales of two small European countries", NBER Macroeconomic Annual, Vol. 5, MIT Press.
- Giudice, G., A. Turrini and J. Veld (2003), "Can fiscal consolidations can be expansionary in the EU? Ex-post evidence and ex-ante analysis", EC Economic Papers No. 195
- Gleich, H. (2003), "Budget Institutions and Fiscal Performance in Central and Eastern European Countries" ECB working paper February 2003
- Hallett, M. (2004), "Fiscal effects of accession in the new Member States" EC Economic Papers No. 203

- Von Hagen, J., A. Hughes Hallet and R. Strauch (2001), "Budgetary consolidation in EMU", Economic Papers, No. 148.
- IMF (2003), "SNA Review: GFS List of Issues"
- IMF (2004a), "Staff Report for the Article IV Consultations"
- IMF (2004b), "Public-Private Partnerships" Fiscal Affairs Department, March 12, 2004
- In't Veld J. and A. Turrini (2004), "The Impact of the EU Fiscal Framework on Economic Activity" Eurofram Conference on Fiscal Policies in the European Union, June 2004
- Jack, W. (1996), "The efficiency of VAT implementation: a comparative study of Central and Eastern European countries in transition IMF working paper
- Jonung, Lars and Martin Larch (2004), "Improving fiscal policy in the EU, the case for independent forecasts" European Economy, Economic Papers. No. 210. August 2004. European Commission
- Kopits G. and I. P. Székely (2004), "Fiscal Policy challenges of EU accession for Baltics and Central Europe"
- Larch M. and M. Salto (2003), "Fiscal Rules, inertia and discretionary fiscal policy" EC Economic Papers No. 194
- Magyar Nemzeti Bank (2004), Report on Inflation, November 2004
- Mankiw, N. G. (2000), "The Savers-Spenders Theory of Fiscal Policy" NBER working paper February 2000
- McDermott, J. and R. Wescott (1996), "An empirical analysis of fiscal adjustments", IMF Staff Papers, Vol. 43, No. 4.
- Ongena, H. – Winkler, B. (2003), "Fiscal Policy in EMU", Focus on Transition, I/2003, OeNB
- Orbán G. and Szapáry, Gy. (2004), "The Stability and Growth Pact from the perspective of the member states", MNB Working Papers, 2004/4
- Organisation for Economic Cooperation and Development [OECD] (1995), "Income Distribution in OECD Countries. Paris: OECD.
- Organization for Economic Cooperation and Development [OECD] (2000), "OECD Economic Surveys: Hungary", chapter IV: Coping with ageing
- Perotti, R. (1996), "Fiscal consolidation in Europe: composition matters", American Economic Review: Papers and Proceedings, Vol. 86, No. 2.
- P.Kiss G. (2002), "A fiskális jelzőszámok új megközelítésben" (A new approach to fiscal indicators, in Hungarian) Közgazdasági Szemle, 2002/4
- P. Kiss, G. and G. Vadas (2004), "Mind the Gap – Watch the Ways of Cyclical Adjustment of the Budget Balance" MNB Working Papers, 2004/7
- Prammer D. (2004), "Expansionary Fiscal Consolidations? An Appraisal of the Literature on Non-Keynesian Effects of Fiscal Policy and case Study for Austria" OeNB, Monetary Policy & the Economy Q3/2004
- Rocha, R. and Vittas, D. (2001), "Pension Reform in Hungary – A Preliminary Assessment", The World Bank Policy Research Working Paper



- Sapir, A. et. al. (2003), "An Agenda for a Growing Europe – Making the EU Economic System Deliver", Report of an Independent High-Level Study Group established on the initiative of the President of the European Commission
- Silgoner, M. A., G. Reitschuler and J. Crespo-Cuaresma (2003), "The Fiscal Smile: The Effectiveness and Limits of Fiscal Stabilizers" IMF working paper
- Tanzi, V. (1995), "Government Role and the Efficiency of Policy Instruments". IMF Working Paper WP/95/100. Washington, DC: International Monetary Fund.
- Tanzi, V. and L. Schuknecht (1998), "The Growth of Government and the Reform of the State in Industrial Countries", megjelent: Andres Solimano (szerk.), Social Inequality, Ann Arbor, MI: Michigan University Press
- Tardos Károly Gergely (2004), "Methodological issues related to the interest balance of the budget and the yield curve sensitivity of the balance", MNB mimeo
- Torres, L. and V. Pina (2001), "Public-Private Partnerships and Private Finance Initiatives in the EU and Spanish Local Governments" European Accounting Review, vol. 10 (September), pp. 601-19
- Zandvakili, S. (1994), "Income Distribution and Redistribution through Taxation: An International Comparison," Empirical Economics 19, 3: 473-91.
- Thygesen, N. (2002), "The Stability and Growth Pact: Any Need for Revision, A note for the Economic and Monetary Affairs Committee of the European Parliament
- Van den Noord. P. (2000), "The Size and the role of Automatic Fiscal Stabilizers in the 1990s and beyond" OECD working paper
- Yläoutinen, S. (2004), "Fiscal Frameworks in the Central and Eastern European Countries" Finnish Ministry of Finance discussion paper No. 72

## Annex

### Experience related to fiscal adjustments in member states of the euro zone

#### *Examples of unsuccessful adjustment*<sup>84</sup>

##### *Italy*

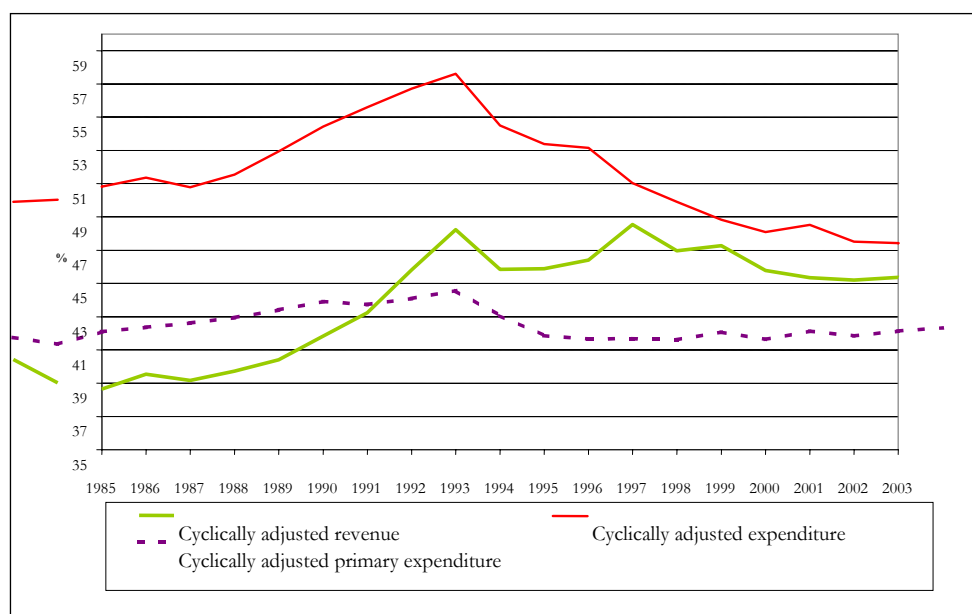
In the early 90s, Italy had been struggling with a high deficit (over 10 per cent) and a large debt (over 100 per cent) for some years. Thus, upon the signing of the Maastricht Treaty in 1991, it was obvious that major consolidation efforts were required. Contrary to the government targets promoted in the early 90s, Italy implemented adjustment based on the increase of revenues; while the cyclically adjusted revenues rose by nearly 8 per cent of the GDP between 1991 and 1997, the amount of adjusted primary expenditures fell by only 2 per cent of the GDP (see Chart F-1.). The rate of adjustment was not even-paced. The period 1991-1993 was characterised by unsuccessful attempts in cutting expenditure, in parallel with major “emergency” tax increases covering basically all tax types. In 1994-1995, the government made serious efforts to cut expenditures: in addition to putting a limit on government wages, it curbed government purchases and partly reformed the pension system; as a result, the cyclically adjusted primary expenditures fell by 2.5 per cent. The government, however, implemented tax cuts in the same period, partly in reaction to political pressure and partly to counterbalance the adverse impact of the pronounced distortion of the tax raise on growth, therefore the primary balance did not improve significantly. In consideration of the extremely high interest expenditures, approximating 10 per cent of the GDP, on the whole, these stringency measures proved to be insufficient. Moreover, with a moderate fall in government wages, social expenditures even exceeded the average rate for 1990 by a minor amount. The Italian government, however, did not undertake to further reform the expenditure side. Nearing the finish line for the fulfilment of criteria, Italy made desperate efforts and implemented temporary measures to increase revenues in the attempt to reach the 3 per cent rate of the deficit. The true nature of this strategy is reflected by the “euro tax” – defining one of the new taxes introduced in 1997, expressly intended as a temporary measure. Thus, the over 2 per cent cut in the ratio of expenditures to GDP is fully contributed to the improvement of the interest balance; the cyclically adjusted primary expenditures remained unchanged in these two years. For the purpose of reducing the deficit, in addition to temporary taxes, the Italian government also employed certain creative accounting techniques which contributed to the fall in the deficit for 1997, in the total amount of roughly 0.7 per cent of the GDP.

Following the fulfilment of Maastricht criteria, the government was forced to implement tax reform – tax cut – which was not accompanied with the reform of expenditures. As a result, the primary balance has been gradually worsening since 1997; it decreased by 3.5 per cent of the GDP up to 2003.

---

<sup>84</sup> The description of countries relies heavily on the study of von Hagen and his co-authors (2001).

**Chart F- 1: Cyclically adjusted budget expenditures and revenue - Italy**



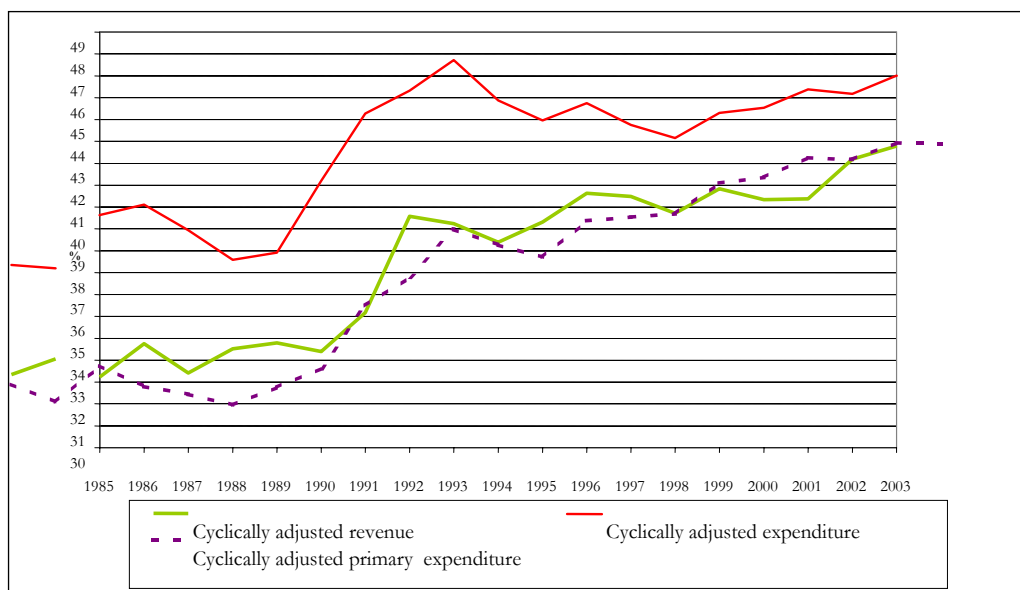
Source: European Commission, Ameco

### Portugal

Portugal provides the model example of adjustment strategy based on the increase in revenue, a rare exception where the cyclically adjusted primary expenditures rose considerably in the period 1991-1997. On the whole, the size of the budget increased significantly in the 1990s; growth has been continuous since the introduction of the euro (see Chart F-2). We must add, nevertheless, that in Portugal the rate of primary expenditures to the GDP still remains below the EMU average.

In the early 90s, Portugal struggled with a high deficit (approx. 6 per cent) and had an average debt. The convergence program, approved in 1991, targeted major budgetary adjustments; according to the plans, the deficit was to fall below 3 per cent by the end of 1995. In 1992, wide ranging tax increases were implemented (income tax, indirect taxes) with parallel attempts at simplifying the tax system, resulting in a jump in revenue. The crisis in 1993, however, obstructed the consolidation process; in addition to falling revenues, primary expenditures rose significantly even on a structural level, primarily as a result of agricultural and export subsidies. The revived adjustment program of 1994 targeted the cut in expenditures, primarily the reduction of transfers and government wages. Little was implemented of the program; in fact, structural expenditures increased by a further 2 percentage points in the reference period, due to e.g. the introduction of subsidised home loans. The fact that Portugal reached the 3 per cent in 1997 is related to two fundamental factors. Firstly, interest expenditures fell at a rate exceeding the figure in Italy – 3.5 per cent of the GDP between 1994 and 1997. Secondly, the tax reforms introduced in 1993-1994 played a key role, establishing simpler administration and the of the tax bases. In contrast to Italy, in place of temporary measures, the improved efficiency of the tax system contributed to the rise in revenues, thus cyclically adjusted revenues have not decreased significantly since the establishment of the EMU. Fiscal prudence, however, has not been implemented, as indicated by the rise in expenditures since 1997 and the fiscal problems related to 2000-2001.

**Chart F- 2: Cyclically adjusted budget expenditures and revenue - Portugal**



Source: European Commission, Ameco

### Greece

The example of Greece is noteworthy particularly on the basis of the revision of data published in September of 2004, corresponding to approximately a considerable 2 per cent rate of the GDP per annum. Consequently, Greece failed to fulfil the 3 per cent deficit criterion in the year of the reviewed Maastricht criteria (1999) and ever since. Thus, on the basis of freshly published data, the example of Greece may clearly be defined as unsuccessful, although the country has implemented major adjustments even with the modified data.

Up to the middle of the nineties, Greece recorded a deficit of over 10 per cent, thus it was forced to make extraordinary efforts to fulfil the criterion. The case of Greece is similar to Italy and Portugal to the extent that it applied a strategy targeting higher revenue, and the improvement of the interest balance significantly contributed to the improved balance. However, the problems stemmed from the expenditure side and not the revenue side. In other words, it seems that the country succeeded in sustainably increasing revenue in the long term which, in addition to the rise in tax revenue, is greatly contributed to the sustainable transformation of the tax system.

From the early 90s, Greece has been reforming the tax system on a regular basis. In addition to the increases of direct, indirect taxes and contributions, these measures were primarily linked to steps addressing the serious problem of tax evasion and transformation targeting the simplification and enhanced progressivity of the tax system. In the period 1990-1999, the ratio of taxes and contributions to the GDP grew by nearly 10 per cent, although it is important to emphasise that the ratio of taxes was very low in European comparison, not least because of difficulties related to tax collection (26 per cent of the GDP in 1990, in comparison with e.g. 38 per cent in Italy and 32 per cent in Portugal).

More modest efforts were made on the expenditure side. Moreover, in 1996-1997, obvious expansionary measures were made in relation to transfers and wages<sup>85</sup> which contributed to the failure in reducing the deficit to appropriate levels by 1997, and by 1999, as indicated by new information.

Thus, on the whole, the adjustments of Greece reveal a mixed picture. The country must make serious efforts to fulfil the conditions of the Stability and Growth Pact, primarily in the area of expenditures. The expected rise in pension expenditures poses major risks which the country can only challenge with the further reform of the pension system. Primary expenditures are characterised by the rigidity of government wages and social expenditures; the budget does not offer sufficient resources for the management of structural problems (e.g. low funds for research and development, high structural unemployment). According to the 2003 assessment of the Commission, major efforts must be made to establish the sustainability of the budget, particularly in light of the continued enormous debt, equalling over 100 per cent of the GDP.

### ***Examples of successful adjustment***

#### *Spain*

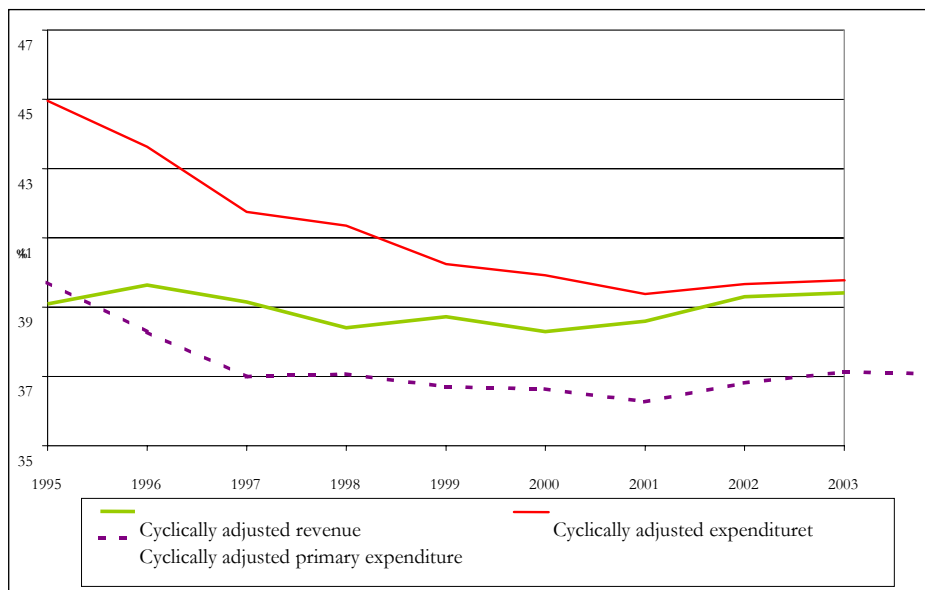
The case of Spain is similar to Italy in the sense that most of the adjustments were implemented in the final two years – 1996-1997 – since the consolidation package planned for the first half of the 90s failed, primarily, similarly to Portugal, in consequence of the 1992-1993 crisis. In 1993, the budget deficit reached 6.6 per cent of the GDP, primarily as a result of the rise in social expenditure, and even with cyclical adjustments, it indicated a major worsening in comparison to 1992. In contrast to Italy, however, Spain wished to implement the Maastricht target through the wide scale reduction of expenditures which, in addition to an improved balance, also included the comprehensive reform of the welfare system. Nevertheless, we should add that the debt was much smaller in Spain than in Italy, therefore it required a lower primary surplus, although the ratio of interest expenditures to GDP also fell at a smaller rate.

The ratio of expenditures to GDP decreased on a gradual basis from 1994; the highest fall was in 1996-1997 (see Chart F-3). With a view to limiting government wages, the government – in agreement with the trade unions – modified the system of wage determination, the indexing practice. In agreement with regional governments, the government limited health expenditures, although actual expenditures did not fall at a rate indicated by official figures due to the above mentioned PPP agreements (Torres and Pina, 2001). Beyond major stringency measures affecting social benefits – the amount of transfers and subsidies fell by 3 per cent of the GDP between 1994 and 1997 – the operating costs of government institutions and investment expenditures were also reduced at a lower rate.

---

<sup>85</sup> Although from 1994, the Greek government made attempts to curb the rise in government wages, this policy became less effective from 1996; in a single year, the number of government employees rose by 1.5 per cent. In 1996 family benefits, agricultural subsidies and certain pensions were raised.

**Chart F- 3: Cyclically adjusted budget expenditures and revenue - Spain**



Source: European Commission, Ameco

The revenue side basically remained stable in the final four years; this trend, however, is linked to the tax reforms promoting economic growth. Social security contributions payable by employers, for example, were reduced to support the rise in employment; lost revenue was supplemented with, for example, the elimination of the tax exemption of unemployment and disability aid.

The adjustment surpassed the fulfilment of the criteria: the cyclically adjusted expenditures decreased even after 1997, and Spain practically achieved a budget balance, although the assessment of the Commission suggests that the expected rise in pension expenditures poses a risk.

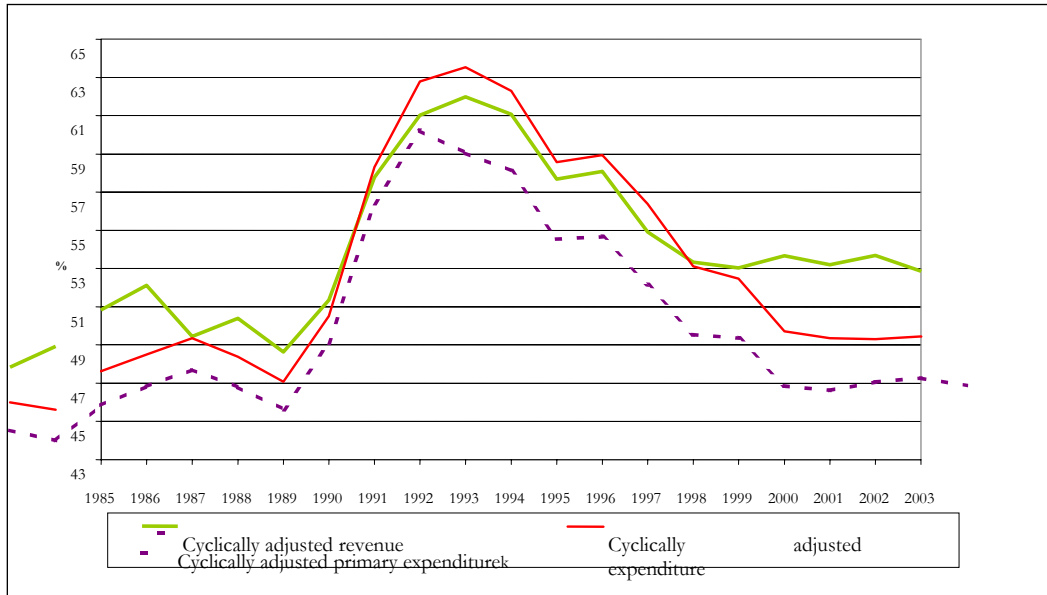
### *Finland*

*Finland* and *Sweden* – although the latter is not an EMU member – are in some respects the model examples of the EU, belonging to the few countries in which there is no risk of fiscal imbalance, as suggested by the assessment of the Commission. These two countries not only confronted the high rate of deficit, but also the level of redistribution, uncommonly high on an EU level. In the process of consolidation, the amount of revenue and expenditure fell at a parallel rate; beyond the reform of welfare expenditures, major tax cuts were implemented.

Finland is a special case among other member states. The fiscal problems of the country, dating back to the early 90s, are primarily linked to the deep economic and bank crisis following the 1991 collapse of the Soviet Union. The main problem was not only caused by the large deficit – although the budget deficit reached roughly 5.5-8 per cent of the GDP in 1992-1994 – but also the marked growth of the budget, corresponding to over 10 per cent of the GDP, which was mostly the result of the fall in the GDP (see Chart F-4). Thus, the consolidation package launched in 1993, and boosted in 1995, not only targeted the improvement of the balance, but also the implementation of a comprehensive budget reform which supports the reduction of the high level of redistribution, allowing, in turn, the improvement of the country's long term competitiveness. In fact, the main objective of

the adjustment served the stimulation of supply. The major cut in social security contributions and taxes on production was, to a lesser extent, enabled by higher revenue originating from other – income and indirect – taxes, and to a greater extent, the significant reduction of expenditures, encompassing the reduction of unemployment benefits and the transformation of the financing system of local governments and the pension system.

**Chart F- 4: Cyclically adjusted budget expenditures and revenue - Finland**



Source: European Commission, Ameco

**Table F -1: Total revenue and expenditure, and total and primary balance of the budget**

(In percentage of GDP)

	Total revenue				Total expenditure				Budget balance				Primary balance			
	1990	1994	1997	2002	1990	1994	1997	2002	1990	1994	1997	2002	1990	1994	1997	2002
<b>Euro zone</b>	44.1	46.7	47.5	46.0	48.7	51.8	50.2	48.2	-4.6	-5.1	-2.6	-2.3	-0.1	-0.1	2.5	1.4
<b>Belgium</b>	46.6	48.4	49.5	50.5	53.4	53.4	51.4	50.5	-6.8	-5	-2	0.1	5.1	4.6	6	6.1
<b>Germany</b>		46.6	46.6	45		49	49.3	48.5		-2.4	-2.7	-3.5		0.9	0.9	-0.4
<b>Greece</b>	34.5	40.7	43.7	45.4	50.2	49.9	47.7	46.9	-15.4	-9.4	-4	-1.4	-6	3.1	4.2	4.7
<b>Spain</b>	39.5	40.8	38.6	39.8	43.4	47.3	41.8	39.7	-3.9	-6.5	-3.2	0	-0.8	-1.5	1.6	2.8
<b>France</b>	48.6	49.4	51.8	50.3	50.7	54.9	54.9	53.5	-2.1	-5.5	-3	-3.2	0.3	-2.4	0.7	-0.2
<b>Ireland</b>			38.6	33.1			37.1	33.3	-2.8	-2	1.2	-0.2	5.1	4.1	5.3	1.2
<b>Italy</b>	42.6	45.3	48.4	45.1	54.3	54.6	51.1	47.6	-11.8	-9.3	-2.7	-2.3	-1.3	2.1	6.7	3.5
<b>Netherlands</b>	49.4	50.1	47.1	45.9	54.8	53.6	48.2	47.5	-5.3	-3.5	-1.1	-1.9	0.5	2.3	4.1	1.2
<b>Austria</b>	50.6	52.4	52.1	51	53.1	57.4	54.1	51.3	-2.4	-5	-1.9	-0.2	1.6	-0.9	2	3.1
<b>Portugal</b>	35.5	38.3	41.2	43.2	42.1	46	44.8	46	-6.1	-6.6	-3	-2.7	2.0	-1.1	0.7	0.3
<b>Finland</b>	54	57.2	55.2	54.4	48.6	62.9	56.4	50.1	5.3	-5.7	-1.5	4.3	6.7	-1.5	2.7	6.5
<b>Sweden</b>		61.7	62	58.4		70.9	63	58.3		-10.5	-1.5	0		-4.1	4.8	2.9
<b>England</b>	40.7	38.2	38.9	39.4	42.2	45	41.1	40.7	-1.5	-6.7	-2	-1.6	2.2	-3.4	1.7	0.5

Source: New Cronos

**Table F -2: Gross debt and interest expenditure**

(In percentage of GDP)

	Gross debt		Interest expenditure		
	1991	1997	1991	1995	1997
<b>EMU12</b>	58.6	75.4	5.2	5.4	4.9
<b>Belgium</b>	130.9	124.8	11.9	9.3	8
<b>Germany</b>	40.4	61.0	2.6	3.7	3.6
<b>Greece</b>	82.2	108.2	10	11.2	8.3
<b>Spain</b>	44.3	66.6	3.9	5.2	4.8
<b>France</b>	35.8	59.3	2.9	3.8	3.7
<b>Ireland</b>	102.9	65	7.9	5.4	3.8
<b>Italy</b>	100.6	120.2	10.5	11.5	9.4
<b>Netherlands</b>	76.9	69.9	5.9	5.9	5.2
<b>Austria</b>	57.5	64.7	4.1	4.4	4
<b>Portugal</b>	60.7	59.1	8.6	6.3	4.2
<b>Finland</b>	22.6	54	1.4	4	4.2
<b>Sweden</b>	51.3	70.5	4.8	6.6	6.3
<b>England</b>	54.9	50.8	3.8	3.7	3.7

Source: New Cronos



## **Anticipated impact of EU accession on the budget deficit**

Several studies have analysed the effects of accession, preparing estimates on different time horizons, on the basis of various approaches. The first group of calculations focused on the period extending from 2004 to 2006; other studies examined medium-term effects (after 2006).

The calculations cover the various levels of budgetary impacts and their different groupings. The classification we propose operates with four impact levels. The first level corresponds to the balance of direct settlements between a member state and EU, the second one supplements the first level with impacts closely linked to accession (e.g. reduction in the rate of customs duties), the third level is related to wider ranging yet direct impacts, and the fourth level also indicates the estimates of indirect impacts.

The first major difference in the applied methodologies is associated with different effects of accession on the levels of the total economy and the government sector. The net balance of EU related financial settlements is seemingly simply defined, but in fact several problems arise.

All approaches agree that funds received by the agriculture are excluded from the balance of the government. But certain calculations (Antzak, 2003) also exclude a considerable rate of structural expenditures when calculating the net balance of the government.

The loss in national customs duties poses an additional problem. This loss has two components. Firstly, some of the revenues are lost in full due to the reduction in the general rate of customs duties, while the remaining part is deemed EU revenue. In the classification we propose, the first effect is manifested on the second level of impacts, while the second effect – similarly to the tables related to the Copenhagen Treaty – is indicated on the first level of settlements. The cited studies, however, likely do not differentiate between the effects of lost customs duties, therefore in their groupings both effects are manifested on the second level of settlement.

On the third level of impacts, we are considering factors which would have theoretically occurred irrespective of the requirements of the EU membership. Such factors include extra expenditures related to infrastructure investments and the transformation of public administration, elimination of certain producer subsidies and extra revenue arising in relation to tax harmonisation.

Structural EU transfers theoretically require automatic extra expenditures. But this only holds true if the agreed levels of additionality is of a high level. In the case of Hungary, however, the level of additionality for 2004-2006 was determined at a low rate; therefore all estimates on extra expenditures are excessive. Although it is difficult to clearly determine the level of additionality (similar data for 2002-2003 is not available), on the basis of flexible re-arrangement within investment expenditures, however, expenditures financed by the EU do not indicate undue pressure for the time being. We are basing our estimate on the simple technical assumption that the rate of effective extra expenditure roughly corresponds to the amount of co-financed expenditure. On the other hand, the fall in producer subsidies will likely not be of a high rate, for the above amount will mostly be counterbalanced with national agricultural subsidies authorised by the EU. In respect of tax harmonisation, we considered the revenue of 2004 as a basis, as estimated by the Ministry of Finance.

The impact, in the broadest sense, encompasses indirect impacts, as well, but it is difficult to estimate their joint impact. The automatic impact of actual extra expenditures, financed by EU funds, on the increase in tax may be calculated. The interest expenditures of the government may fall, but we quantified this effect separately. However, no estimates are available regarding the impact of the following factors. The extra investments implemented by the private sector may produce a favourable impact on employment and thereby tax revenue. Beyond the above, however, with strengthening competition, the private sector will have also costs in relation to accession. In respect of Hungary, tax competition may have a negative effect on the budget. In the medium term, the improved efficiency of public administration may result in savings, but this process will likely involve short term expenditures. (For the sake of simplicity, our estimate does not include these effects.)

Major differences arise when comparing results relating to short term impacts in Hungary. Our own estimate, indicating a minimal impact, is of an average rate. The largest negative impact is estimated by Antzak; a large amount of revenue is linked to the private sector, and in respect of extra expenditures, her estimate does not take into account that the re-arrangement of expenditures may lead to major reductions in extra expenditures. The estimate indicating a positive impact (Hallet) disregards the loss in customs duties, and – similarly to our method – only considers co-financing in estimating the size of extra expenditures.

**Table F-3: Short term fiscal impacts of EU accession\***

(In percentage of GDP)

	<b>Antzak</b>	<b>IMF staff</b>	<b>Hallet (EC)</b>	<b>Own estimate</b>
<b>Budgetary settlements</b>	-0.7	no data	0.9	0.1
<b>Including closely linked impacts</b>	-1.2	no data	no data	-0.1
<b>Including all direct impacts</b>	-2.2	-1.0	0.5	-0.3
<b>Including indirect impacts</b>	no data	no data	no data	0.0

*/\*The calculation relates to the year 2006, excluding the Antzak estimate which is linked to 2004-2006.*

The medium-term impact on the level of budgetary settlements may be even more favourable, although re-arrangement of expenditure would certainly be limited by the levels determined by additionality – EU funds may not substitute own expenditures. For the above reason, the increasing funds may not improve the deficit, moreover, the higher rate of payments to EU and lost customs duties increases the overall deficit. With additional costs (co-financing, institutional costs), the government assumes a major burden. Similarly to our short term estimate, Backe only takes into account co-financing, and assumes that beyond additionality, it is possible to re-arrange expenditures within the budget, allowing the minimising of the negative impact with the above measure and the higher revenues produced by larger growth. We did not prepare estimates relating to the medium term, because the focus was on the period 2007-2008. These years are still linked to transition. In comparison to the broadly neutral short term effects, even a moderately positive budgetary impact can occur on a temporary basis, depending on how the average level of additionality is determined in relation to the period 2007-2012.

**Table F-4: Middle term fiscal impacts of EU accession\***

(In percentage of GDP)

	<b>Kopits-Székely</b>	<b>Backe*</b>
<b>Budgetary settlements</b>	2.8	2.8
<b>Including closely linked impacts</b>	2.3	2.3
<b>Including all direct impacts</b>	-3.8	-0.6
<b>Including indirect impacts</b>	no data	-0.1

*/\*No separate calculations are available in Hungary; the average of the given extreme values and the corresponding Hungarian value of the Kopits-Székely estimate, used by Backe, was used*

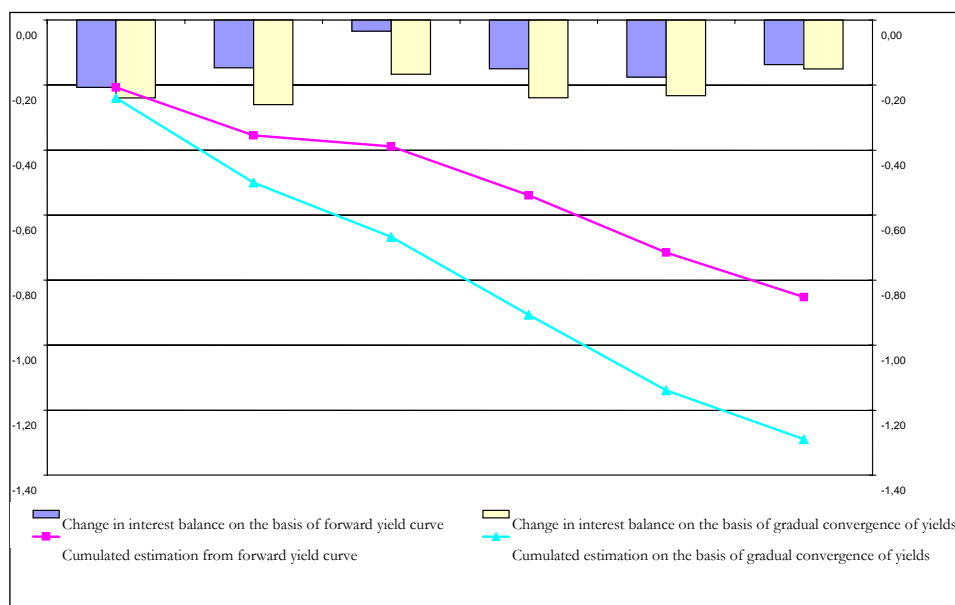
### **Expected impact of yield convergence on the budget deficit**

The following chapter was prepared on the basis of the study of Tardos (2004). Hungary's accession to EMU is linked to the yield convergence of sovereign Hungarian national debt instruments. For the purpose of estimating the impact of yield convergence on the budget balance, we examined two alternative versions as to how the improvement of the budget balance contributes to the reduction of the deficit required by Maastricht criteria in the period up to 2008, projecting the analysis up to the date of accession.

Our calculations lead us to conclude that in the baseline scenario – if the future trend of the interest balance is estimated on the basis of the forward yield curve of January 2005 – the interest balance will contribute to the reduction of the ESA 95 deficit level at an average annual rate of 0.15 percentage points of the GDP in the period 2005-2010. According to an alternative, optimistic scenario, with a maximum estimate – assuming the gradual, full elimination of the difference between the HUF and euro yield levels - the interest balance will contribute to the reduction of the ESA 95 deficit level at an average annual rate of 0.2 percentage points of the GDP in the period 2005-2010. The first scenario suggests that the deficit may be reduced by 0.5 per cent of the GDP in the period we examined, extending up to 2008. According to the second, optimistic scenario, the fall in the deficit may correspond to 0.9 per cent of the GDP by 2008.

**Table F-5: Presumed change in the interest balance 2005-2010**

(In percentage of GDP)



We wish to emphasise that the optimistic scenario, in fact, suggests a hypothetical path, the probability of which are small. This holds true particularly in light of the past trends of risk premium in countries acceding to the euro zone in the past.

If we examine the final year of the convergence period (between 2005 and 2010) under analysis, according to the above scenarios, in reaction to interest convergence related to accession to the euro zone, the ratio of interest balance to GDP may fall from the annual rate of 4.1 per cent in 2004 to 3.2-2.8 per cent of the GDP in 2010. On the basis of the above, we may establish that in comparison to the interest balance of 2004, a much lower interest balance is expected by the end of ERM II membership, equalling 0.8-1.3 per cent of the GDP; in the next five years, the accumulated change in the interest balance supports budgetary adjustments at this rate, as required for fulfilling Maastricht criteria. Consequently, in the following years interest convergence will likely contribute to the acceleration of fiscal convergence only at a moderate rate.

On the basis of the yield curve calculated according to the interest path, by 2010, the interest balance may contribute 0.8 per cent of the GDP to the fulfilment of Maastricht criteria relating to the budget balance.

The future path of the yield curve we have defined greatly depends on the trend of the government balance in the next years. Stringent fiscal policy and sustainable budget adjustments may promote the reduction of the risk premium of Hungarian debt instruments. Thus, in the optimistic case suggested by the second scenario, the risk premium on Hungarian government securities may be gradually eliminated from 2005. Assuming that the yield convergence of Hungarian government securities is fully implemented by 2010, this scenario suggests that in the final year of the period under examination, in 2010 the interest balance will contribute 1.3 per cent of the GDP to the fulfilment of Maastricht criteria related to the ESA deficit.

Our calculations are based on the premises below:

- In 2005, the primary balance of the budget is likely to decrease by 0.7% of the GDP. In line with the Convergence Report of the Government, published in December of 2004, the deficit is then likely to gradually fall over the examined time horizon; at the end of the period, we assume that a further improvement of the balance is not expected, under the principle of prudent projections.
- In 2005, foreign exchange bonds are expected to be issued at the net value of 2 billion euro; in the subsequent years, foreign exchange issues will likely amount to net 1 billion euro annually. As a result, the denomination structure of public debt will shift in the short term to a larger rate of foreign exchange, but the weight of foreign exchange debt will roughly remain unchanged over the examined time horizon.
- Similarly to the practice of previous years, the issue of bonds with variable interest rate is not expected in the future, and the rate of treasury bills will not rise significantly on a nominal level. The Government Debt Management Agency is assumed to satisfy financing demand mostly through fixed rate bonds. We expect that bonds with long term maturity will play a moderately larger role in financing, with a corresponding fall in the rate of bonds with 3 years maturity.