ANALYSIS OF THE CONVERGENCE PROCESS
October 2011

MAGYAR NEMZETI BANK

Hungary and the euro area: challenges and prospects

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Published by the Magyar Nemzeti Bank

Publisher in charge: dr. András Simon

H-1850 Budapest, 8–9 Szabadság tér

www.mnb.hu

ISSN 1787-4513 (online)

Following Hungary's accession to the European Union, the greatest challenge facing economic policy is compliance with the criteria for joining the Economic and Monetary Union. Although the adoption of the euro is a medium-term objective, due to the nature of economic processes, economic policy decision-makers must consider the convergence criteria even now, in order to be able to comply with them at the lowest possible cost.

Similarly to the other EU Member States wishing to participate in the Monetary Union, the primary responsibility for the elaboration and execution of the mandatory Convergence Programme rests with the government in Hungary. However, the central bank also plays an important role in execution, primarily in the field of monetary and exchange rate policies. The major milestones of convergence, i.e. accession to ERM II and adoption of the euro, can only be reached if the government and the central bank act in mutual agreement. Moreover, convergence indirectly affects the central bank's operations, and the manner in which money and capital market participants perceive future developments in the economy. Furthermore, convergence fundamentally influences domestic monetary conditions, including the scope of interest and exchange rate policies. For this reason, the central bank must continuously evaluate progress in convergence and Hungary's steps towards preparing for the euro.

Due to the role the MNB plays in the convergence process, this overview of the central bank's position regarding the current state of convergence and the challenges expected in the near future may be of public interest. This new MNB publication intends to raise the awareness of decision-makers, professionals and the wider public regarding the frequently intricate issues of participation in the Monetary Union and ultimately help Hungary to adopt the euro under the best possible conditions.

This issue of the Analysis of the Convergence Process was prepared by the Monetary Strategy and Economic Analysis and the Financial Analysis Departments of the MNB. The work was supervised by Ágnes Csermely; the project manager was Mihály András Kovács. The Analysis was approved for publication by Ferenc Karvalits.

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The analyses in this issue incorporate valuable input from Monetary Council members' comments and suggestions. However, the analyses in this publication reflect the views of the authors and do not necessarily reflect those of the Monetary Council or the MNB.

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Summary

A combination of global factors, the undisciplined economic polices pursued by some Members States and internal institutional weaknesses has led to the problems facing the euro area

Global factors, the undisciplined national economic policies pursued by some Member States and internal institutional weaknesses have all led to the challenges currently facing the euro area. Excessive risk-taking and abundant liquidity, two of the global factors, played a role in the development of credit booms, primarily in some less developed members. Member States exhibiting various degrees of overheating were unable to take appropriate macroeconomic adjustment measures and overestimated the sustainability of growth in their economies, which also contributed to the emergence of problems.

Entry into the euro area in itself was also a major factor influencing the development of credit booms. The decline in real interest rates associated with euro area membership, as well as intensifying bank integration and competition following the elimination of exchange rate risk all led to economic overheating, which reversed sharply during the financial crisis.

However, the euro area's own institutional weaknesses have also been a factor exacerbating the problems of the euro area in recent years.

An efficient institutional system to correct internal imbalances and crisis management was lacking

Those problems largely fell into two groups. The first group of problems allowed certain Members to move into an unsustainable position. The cause of the problem was partly non-compliance with the existing rules and partly insufficient economic policy coordination. In terms of the latter, the lack of mechanisms aimed to prevent the emergence of imbalances in the private sector and a single European financial supervision deserve special mention.

The absence of efficient institutions and mechanisms for crisis management constituted the second group of problems. While the increased financial integration resulting from the creation of the single currency came into conflict with limited national crisis management capacity, the sporadic consensus-driven political bargains were not fast enough and efficient enough to address crisis situations.

Significant progress in reforming the institutional system, but the long-term equilibrium setting remains unclear at present

Significant progress has recently been made in dealing with these problems: economic policy coordination has improved and the power to impose sanctions has increased, and with the creation of the EFSF and ESM, a degree of 'risk pooling' has been defined. In the current period of financial market turbulence, however, the size of a required risk pool may be even greater than preliminary announced, and the extent to which individual Member States behave as regions within a monetary union or as countries using a single currency and pursuing independent economic policies is still unclear for the markets. Consequently, there may be a conflict between the very deep financial integration of individual Members States and economic policies remaining at the national level. The extent to which this gap

continues to widen will depend crucially on future developments in the prospects for growth and changes in risk appetite in financial markets.

The preliminary definition of risk pooling, however, raises the problem of moral hazard, as it can reduce the incentives to pursue disciplined economic policy in the future. Consequently, a successful future euro area institutional framework must strike a balance between the preliminary definition of a risk pool and efficient mechanisms to ensure that policies potentially leading to unsustainable macroeconomic paths are prevented or corrected in a timely manner.

The cost-benefit analysis of euro adoption can be performed with greater uncertainty than in the past

Based on the experience with the euro since its inception more than a decade ago, the cost-benefit analysis of entry into the euro area can be performed with greater-than-usual uncertainty. First, in terms of the benefits of euro adoption assumed earlier, the empirical results are widely dispersed, making it difficult to reliably quantify the likely effects. Second, the risks arising in connection with entry into the euro area have shifted towards not readily quantifiable medium-term macroeconomic risks. Third, the net benefits of euro area membership depend greatly on the conscious attitude of economic policy, i.e. it cannot be treated as exogenously given for the country to join the euro area.

Adopting the euro may deliver significant macroeconomic benefits for Hungary…

Euro adoption may deliver significant macroeconomic benefits for the Hungarian economy. Such benefits may arise primarily from intensifying competition and increasing cross-border capital and trade flows. Beyond that it would be an illusion to believe that maintaining independent monetary policy would be a lasting solution for Hungary over the medium term, given the country's high degree of financial integration and foreign currency exposure: the efficiency of monetary policy in maintaining financial stability with the euro area may improve significantly.

…but excessively early euro adoption entails significant macroeconomic risks, such as the evolution of boom and bust cycles and insufficient labour market adjustment

Macroeconomic experience since the crisis, however, suggests that euro adoption may also entail significant macroeconomic risks, which can only be mitigated by pursuing a very conscious economic policy. The reason for this is that joining the euro is an asymmetric shock, which results in increased competition and falling real interest rates in countries with higher interest rate levels. This in turn gives rise to two problems. First, the development of boom and bust cycles following entry cannot be ruled out. Second, inefficient labour market adjustment can also cause problems.

In terms of the first issue, a combination of higher demand for credit due to falling real interest rates and higher credit supply due to increased capital flows may lead to excessive credit growth, excessive indebtedness of domestic private sector and, ultimately, to an economic downturn. The fact that the single monetary policy is not calibrated to Hungarian processes may facilitate the development of such credit booms. Unanchored inflation expectations may lead to higher excess inflation and, indirectly, the likelihood of the development of persistently low real interest rates. In terms of labour market flexibility, the country's ability to adjust to increased competition and other potential asymmetric shocks after elimination of exchange rate uncertainty may cause a problem.

Economic policy should prepare for euro adoption by focusing on four key tasks

Although the new European stability mechanism, intended to strengthen the coordination and surveillance of economic policies, mitigates the chances of risks materialising, it would be useful for Hungary to undertake deliberate planning for future euro adoption. Despite the fact that the Government's strategy includes euro adoption at the earliest at the end of this decade as a realistic time horizon, it is worth considering whether an economic policy framework for successful euro area membership should be instituted as early as possible. There are four key tasks ahead for Hungary for the coming years. These tasks relate to monetary policy, fiscal policy, macroprudential regulation, and labour market institutions.

Monetary policy may help by anchoring inflation expectations to the euro area inflation target

First, monetary policy should aim to bring inflation expectations into line with the euro area inflation target well before the country adopts the euro. This could help dampen the effects of a decline in real interest rates after euro area entry.

Fiscal policy may contribute to successful euro area membership by reducing debt to a low level

Second, fiscal policy should aim for a much stricter debt level than the Maastricht criterion in order to have adequate room for fiscal manoeuvre to smooth adverse external shocks in the absence of independent monetary policy. The economy's reliance on foreign financing and its vulnerability to external shocks may remain even after Hungary meets the Maastricht criterion for government debt, due to the combined effect of a low level of domestic wealth and the structure of debt.

If the measures included in the Structural Reform Programme and the Convergence Programme are implemented in full and the structural deficit is maintained at 1.5%, consistent with the European rules, Hungary's external debt may fall to 56-57% by the end of the decade. However, even in this case, government debt is likely to exceed the current average of Hungary's regional competitors, and consequently the high level of debt will limit the room for fiscal manoeuvre for many years to come.

Developing an efficient macroprudential institutional system may prevent excessive credit cycles and strengthen the resilience of the banking sector

At the same time, the crisis has revealed that it is impossible to create enough room for fiscal policy to remedy the problems associated with the sharp decline in economic performance and the correction of the significant financial imbalances in the private sector. Moreover, reducing the amplitude of financial cycles in the economy is in itself desirable. Consequently, macroprudential policy will play a key role in addressing any potential for overheating in the private sector during the upward phase of the cycle and reducing the chances of financial stability risks materialising in a crisis situation.

One of the most important elements of efficient macroprudential policy is the pursuit of an adequate balance between responsibilities and tools. This means, first, that the responsibilities and tasks of individual economic policy decision-makers should be clearly defined; second, efficient tools should be allocated to those responsibilities. We believe that this condition is not satisfied in the current institutional system in Hungary. On the one hand, while the central bank has a clear responsibility for preserving financial stability under the Central Bank Act, it does not have direct macroprudential tools at its disposal. On the other hand, even though it encompasses all of the possible institutions responsible for macroprudential policy, the Financial Stability Council also does not have a specified set of tools and functions only

as a consultative body. Finally, a clear mechanism for implementing the macroprudential actions deriving from European law and the ESRB's recommendations would be needed.

In the absence of independent monetary policy, the importance of labour market flexibility increases. A more effective institutional system is needed which makes it possible to remain in the market and to re-employ those losing their job

Finally, increasing the flexibility of the labour market would be of key importance. The institutional framework currently enabling flexible adjustment for the corporate sector is insufficient. An institutional structure for the labour market and incentives should be developed which would make it possible to keep in the market and re-employ those losing their jobs in the private sector due to increased competition or other adverse shocks. The Hungarian economy seems to be far from satisfying this condition.

In our calculations, over the long run the government measures envisioned in the past period will not result in a meaningful increase in employment or reemployment in the private sector. Although tightening government benefits to the non-employed and cutting the tax rate on above-average incomes may stimulate employment rates and the ability of the economy to create new jobs, this opportunity may be undercut by the long-term phasing out of basic tax allowance, which aids less productive jobs, making the solidarity taxes on the financial sector permanent, and a persistent rise in the risk premium on Hungarian assets.

The national employment rate may be improved by a major boost in public employment as planned, but the sustainable development of the domestic economy will not be significantly advanced unless employment is increased in the business sector. In our opinion, a consistent change in incentives motivating currently inactive groups and a more efficient implementation of active labour market policies would be needed for there to be a permanent improvement of employment rates in the business sector. As regards the first of these two conditions, it would be imperative – as it is in other countries – to maintain the institution of basic tax allowance or to find alternative ways of supporting jobs with low qualified workers. In terms of active labour policies, the efficiency of the programme should be enhanced in order to remove factors impeding private sector employment.

1. Where is the euro headed?

This chapter provides a brief overview of why the global crisis is affecting the European monetary union especially seriously, and what changes may be necessary to manage the crisis and avoid a recurrence. The crisis is partly caused by the fact that some countries did not comply with the mutually adopted macroeconomic framework, and pursued unsustainable economic policies (fiscal indiscipline – Greece and, to some extent, Portugal). However, some countries which respected the existing rules and did not pursue policies considered unsustainable according to earlier knowledge also ended up in a crisis or a near-crisis situation. In these cases, the crisis was caused by factors which were not foreseen by the creators of the union, and there were no institutions to prevent the crisis (indebtedness of the household, banking and construction sectors – Ireland, Spain). As a result, the global shock had an extremely heterogeneous effect on the participating countries, despite all of the previous convergence which had been achieved. Eventually, it proved to be a false assumption that institutionalised mechanisms are not necessary at the level of the monetary union, should crises still develop. In cases such as this, ad hoc intergovernmental agreements are unable to mitigate the damages and prevent the exacerbation of the crisis in a timely and efficient manner. Therefore, as a result of the crisis, existing rules must be better observed in the future (fiscal sustainability), and early warning and correction mechanisms need to be set up in further areas of coordination (private sector indebtedness, excessive imbalances). In addition, permanent crisis management mechanisms are also needed, the central element of which is an institutional system that ensures the financial stability of the area as a whole, in order to avoid the materialisation of solvency problems of individual Member States as a systemic risk in the area as a whole. At the same time it still remains imperative to avoid moral hazard. Thus, it is essential that the tools of quick crisis management be readily at hand in the future, although we do not need detailed, preannounced rules to be followed in such unexpected events. On the other hand, to avoid moral hazard, we need effective use of preventive rules and credible preannounced sanctions.

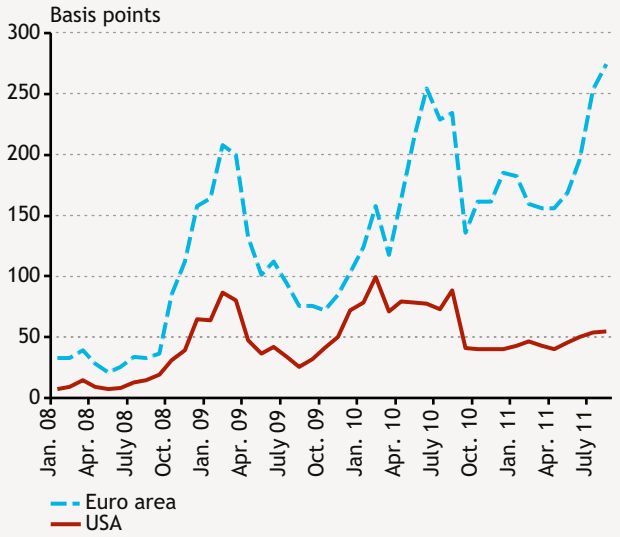
During the last year, steps were taken in the designated directions, but the institutional system of the area is changing continuously, depending on the responses to macroeconomic and financial market challenges. We believe, however, that if the directions being discussed become firmly established, there will be no need for total fiscal centralisation; tax, social and welfare policies may remain in national competence. Moreover, with the current fiscal structure, in the case of asymmetrical macroeconomic shocks, macroeconomic stability may necessitate different developments in national-state fiscal policy.

The global economic crisis that started in 2007 and deepened in 2008 affected the developed regions more seriously than the less developed ones (Latin America and the Far East), and among the developed ones it also had more serious consequences in the countries of the European Economic and Monetary Union (EMU), than in the USA or Japan. The depth of the crisis in Europe is clearly shown by the fact that the very survival of the monetary union itself has come into question. In the USA and the EMU, the crisis was caused by the fact that during the preceding 'great moderation' certain regions and economic sectors had become excessively indebted. Mainly banks and households increased their indebtedness, but real estate agencies and some government's budgets also accumulated increasing debts.[1]

The reason why the crisis affected the EMU more seriously requires explanations so much the more because the epicentre of the crisis was in the USA, and the EMU as a whole had a balanced current account, as opposed to the USA, which was in need of foreign capital inflows. Moreover, the total fiscal deficit and also the government debt of the countries that constitute the EMU are lower than those of the USA.

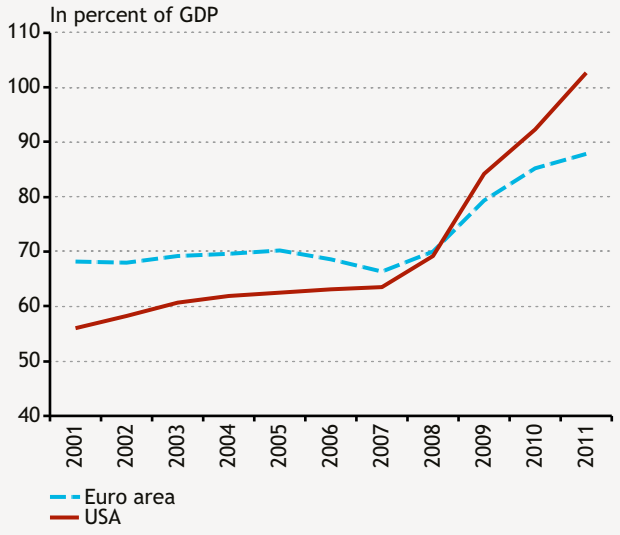
[1] The period of the 'great moderation' lasted approximately from the early 1990s until the crisis. Compared to previous periods, inflation declined and growth rates also became more stable. At the same time – in a paradoxical manner – financial stability was exposed to an increasing number of challenges. For more details, see our previous Analysis of the Convergence Process issued last year (MNB, 2010)

Chart 1-1
Risk premium on government bonds, euro area and US



Note: Data for euro area is weighted average.
Source: Bloomberg.

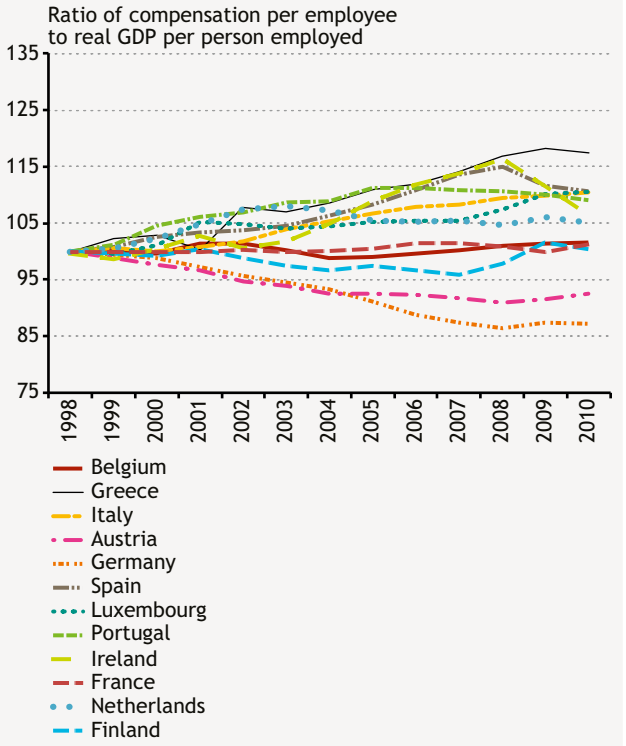
Chart 1-2
Government debt in percent of GDP



Note: Data for euro area is weighted average.
Source: Eurostat.

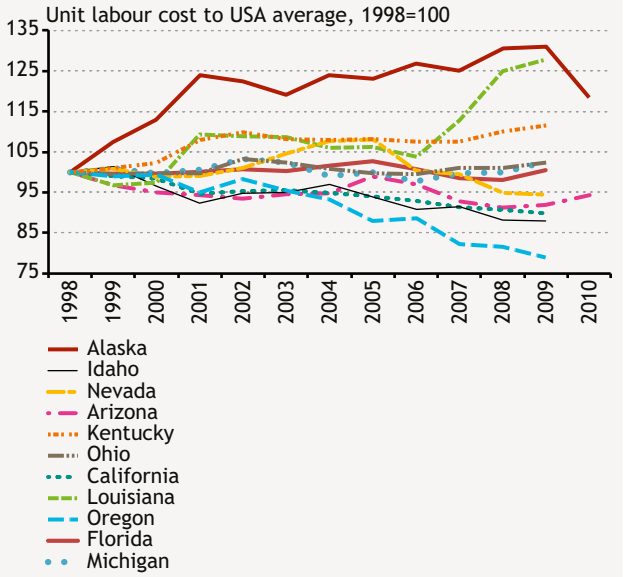
Examining the performance of EMU member countries, the number of question marks simply increases as we find that although there are differences in terms of competitiveness, growth rates as well as the rate of and volatility in inflation, these differences are not greater than the ones between comparable regions of the USA.[2] However, private sector indebtedness – which is not traditionally regarded as an OCA criterion – was very heterogeneous in the EMU, which,

Chart 1-3
Unit labour costs, euro area 1998 = 100



Note: Ratio of compensation per employee to real GDP per person employed.
Source: Eurostat.

Chart 1-4
Unit labour costs, USA, 1998 = 100



Note: our chart for US unit labour cost slightly differ from that of Trichet (2011). Due to data availability, we used non-farm compensation and GDP data for US states, instead of per capita data.
Source: BEA.

[2] Trichet (2011).

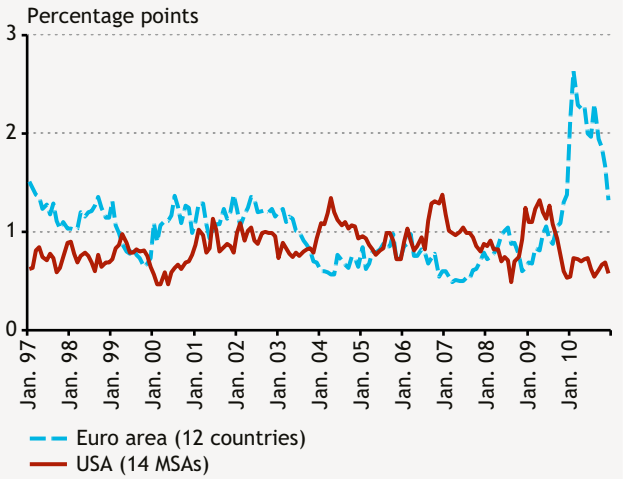
coupled with heterogeneity of government indebtedness, resulted in an extremely asymmetric effect on the participating countries caused by a basically global, that is, symmetric shock, despite all of the convergence results achieved in other respects.

If indebtedness at the level of the EMU as a whole is not greater than in the USA and the heterogeneity of economic performance is not different either, one should seek the underlying reasons for the severity of the crisis in the extent of the efficiency and credibility of the institutional system of economic management in managing the crisis. In this regard, it is worthwhile to highlight several differences.

In the USA, government indebtedness burdens the federal budget to a greater extent and the states to a lesser extent, as opposed to the EMU, where government indebtedness primarily burdens the member states. Furthermore while dedicated institutions and detailed rules of crisis management were established neither in the USA nor at the level of the EMU as a whole, crisis management in the latter requires permanent and elaborate intergovernmental coordination, making it unable to efficiently complement the limited crisis management capacities of the national institutions. Finally, crisis management in the EMU is complicated by the fact that the more indebted countries are those whose competitiveness is the least satisfactory and/or the stock of debt is the largest to the country's fiscal capacities available for financial stabilisation.

Although the treaty establishing the monetary union included a 'no-bailout' clause, insolvency of a participating

Chart 1-5
Dispersion of Annual Inflation



Note: MSAs: Metropolitan Statistical Areas.
Source: Eurostat, BLS.

country was unimaginable in the eyes of the markets until mid-2010. The 'Greek crisis' was precisely triggered by the sudden reversal of this belief. The other countries did not bail-out Greece, but they also did not announce a definite, credible solution to the Greek crisis. The crisis escalated as a result of this and spread to other countries as well.

First, the framework of thinking on which the institutions of the EMU were built is reviewed below, then the weaknesses and deficiencies that surfaced in the crisis are discussed, and finally the main directions of the ongoing institutional reform are summarised.

1.1 The macroeconomic and policy framework of the EMU before the crisis

The EMU appeared as a natural extension of the cooperation of several decades (customs union, common market, later economic union and also political union in certain elements). The coordination of monetary and exchange rate policies also looked back on several decades. Various forms of exchange rate policy cooperation had been tried, but the 1992–1993 ERM crisis – the European currency crisis – convinced the decision-makers that, in spite of any possible coordination, exchange rate risk would not cease to exist as long as the independent national currencies existed. Therefore, the conditions for the adoption of the common currency had to be elaborated. The economic management system of the EMU was based on the economic policy knowledge[3] prevailing at the time of its establishment; it is also known as the *Brussels–Frankfurt consensus*.[4] Its most important elements are as follows:[5]

1. **Fiscal sustainability and macroeconomic stabilisation policy.** If each country pursues a disciplined fiscal policy, fiscal sustainability will be attained at the level of the union as well. Therefore, coordination institutions are needed that guarantee fiscal sustainability at the level of the countries. The Stability and Growth Pact and the Excessive Deficit Procedure were the two main pillars of the institutional system that came into being. At the same time, only a minimal amount of fiscal centralisation took place, the fundamental objective of which is the financing of EU institutions. Further centralisation was not considered desirable, as the various countries showed significant differences both in income levels and in the national preferences related to the welfare state and solidarity. The opinion was that macroeconomic (or cyclical) stabilisation policy can be ensured at the level of countries as well. The ECB plays an important role in counterbalancing shocks affecting the whole region, and the governments of the various countries may take stimulating or tightening measures in a coordinated manner, simultaneously,[6] whereas management of so-called asymmetrical shocks belongs to the competence of national budgets. (See the box entitled *'Region vs. country in the EMU* (1): *Fiscal autonomy and macroeconomic stabilisation policy'.)*

2. **Price stability.** At aggregate level, the ECB safeguards price stability, while competition efficiently limits *price and wage setting* in the integrated market of individual countries and regions. The countries entering the EMU showed different inflation performances in the past, but it was assumed that the possible initial inertia brought by individual countries with themselves from the past would be broken by compliance with the convergence criteria (low and nearly the same inflation, interest rate level and sustainable fiscal positions) by the time of the entry. The objective of the criteria is exactly to demonstrate that a country that wishes to enter is able and also willing to show stability-oriented behaviour and to coexist with macroeconomic stability.

3. **The stability of financial institutions and markets.** This is to be ensured by the stability-oriented macroeconomic (monetary and fiscal) policy itself as well as by the internationally coordinated prudential rules. At the same time, no EU-level institutional system was established for the purpose of financial supervision, and the ECB did not receive an explicit prudential mandate or lender of last resort function. (See the box entitled *'Region vs. country in the EMU (2): Fiscal autonomy and financial stability'.)*

[3] We do not intend to present the EMU in detail below, as that is available in earlier publications of the MNB. See Horváth and Szalai (1997), Csajbók and Csermely (2002) as well as Orbán and Szapáry (2004). The elements of the proposals related to the transformation of the economic management system of the EMU that have become known to date were discussed by Csermely and Szalai (2011). Without going into details, hereinafter we are only focusing on the directions that are the most important from the aspect of a future upturn.

[4] More exactly, Fitoussi and Saraceno (2004) used the expression Brussels–Frankfurt–Washington, which better emphasises the global character of the knowledge that developed. The emphasis is on Europe here, and the reference to Washington is omitted, because the latter primarily took into account the less developed and developing countries in the wording of the recommendations (e.g. privatisation, liberalisation, stabilisation), which appear at another level on our continent, if at all.

[5] For the sake of easier comprehension, the following part is summarised in a table at the end of the chapter.

[6] See the European Economic Recovery Plan following the eruption of the crisis (European Commission ECFIN, 2008).

4. Cohesion and convergence. The *catching up* of the less developed countries is ensured by the flow of resources (capital, technology) and the easier access to the larger market, which is catalysed by the high degree of harmonisation of the institutional system. This process is also facilitated by the fiscal transfers which are determined by the 'absorption' capacity (ability to use the resources efficiently) of the countries. The countries will implement reforms under the pressure exerted by the stability-oriented framework and the internal market.

5. Compliance with the rules. In addition to planning the institutional environment, *ensuring compliance with the relevant rules* is also important in order to achieve the desired results. The problem stems from the fact that integration entails the development of areas which allow for 'free riding', while the EMU consists of sovereign states, to which it is difficult to hold out the prospect of sanctions in a credible manner. Nevertheless, a very weak sanctioning policy came into being, which was based on the principle that compliance with the rules is everyone's own recognised interest. By joining, the countries express their willingness and ability to pursue stability-oriented economic policy and market behaviour. Where incentives become distorted, and market discipline is insufficient, institutional control procedures and sanctions also evolved (fiscal sustainability), but these sanctions also require the consensus of those concerned; force cannot be used.

Box 1-1
Region vs. country in the EMU (1): Fiscal autonomy and macroeconomic stabilisation policy

The countries participating in the monetary union became a 'region' from a monetary aspect in a common currency area. However, from a fiscal/budgetary policy aspect they did not become a region in the usual sense,[7] because the participating countries continue to be characterised by a much higher degree of autonomy than regions within federal countries (e.g. Germany) or federal states (e.g. USA, Switzerland, etc.). Eruption of the sovereign debt crisis re-ignited the debate as to whether there is a need for a greater degree of fiscal centralisation to operate the currency union.

The subject of the debates on fiscal coordination to be implemented in the EMU was whether decentralised fiscal policies were able to smooth the business cycles or the external shocks.[8] The capacity of fiscal policy is determined by the size of the budget, and the latter is determined by tax revenues. Tax revenues are collected at the national level in the EMU; therefore, it is logical that both automatic stabilisers and discretionary measures have remained in national competence. By contrast, automatic stabilisers and discretionary stabilisation expenditures in other monetary unions operate at federal or 'monetary union' level, as the funds that finance them are also centralised at the federal level. This is shown by the fact that e.g. the balances of the budgets of US states or German provinces are acyclical and these budgets are nearly balanced.[9] Therefore, when the EMU is compared to the USA or other federal states from the aspect of fiscal stabilisation policy, these features of the EMU need to be taken into account. Before the crisis, as well as prior to and following the establishment of the monetary union many research projects addressed this issue.[10] Most of them found that automatic stabilisers were stronger in individual EMU countries than in the USA, because the magnitude of the budget compared to GDP was greater.[11]

[7] Functions financed from a common budget exist in the EU as well; it is expedient to review them in line with the grouping developed according to Musgrave and Musgrave (1973), i.e. according to items with an objective of allocation, redistribution and stabilisation. The main purpose of the structural funds in the EU, which aim at making the regions catch up, is allocation, with certain redistribution elements. Redistribution is the objective of cohesion funds, which were established in connection with the entry of the less developed South European countries into the EMU. Expenditures with a stabilisation objective include the EU-level mechanism set up in order to manage balance of payments financing problems; the mechanism can only be used in the case of non-EMU participants. The financing funds set up on an ad hoc basis as a result of the current crisis (Greek rescue package, ESFS) and the ESM fund that will replace the ESFS and the ESFM from mid-2013 on can be considered this kind of fund with a stability objective. The EU funds that facilitate the catching up of less developed regions, sectors and countries as well as the items that finance the common functions of the EU, also including the stabilization funds to be set up now, are insignificant compared to the aggregate budget of the participating countries (Heinen, 2011).

[8] See e.g. Goodhart (1998).

[9] See von Hagen-Wyplosz (2008), von Hagen (1988), Kletzer (1998). In the US states' laws are in force which require balanced state budgets. The state's debt-to-GDP ratios are smaller than in then in EMU participating countries. The US states pay for the holders of their bonds before any other state expenditures.Thus, financing problems of the US states do not manifest in the state's bond markets, rather they remain at local political level: the question is which public expenditures or programs should be deferred or cancelled.

[10] Summarising estimates of forteen studies finds that income smoothing and automatic stabilisation is stronger in Europe than in the US, but works at national level (von Hagen, 1988).

[11] This is important because initially the EMU is less integrated than the USA, and therefore the common monetary policy is less optimal from the aspect of individual countries, i.e. there is greater need for national smoothing, and then it is better if as much of it as possible is done through the automatic stabilisers.

Automatic and discretionary stabilisations are able to function efficiently in the EMU even without fiscal centralisation, as cyclical smoothing does not require permanent transfer and income allocation. Cyclical smoothing strives to smooth the fluctuations of the economy over time ('intertemporally') and temporarily, which may be offset by the fluctuations of the balance of the budget between deficit and surplus. The main task of the Stability and Growth Pact was to ensure the avoidance of the development of unsustainable indebtedness, and in line with the best knowledge of its creators in the case of cyclical slowdowns or negative shocks it provided sufficient room for the governments to allow automatic fiscal stabilisers to work or even to stabilise their economies through further discretionary measures. The primary reason for the fiscal problems experienced during the crisis was not that the institutional system limited the efficient stabilisation policies of budgets; it was much more of a problem that the fiscal policy conducted in the good times from a cyclical point of view did not create the fiscal room for manoeuvre necessary for stabilisation.

1.2 Weaknesses of the EMU that surfaced in the crisis

The weaknesses of the EMU are partly attributable to the behavioural mistakes made within the existing frameworks, but the institutional frameworks and their underlying principles also proved to be incomplete. In general, both behavioural and institutional deficiencies are kind of new, i.e. the risks that materialised were not the ones that had been mentioned by most critics in the debates prior to the crisis, although there were examples for the latter as well (mainly in Greece in connection with fiscal discipline).

The first of the *behavioural mistakes* by – economic-policy and market – participants is that not every country met the convergence criteria. Greece failed to meet fiscal criteria, whereas Italy, Spain and Portugal fell behind in meeting the inflation criteria, while Slovenia and Greece resorted to the informal limitation of capital flows as well during the convergence period.

Fiscal deficits/debts declined considerably in many countries within the EMU. Nevertheless, the sustainability of the debt of several countries became doubtful in the economic environment that changed during the crisis.

The integrated market did not prevent excessive widening of the differences in competitiveness. Price and wage inertias moderated compared to the pre-EMU situation, but did not cease to exist. However, even today they are not greater than for example across the regions of the USA, where nobody questions the viability of the monetary union.

While price stability was achieved at the level of the euro area, market competition did not provide an efficient disciplinary force to eliminate regional differences in inflation. Due to the permanent differences in inflation, real interest rate sank too low in the case of the least stable countries, i.e. the ones that produce higher inflation, which resulted in the development of financial imbalances. As a consequence of this as well, and also due to global developments, the indebtedness of the private sector (banks, households, construction/real estate sector) exceeded all previous values, which was not prevented either by economic or prudential policies, and this was an important determinant of the fiscal crisis.[12]

The first one of the *design and institutional deficiencies* of the EMU to be mentioned is that in the fields where coordination existed, it was not deep enough, whereas sanctions were weak and they were not applied. An example for this is the early fiscal warning system of the SGP and the harmonising of economic policy programmes (Integrated Economic Policy Guidelines, the procedures of fiscal policy planning.[13]

Nevertheless, certain fields were not coordinated at all or not in a satisfactory manner. One of the important lessons of the crisis was the realisation that fiscal sustainability can be jeopardised not only through the usual channels, but also due to the management of the indebtedness of the private sector as well. This channel was not taken into account in designing fiscal coordination.[14] Prudential policy remained within national frameworks, and its scope was hardly macroprudential; large financial imbalances and indebtedness accumulated. The external imbalance – price and wage competitiveness, excessive capital flows – of countries participating in the EMU was not coordinated, and was even less supervised than fiscal policy. It is true that the common currency terminates the balance of payments barrier and the vulnerability of the currency, but capital flows and foreign trade deficits continue to pose a risk to stability. The difference is that they appear as credit risk instead of balance of payments deficit/external imbalance at the participants of individual countries, with the disadvantage of *not appearing as an aggregate, as national indebtedness*. As the funds necessary for their management are also *mostly in national competence in the form of fiscal*

[12] The phenomenon of 'booms and busts', as well as fiscal indebtedness are discussed in Chapters 2 and 3, respectively.

[13] The rules of the SGP were even eased when large member countries faced its limits in 2003. Debt reduction was almost complete removed from the agenda, and emphasis was diverted to current deficit. However, the 'great moderation' reflected it in a very favourable manner, low risk premia reduced interest expenditures, while growth financed from borrowing temporarily accelerated fiscal revenues.

[14] See Chapter 3 for more details.

policy, it is visible that the situation of countries is not analogous with that of the regions in terms of financial and fiscal stability, only in the monetary field. (See the box entitled *'Region vs. country in the EMU (2): Fiscal autonomy and financial stability'*).

There was no progress in the advancement of longer-term convergence, growth and competitiveness in individual Member States. The relative position of Portugal, Italy and Greece did not improve, or only temporarily and in an unsustainable manner (based on increasing indebtedness). The advancement of longer-term growth/competitiveness was insufficient in their case, they did not take the advice regarding structural reforms, and the Lisbon Strategy remained on paper. The countries were not compelled to implement reforms, and in the benign financing environment they were not burdened by the risk of high indebtedness.

Box 1-2
Region vs. country in the EMU (2): Fiscal autonomy and financial stability

Upon establishment of the institutional framework of the EMU there was a debate as to whether pre-defined financial crisis management institutions should be set up. The most sharply debated issue was whether the ECB should have a declared lender of last resort function.[15] Those who did not consider it necessary argued that the chance for the occurrence of a financial crisis was low, provided that monetary stability is achieved within the framework of the union, players comply with the prudential rules and fiscal policies are sufficiently disciplined. Should a crisis still take place, it could be kept under control by ad hoc measures, which is also advantageous from the aspect that 'moral hazard' is not fed by pre-announced and institutionalised crisis management mechanisms. Others warned that if in a crisis situation no pre-determined crisis management institution is designated, and it is not clear how the burdens of crisis management will be distributed, it may happen that countries will be waiting for one another, while the crisis escalates. Finally, crisis management institutions were not set up, but it was implied that the ECB would know what to do, if necessary (constructive uncertainty).[16]

This approach was in full conformity with the views prevailing in other parts of the world at that time. In terms of thinking or their institutions, other regions were also not prepared for a crisis like the current one. Nevertheless, taking the necessary steps following the outbreak of the crisis was a greater problem in the EU. With democratic decision-making based on coordination between countries, decision-makers were less able to react in a timely manner and with the necessary resoluteness to the new challenges arising in the crisis. The stabilisation instruments that could be provided by the central bank were insufficient, and the provision of further fiscal sources became necessary.[17]

The greatest deficiency was the lack of a crisis management fund that could have been the final provider of financial stability. In other monetary unions, this function is performed by the budget, or more exactly the ability of the budget to impose taxes. This conception is the basis of the so-called cartalist theory of money,[18] according to which the borders of the optimum currency area coincide with the borders of the authority that imposes the taxes. In the context of the current crisis, it means that the stability of the currency requires some degree of fiscal centralisation that guarantees its acceptedness and stability. It is remarkable that prior to the crisis the

[15] See, inter alia, Aglietta (1999).

[16] However, the text of the procedures and of the underlying Memorandum of Understanding (MoU) is not available for the public: '…The MoU, which is not a public document, consists of a set of principles and procedures for cross-border co-operation between banking supervisors and central banks in crisis situations. These principles and procedures deal specifically with the identification of the authorities responsible for crisis management, the required flows of information between all the involved authorities and the practical conditions for sharing information at the cross-border level. The MoU also provides for the setting-up of a logistical infrastructure to support the enhanced cross-border co-operation between authorities….' ECB (2003). See also EFC (2001).

[17] The resources of central banks are usually sufficient for providing liquidity assistance; this is the lender of last resort function. However, in the event that financial institutions become insolvent and high amounts of capital losses have to be made up for as well as fiscal resources have to be used, central banks contribute to the stabilisation steps playing an agent's role at best. Usually there are no pre-defined general rules of crisis management, because they mostly depend on the nature of the situation that has evolved. A general principle is that central banks as technical players, which are led by non-elected experts, cannot play a decisive role in the management of insolvencies, as they entail potential income distribution effects. This is the competence of the relevant politicians (finance ministers) in every democracy.

[18] According to cartalism as a school of monetary theory, the acceptedness and wide use of money is ensured by the fact that the state imposes and accepts taxes in the given currency. This creates demand for the money. Supply, in turn, is provided by the spending of the budget. This is an alternative of, although does not necessarily exclude, the more wide-spread transaction concept, which is based on the convenient use of money. Well before the adoption of the euro, Goodhart (1988) already declared several times that those who created the EMU had not sufficiently taken into account the cartalist principles.

riskiness of the government debt of every country that participated in the EMU was practically the same. The Greek crisis began to unfold exactly when it turned out that the other Member States do not automatically and unconditionally stand by the one who got into trouble. The question raised by the crisis is to what extent the debt crisis of a country can be isolated and managed on its own, and to what extent the countries constitute a risk pool.

In order to support our message, the crisis management of the USA is worth mentioning. The USA also did not have an established institutional system able to smoothly implement large-scale fiscal and financial rescue programmes. Crisis management was not carried out on the basis of plans laid down in detail there either. However, within a national framework it was easier to use institutions designed for another purpose in a crisis management mode of operation. Perhaps it is even more important that in critical moments markets could trust that the necessary measures would be taken by the decision-makers.

In the crisis, the EMU was compelled to set up fiscal crisis management institutions (Greek rescue fund, then the ESFS), then in August 2011 the EFSF was also allowed to use the available funds for the management of bank crises. However, the institutions were established extremely slowly. Due partly to the fear of 'moral hazard' and partly to their unpopularity experienced among domestic voters, it was always only 'fire fighting' measures that were taken, which were deemed the most necessary at the given moment. This was neither enough to stop the increase in the risk premia of the countries already in trouble nor to prevent this increase from spreading to other countries.

Overall, adjustment to asymmetrical shocks and normal cycles does not require the centralisation of fiscal policies or an extended transfer union. At the same time, the financial stability of the EMU is a public good, the provision of which may require a partial pooling of fiscal resources. This may take place in several forms, and the establishment of the permanent crisis management fund (ESM) can be considered this kind of pooling of fiscal resources. Other proposals suggest that further steps should even be taken, and for example common bond issue should be institutionalised. During the setting up of the permanent crisis management institution continued attention has to be paid that it should not serve as a basis for moral hazard. Therefore, it is not possible to create detailed, ex ante, public rules for its operation; ad hoc discretion and non-public rules will always be needed. However, it is important that there be means for rapid action, and that efficient preventive mechanisms reduce the need for using crisis management instruments to the minimum.

1.3 Where is the euro area headed?

The main directions in renewing the economic management institutions of the EMU mostly stem from the above. In addition to consolidation of the institutions established in an *ad hoc* manner for the purpose of *crisis management,* which is still in full swing, *institutions and procedures aiming at the prevention of future crises and of the development of vulnerabilities* are also being outlined. Nevertheless, the set of proposals cannot be considered final yet, as the crisis itself has not ended either. Some of the proposals cannot be considered final, because they have not been adopted yet; they may change in the future. Therefore, in the following we can only attempt to indicate the expected directions.

The planning principles of the *preventive, early warning institutional* framework need to be corrected in the areas where market disciplinary mechanisms and coordinating, early warning systems did not work and did not prevent vulnerabilities from building up. *Existing fiscal coordination* (e.g. SGP) needs to be strengthened: due to the reverse majority and the greater weight of the proposal of the European Commission, compliance with the rules and their sanctioning may have better chances in the future than now, when politicians have to have sanctions adopted by a qualified majority against their colleagues. The budgeting process should be improved by establishing fiscal councils or equal institutions and strengthening the practice of giving mutual opinions between countries. The introduction of the *European Semester* allows the institutionalisation of mutual inspection and recommendations already prior to planning the budgets and their adoption by national parliaments. The mutual evaluation of budgets was carried out in this new framework in 2011 already. Namely, fiscal programmes in the past often proved to be systematically too optimistic, which allowed little opportunity for correction in the time of negative surprises while observing the SGP rules.

Another area is *systemic/aggregate financial stability,* where the disciplinary force of the market and regulation proved to be insufficient. It is the task of a newly established body, the ESRB (European Systemic Risk Board), to fill the void left by the nationally fragmented prudential regulation with a mainly microeconomic attitude (see Chapter 4 for more details).

In addition to the macro-level vulnerability of the financial sector, there was another area as well that was not paid adequate attention to either by the stakeholders or economic policy makers. This is the area of excessive *external and internal macroeconomic imbalances*. With their changed meaning, balances of payments continue to be sources of important information, just like indicators of competitiveness (unit labour cost) and developments in certain asset prices (e.g. housing prices, added value in construction). Economic governance will be amended by an Excessive Imbalance Procedure (EIP) and a set of indicators required for its overseeing and sanctioning. In brief, it will provide information about unsustainable macroeconomic developments in the case of the private sector, similarly to the procedure that already exists in fiscal policy. Another similarity is that it will have a preventive/warning and a sanctioning arm.[19]

A further economic policy package, the *Euro Plus* was adopted in the first half of 2011 for the sake of the *catching up and real convergence* of certain less developed countries, the long-term growth and global competitiveness of the EMU as whole, as well as for the 'outgrowing' of the debt. The package is an intergovernmental agreement, joining is voluntary, although it is recommended for non-EMU countries as well. Four member states, including Hungary, have not joined the package yet.

The institutions that were established in an ad hoc manner during the ongoing *crisis management* will be transformed into permanent institutions and procedures. The underlying reason is that it turned out in the crisis that the *lack of ex ante* crisis management procedures and institutions is much more costly than previously thought, and *ad hoc* crisis management is much more costly. It was learnt that the dynamics of the financial crisis is much faster than what could be followed by politicians appealing to voters' moods in the fragmented and excessively national frameworks. There are signs that governments in decision-making

[19] European Commission (2010), (2011a) and Csermely and Szalai (2011).

Table 1-1
Economic management system of the EMU and the experiences of the crisis

Risk/problem	EMU – Brussels/Frankfurt consensus	EMU – Experience (including during crisis)	Post-crisis measures and proposals
Exchange rate/ balance of payment risk	None	Exchange rate/balance of payment risk transformed into national credit risk.	Requirement to prevent external imbalances (EIP – Excessive Imbalance Procedure).
Price stability	Independent, credible central bank.	By and large satisfied on the average, but not enough for macro stability (GDP).	Internal and external imbalance indicators are needed in addition to inflation (EIP – Excessive Imbalance Procedure).
Stability of financial institutions and markets	Credible central bank, (micro-) prudential rules for the sector. Implicit "lender of last resort".	Price stability and (micro-) prudential requirements are insufficient.	Create ESRB to prevent macroprudential risks. Create ESM, special bankruptcy procedures for banks to manage crisis (Commission proposal).
Fiscal unsustainability	SGP (Stability and Growth Pact) – prevents and sanctions.	Inadequately enforced. May result not only from irresponsible fiscal policy but from crisis management in the private sector.	Strengthen and enforce existing SGP. Better coordination in fiscal planning – with the European Semester and recommended fiscal councils.
Macroeconomic stabilization	National shocks and divergences are mitigated.	Shock is global during a crisis, but vulnerability varies from country to country. The Maastricht criteria imposed a limit on state indebtedness in terms of direction only, but barely in terms of magnitude, and none on the private sector.	Create actual fiscal room for maneuver and strengthen SGP to assist with cyclical adaptation.
(Adaptation to national cycles and shocks)	Lost monetary independence redeemed by self-adaptation of markets; the room for maneuver of national fiscal policy is adequate to prepare for shocks.	Divergence due to different real interest conditions; insufficient adaptation in markets.	Progressively but systematically reduce state debt – amend SGP, debt reduction rule (EIP – Excessive Imbalance Procedure).
	Fiscal centralization politically unfeasible (welfare state), nor necessary economically.	The shock is not a normal cyclical real shock but a debt crisis that not every country is equipped to manage by itself.	Permanent state debt managing institution (ESM), Collective Action clause on government bonds from 2013.
Cohesion and convergence	Reforms (EMU = convergence club) ensured by institutional frameworks, integration, and transfers, and enforced by competition and rules.	Some countries catching up (Greece, Ireland, Spain) in part. Portugal and Italy gradually falling behind. Slowing down reforms instead of competition.	Euro Plus Pact: improve competitiveness and employment, strengthen fiscal discipline, harmonize tax bases. Membership voluntary.

positions did not realise the seriousness of the crisis and considered it a liquidity crisis or an isolatable minor (practically Greek and perhaps Irish and Portuguese) solvency crisis, and followed the increasingly panic-ruled markets in deliberately small steps, taking only the most necessary fire fighting measures.

During the escalation of the crisis it gradually became clear that a permanent crisis management mechanism is required for stopping the negative spiral and preventing its recurrence in the future. In the crisis, the EFSM and the EFSF were set up (the former to support Greece, the latter for a wider circle, to support countries in a weak fiscal position). The IMF also participates in the financing of the funds as well as in their operation as a technical facilitator.[20]

The measures decided so far do not go further than extending accommodation loans temporarily with favourable conditions to countries facing a crisis. As a result of the current market panic, it cannot be ruled out that even this will not be sufficient to prevent contagion to countries that already may be considered too large, i.e. Italy and Spain. If it was so, further fiscal resource concentration and the issuing of common bonds would hardly be avoidable in order

[20] The facility for bridging balance of payments difficulties that had existed earlier could not be used for assisting countries participating in the EMU. Central and East European countries, including Hungary, could receive a share of the resources of this facility in the earlier stage of the crisis. Later it was decided that starting from July 2013 the new ESM (European Stability Mechanism) would take over the role of the two earlier funds; its actual lending capacity will amount to EUR 500 billion, and it will receive an AAA rating. The objective in the lending is to provide accommodation loan until the country concerned is able to return to borrowing in the market. According to the plans, the price of the loan would have been punitive: costs of funds + 200 basis points = approx. 5–5.5% for loans with a maturity of less than three years and an additional 100 basis points for loans with a maturity of over three years.

to ensure stability. However, for the time being, this is not yet on the agenda at decision-makers' level; if possible, they try to avoid this final solution. It should be noted that this solution also has its disadvantages that should be recognised; primarily that even the credit rating of countries in a stronger fiscal position may be shaken, and this would be a bad message for the indebted. On the other hand, however, the situation would be similar to how crises are solved within national state frameworks: a public good, financial stability is provided in exchange for taxpayers' money, which raises serious distribution and fairness problems. Nevertheless, it is possible that this is the optimum solution at the macro level.

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2. Benefits and risks of introducing the euro in Hungary

Following our analyses in 2002 and 2008, this chapter again attempts to assess the benefits and risks of introducing the euro. We do not, however, undertake a numerical cost-benefit analysis on the introduction of the euro, for several reasons. Firstly, empirical research published in the past decade shows a considerably wide spread of macroeconomic effects in channels that have been identified in the past as benefits of the euro. Secondly, risks and costs have shifted as well since the financial crisis in the direction of medium-term macroeconomic risks that are difficult to quantify. Thirdly, the net benefit of euro area membership significantly depends on a conscious economic policy, that is, it is not considered to be given externally for the joining country.

Overall it is still likely that introduction of the euro may have substantial macroeconomic benefits for the Hungarian economy. These benefits will primarily result from strengthening competition and growing capital and foreign trade flows. Moreover it would be an illusion to assume that with the substantial Hungarian financial integration and exposure in foreign currency, independent monetary policy could serve as a long-term solution for the Hungarian economy, that is, the effectiveness of monetary policy in terms of financial stability could significantly strengthen within the zone.

Macroeconomic experience since the crisis, however, suggests that introduction of the euro may also entail major macroeconomic risks which can only be mitigated by very conscious economic policy. The most relevant of these risks are the development of boom and bust cycle and inadequately efficient adjustment on the labour market.

In respect of the first issue, growing credit demand caused by declining real interest rates and strengthening credit supply attributed to increasing capital flows can jointly contribute to excessive lending and subsequently to a downturn. The evolution of a credit boom may be reinforced by monetary policy, which is not calibrated individually to Hungarian developments. With respect to labour market flexibility, the ability to adapt to strengthening competition following the cessation of exchange rate uncertainty may pose a problem. We believe that the risk of a developing credit boom can be moderated by anchoring inflationary expectations on the level of the euro area and with fiscal and macro-prudential policies. The newly developed European economic mechanism also reduces possible risks, strengthening the coordination and oversight of economic policies.

In terms of labour market flexibility in Hungary, the current institutional environment enabling the flexible adjustment of companies is insufficient. An institutional framework and incentives are necessary on the labour market which enable efficient renewed employment in the market sector of the currently non-employed and those losing their jobs as a result of intensifying competition. It seems that the Hungarian economy is currently far from meeting the latter condition. According to our calculations, a substantial increase in employment in the private sector resulting from the tax and transfer measures outlined in the government programmes is not a realistic possibility. This is chiefly attributable to the fact that the favourable effect of low PIT and corporate tax reduction and the tightening of the transfer system is significantly offset by the phasing out of tax credits and special taxes imposed on the financial sector over the long term.

The question is the extent to which the wider institutional environment is capable of channelling the former effects in a positive direction. Although the government measures suggest shifts in a positive direction in several areas, transformation of the institutional framework of the labour market is contradictory in some cases, and the plans and impact assessments necessary for the accurate assessment of the measures' effects are not available in sufficient depth. While the aggregate employment rate can also be improved through the planned substantial expansion of public employment, sustainable development of the Hungarian economy would be effectively supported by increased employment on the market.

In our view, an increase in the private sector employment rate over the long term would necessitate the consistent modification of incentives targeting currently inactive groups and the implementation of more effective active

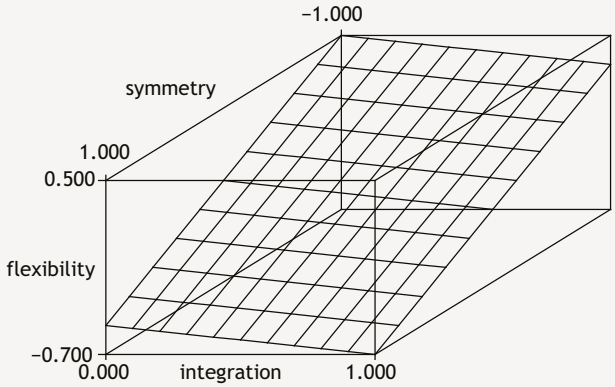
labour market policies. As regards the first factor, similarly to other countries, it would be necessary to keep in place the institutional framework of tax credits or otherwise support the employment of low qualified employees. In relation to active labour market policies, the efficiency of the programme needs to be improved to allow the identification and elimination of factors impeding the private sector employment of the affected groups.

2.1 Theoretical framework: The optimal currency area (OCA) theory

According to the OCA theory, the benefits of the euro are principally attributed to strengthening competition resulting from eliminated exchange rate uncertainty and the growth of trade and capital flows between countries. The elimination of exchange rate uncertainty and the related decline of transaction cost is stronger in increasing efficiency through competition, where the integration of an economy in the zone is higher.

Adoption of the euro, however, entails the surrender of independent monetary policy. This can be the most important cost, if the country experiences asymmetric shocks. The European Central Bank, namely, will react to these only in proportion to Hungary's relatively low economic weight on a European scale. The higher the risks of asymmetric shocks, the less it makes sense to join the zone.

Chart 2-1
The Optimal Curreny Area plane



Source: De Grauwe and Mongelli (2004).

Asymmetric shocks can be more effectively managed if nominal rigidities are negligible, as monetary policy minimises welfare losses resulting from these.[21] In this sense, the flexibility of commodity and labour markets is of key importance. However, in view of the fact that without labour market adjustments price changes do not ensure the sustainability of the corporate sector and long-term employment in case of negative shocks, emphasis has increasingly shifted to the latter. Labour market flexibility can be assessed in terms of the flexibility of both wages and quantities. Although Mundell (1961) defined labour mobility as a precondition for successful monetary union, in a European context, focus shifted to the analysis of wage flexibility for assessing the success of monetary union membership. This is presumably chiefly attributed to the fact that there is low labour mobility between certain European countries partly due to linguistic and cultural reasons. (Nickell, 1998).

According to De Grauwe and Mongelli (2004), we can illustrate the dilemma of optimal accession to the currency area in three-dimensional space; space is defined by the dimensions of symmetry, integration and flexibility. The OCA plane marks the imaginary position where the net benefits of entry are reversed. Above the plane it makes sense to join the union, below it, it does not. The plane has a negative gradient in all dimensions. Entry is a viable choice even where higher economic integration is paired with lower symmetry. For two reasons: firstly, the benefits are larger with a higher level of integration, and secondly, higher financial integration offers greater possibilities for smoothing out asymmetric shocks. Similarly, entry to the area could be a viable choice where higher integration is paired with lower economic flexibility, considering that the benefits are ceteris paribus larger. Finally, asymmetric shocks paired with higher flexibility are a smaller problem for the aforementioned reasons.

The position of a country in the above space, however, is not fixed – it may change over time. Moreover, it can be argued that membership in the currency area affects the position of a country in the above space over time. Finally, as discussed below, entry to the area can in itself constitute an asymmetric shock to which the economy needs to adjust.

Beyond doubt, the elimination of exchange rate uncertainty can contribute to strengthening integration; this was one of the basic principles motivating the establishment of the

[21] Moreover, as Pissarides (2008) argues, identical shocks require different monetary policies if labour market flexibility varies.

single European currency.[22] Entry to the currency area also affects the symmetry of economies. In the literature, it is argued that integration can both increase and decrease symmetry. According to Frankel and Rose (1997), higher integration increases the symmetry of economic structure, as a growing proportion of foreign trade flows constitutes sectoral trade. By contrast, Krugman and Venables (1997) argue that higher integration increases specialisation on the basis of rising returns to scale, causing declining symmetry.

Currency area membership not only increases foreign trade integration, but also financial integration. If idiosyncratic shocks are transmitted faster from one country to another as a result of financial integration, symmetry is expected to increase. Financial integration, however, asymmetrically supports sectors with a higher capital intensity, through the easing of external financing constraints (Rajan and Zingales, 1998); this mechanism can also contribute to increasing the asymmetry of economic structure.

Finally, entry to the currency area can be regarded as an asymmetric shock for the given country. The elimination of exchange rate uncertainty obviously causes substantially stronger changes in joining countries than in the older members of the area. Strengthening competition forces adaptation to a new, more efficient environment in tradable sectors, on the one hand, while declining real interest rates may lead to credit booms, on the other. Moreover, in theory, national monetary policy is no longer available to support adjustment to the trend.

In theory, EMU membership can also affect the flexibility of the economy, as membership and the path leading to membership can act as a catalyst for the implementation of reforms delayed in the past. At the same time, prior to the crisis, membership in the area may have been perceived as a safe harbour for many countries.[23]

2.1.1 LIMITS OF THE OCA ANALYTICAL FRAMEWORK

It is necessary to briefly make note of other factors which the above theoretical framework does not adequately address.[24] According to Mundell (1961), the OCA analysis is based on the assumption that the issue of choosing the national currency fundamentally constitutes an optimisation problem: a country should choose a currency that minimises the cost of economic transactions. As noted above, this optimisation decision can be taken on the basis of economic shocks and the available adjustment mechanisms, amongst other things. This logic is valid if foreign exchange rate movements generally reflect market fundamentals and the disciplinary power of the market ensures that fiscal authorities making up the currency area move along a sustainable path and their solvency is not called into question. In such a logical framework, there is no room for a confidence crisis, irrational market pricing or behaviour, and there are no crises or financial stability problems.

The real extent of this problem is another matter in empirical terms, of course. With the current problems in the euro area, however, a growing number of economists[25] are emphasising the irrational behaviour of the market, the importance of confidence and institutional factors and the role of fiscal factors played in maintaining a currency.[26] It seems that the crisis has accentuated that conflicts may arise between the common currency and the related, deeply integrated financial system and inadequately coordinated fiscal policies. This argument relating to aspects of financial stability and crisis not only offers useful perspectives for the analysis of the currency area's viability, but also for the evaluation of the costs of non-entry. Buiter (1998) generally questions the ability of small, open economies with major foreign currency debt to independently pursue effective monetary policy. On the one hand, with regard to major foreign currency debts, the central bank's ability to carry out the lender of last resort functions is limited to the amount of foreign currency reserves. Partly as a result of the above and changes in investor sentiment on the financial markets, exchange rates may not adjust to trends in fundamentals for a very long time. Thus, the independent exchange rate is more likely to be a source of shock than an instrument of adjustment (see Corsetti, 2008). In addition, the exchange rate is less effective as an adjustment instrument in relation to large debts denominated in foreign currency, where the effect of exchange rate changes on net exports is offset by the effect on the balance sheets of domestic participants.

2.1.2 TO WHAT EXTENT HAS THE EMPIRICAL LITERATURE SUBSTANTIATED THE THEORETICAL MECHANISMS?

With respect to the benefits of entry to the currency area, all of the previously described channels have been identified

[22] For details, see EC (1990).
[23] We discuss this issue in greater detail in the first chapter.
[24] We discuss these factors in greater detail in the first chapter.
[25] Tabellini (2011), Winkler (2011).
[26] See Goodhart (1998).

over the past decade. Conclusions reached by researchers upon analysing foreign trade flows on a macro level show extremes. Rose (2000) observed a multiplication of foreign trade flows, Baldwin (2006) estimated the foreign trade boosting effect at 6-25%, while Havranék (2009) found this effect to be negligible.

The use of corporate data seems more encouraging from a methodological point of view. Berthou-Fontagné (2008) concluded that the introduction of the euro substantially increased the exports of French manufacturing companies. The effect was measurable mostly in relation to companies that had already operated on the market, exporting a range of products rather than larger quantities. This result concurs with theory: the number of products on a market increases with the decline of transaction costs, as consumers appreciate the growing product variety.

Beyond the foreign trade channel, research has also confirmed the effect of strengthening competition. According to the results of Martin and Mejean (2008), prices of the same products are consistently lower in the euro area than in other OECD countries and price discrimination between certain markets is also lower. Additionally, several studies have established a positive effect between company level productivity and introduction of the euro. Using Italian company-level time series, Bugamelli et al. (2008) have shown that introduction of the euro resulted in a substantial increase in productivity in sectors that are sensitive to the exchange rate. In other words, the lack of 'competitiveness depreciation' which characterised earlier decades resulted in major efficiency constraints that increased productivity. Ottaviano et al. (2009) lucidly link the mechanism of expanding foreign trade and increasing productivity.[27] According to their estimates, in terms of the real economy, the smaller and more open an economy is, the closer it is to the centre of the currency area and the greater the flexibility of the production structure, the more the competitiveness of a country improves through entry to the currency area.

Overall, however, as regards real economic effects, the *ex post* results relating to the introduction of the euro show a considerably large spread, and therefore it is difficult to provide a reliable estimate for effects at the macro level. At the same time, the overall qualitative results of the analyses have confirmed the mechanisms assumed in the theory.

The introduction of the euro in the financial sector produced a more distinct effect. Lane (2008) assesses all of the possible financial markets (debt, FDI, bank flows). Reviewing earlier studies, he concludes that introduction of the euro substantially increased financial integration, with double-digit increases even recorded in some channels. The results of Warin et al. (2008) suggest that EMU membership doubled FDI flows. By contrast, according to the analysis of the IMF (2011), the pace of integration related to FDI and other non-debt generating instruments remained well below that of interbank, debt generating instruments. It was also concluded[28] that increasing integration strengthened the co-movement of GDPs, i.e. symmetry, although a smaller effect was measured in relation to consumption – contrary to the theoretically assumed effect.

As regards asymmetric shocks, *ex post* analysis suggests that the largest asymmetric shock was the introduction of the euro in itself, to which the peripheral economies were not able to adequately adjust. We will discuss this issue in more detail in the next sub-chapter.

Finally, the picture is very mixed with regard to the endogeneity of EMU entry and economic flexibility. It now seems that although the macro-stability of members pursuing undisciplined economic policies in the past has improved, this has proved to be insufficient – attributable to various reasons in the different countries – to enable flexible adjustment in the currently adverse economic environment (For details, see Chapter 1).

2.1.3 PHENOMENON OF BOOM AND BUST IN THE EURO AREA

In the period following the introduction of the euro, many peripheral euro area countries (Spain, Portugal, Ireland, Greece, Cyprus, Slovenia) experienced a boom-bust cycle in which rapid initial growth was followed by a major decline. Upon review of experience in the above countries, we aim to determine the extent to which the boom-bust cycles in the peripheral countries – with a higher interest rate prior to entry to the euro area – are necessary consequences of declining interest rates resulting from entry and to determine the role played by the given economies' attributes, the financial environment and economic policies in shaping these trends.

In theory and in simplified terms, the boom-bust cycle can be described with the following mechanism. In countries previously characterised by higher interest rates, the decline

[27] The authors assess the elimination of the exchange rate risk as a fixed cost of entry to the foreign market and this is how they model its effect on greater market access and growth.

[28] See Imbs (2006), Stavrev (2007).

in real interest rates relating to accession on the demand side results in rising internal demand, financed on the supply side by increased funds attributable to the elimination of the exchange rate risk. Owing to the above, due to slower adjustment of aggregate supply, economic performance temporarily rises above the potential level, accompanied by increasing wages and inflation and a worsening external balance. However, declining competitiveness as a result of real appreciation eventually offsets rising internal demand and results in an economic slowdown. Theoretically, balance is restored through the adjustment of wages and prices.

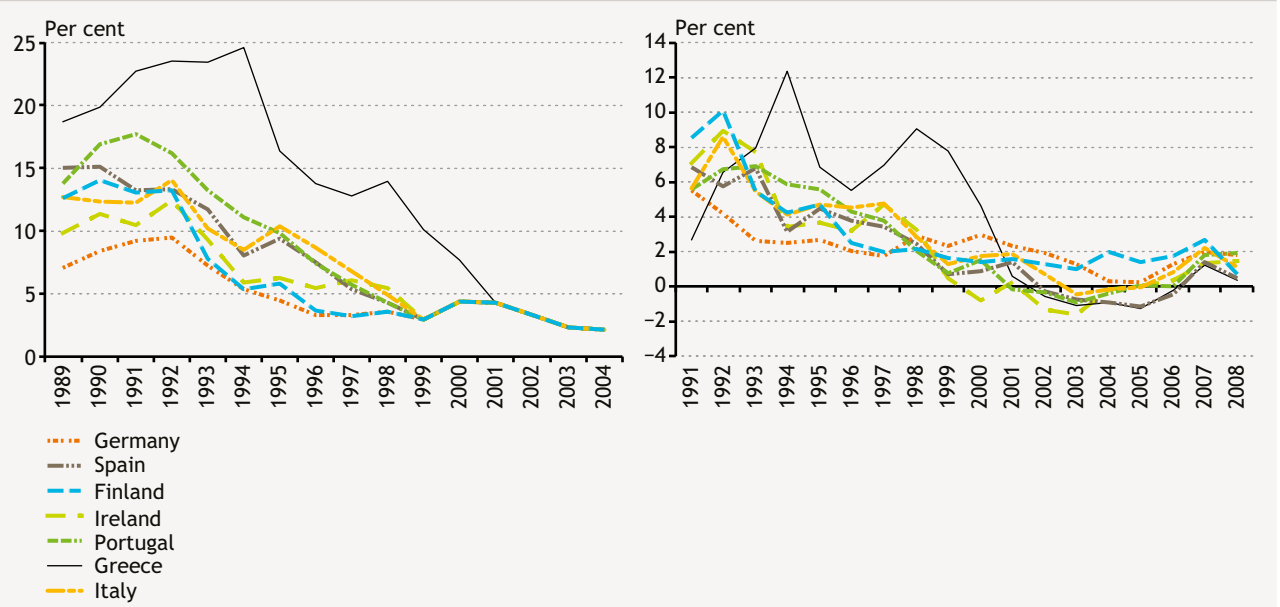
The declining real interest rates resulting from interest rate convergence actually constitute an asymmetric shock in countries with higher interest rates. It is important to emphasise that – in theory – with a flexible labour and commodity market and rational expectations, rising demand attributed to falling interest rates can also occur in a 'benign' form, where the rapid initial growth tapers off slowly and gradually (e.g. Fagan-Gaspar, 2007; Toroj, 2009).[29] In theory, growing investment and consumption rates and the resulting rise in the current account deficit can also reflect equilibrium adjustment to the new macro-environment and to the expanding financing possibilities arising from the elimination of the exchange rate risk, and do not necessarily indicate an unsustainable condition (Blanchard and Giavazzi, 2002). In reality, however, it seems that the boom period in the given countries – frequently accompanied by the emergence of prolonged and severe imbalances – is followed by a deep, lasting recession, where adjustment is a slow and difficult process due to the rigidity of the labour and commodity markets.

We first examine the macroeconomic processes in the given countries that characterised the period following accession to the monetary union. We then attempt to identify the factors that strengthened the boom cycle, delayed adjustment and caused the emergence of severe imbalances. We focus primarily on the role of the international financial environment, elements of country-specific banking systems, expectations and fiscal policies. (Slovenia – which entered the euro area in 2007 – is discussed in Box 2-1).

2.1.3.1 Anatomy of boom-bust cycles

The rapid and substantial decline in real interest rates is an important element of the cycle: the nominal interest rates of euro area countries had practically fully converged by the date of euro introduction – this amounted to a significant decline over the span of a few years for most of the peripheral countries. Inflation decreased by a lower rate, thus real interest rates also dropped significantly, albeit to a lesser extent than nominal interest rates, while the real interest rate of Germany showed much greater

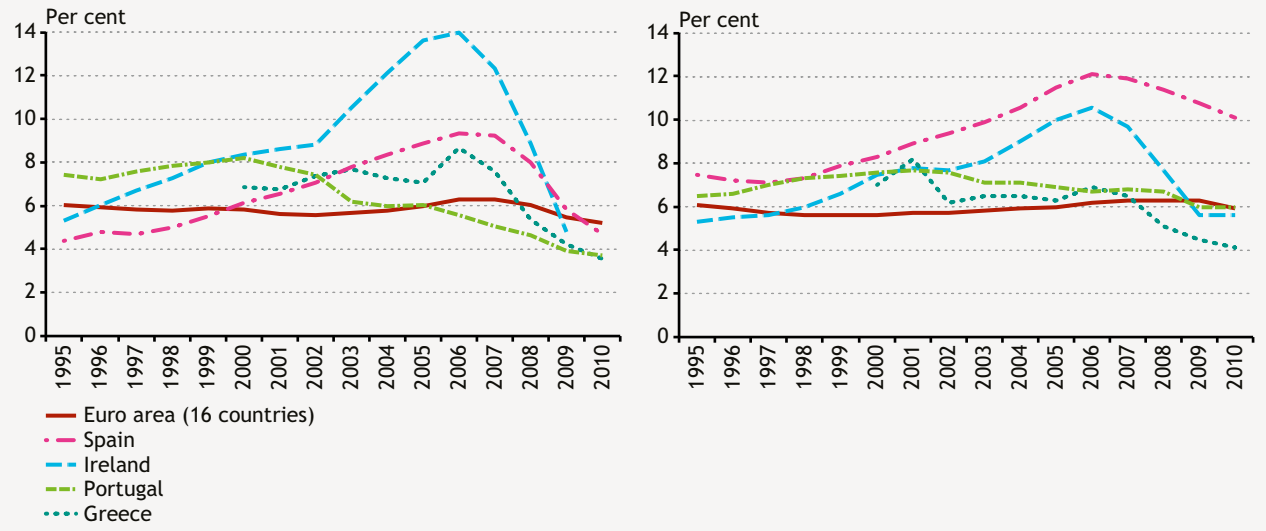
Chart 2-2
Short market nominal (left panel) and real (right panel) interest rate



Source: Eurostat.

[29] In their model drawn up for eurozone countries, Fagan and Gaspar (2007) show that in the boom phase, a strengthening real exchange rate attributable to rising wages and accelerating inflation temporarily worsens prospects in the export sector. But with forward looking expectations and flexible wages, competitiveness can be restored without a deep recession through the gradual slowdown of internal demand and the adjustment of wages.

Chart 2-3
Housing investment (left panel) and construction (right panel) as a percentage of GDP



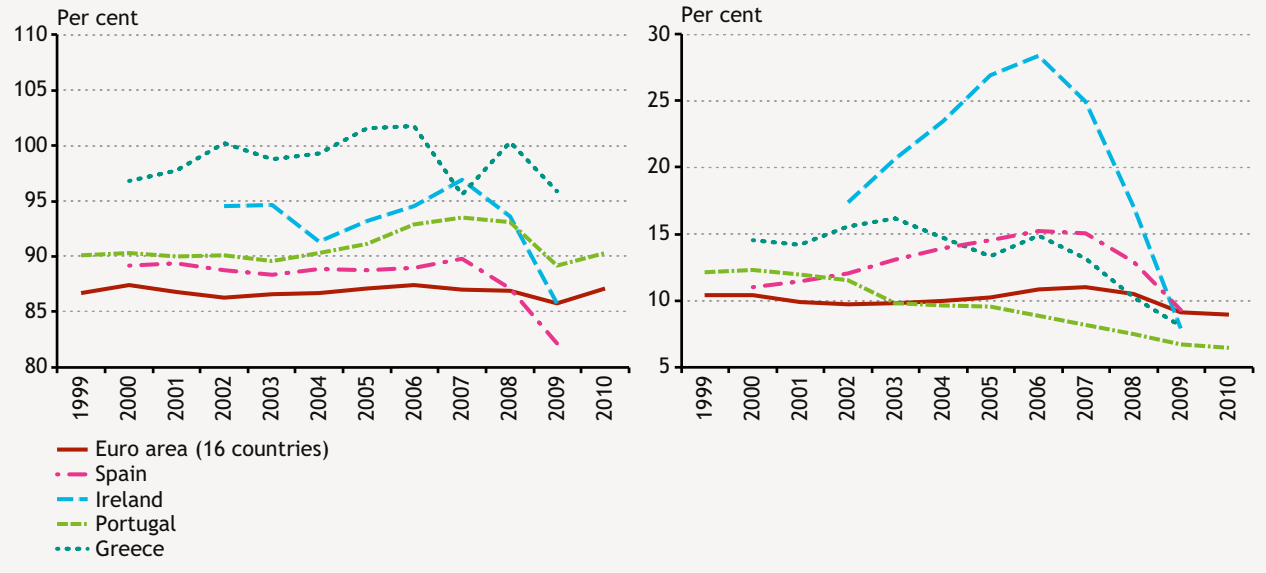
Source: Eurostat.

stability. By 1999, real interest rates in the peripheral countries fell to an extremely low level, approximating zero, and since inflation differentials once again strengthened after the establishment of the euro area, real interest rates typically continued to decline in the years following the introduction of the euro, reaching a negative value in several countries.

It is important to note that Italy and Finland – which also showed a relatively high interest rate spread in the early 1900s – did not experience the boom-bust cycle. We will examine the underlying reasons in detail later.

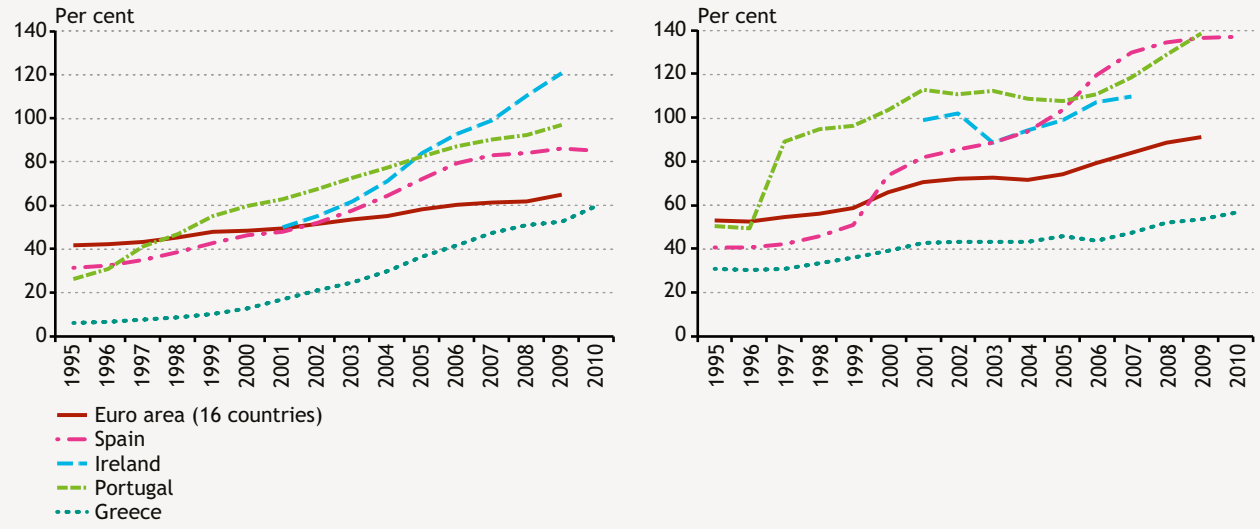
In the countries affected by overheating following accession, the process, degree, duration of the boom and its reversal into a slowdown showed variations depending on the weight of different factors. The slowdown in Portugal already began in the third year after the introduction of the euro, while the boom in Spain, Greece, Ireland and Slovenia was stemmed only by the financial crisis in 2008.

Chart 2-4
Household consumption (left panel) and investment (right panel) as a percentage of disposable income



Source: Eurostat.

Chart 2-5
Household debt (left panel) and non-financial corporate debt (right panel) as a percentage of GDP



Source: Eurostat.

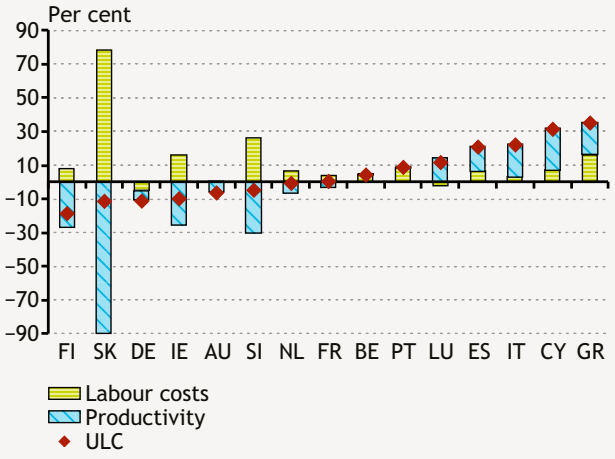
Nevertheless, some general characteristics can be observed. Real estate investments and household consumption played a dominant role in the growth of internal demand; the ratio of other corporate investments to total gross fixed capital formation declined.[30]

In countries which experienced a credit boom, the financing capacity of the household and/or corporate sector significantly worsened; in Ireland and Greece households were net borrowers. The extent to which the worsening financing capacity of households was attributable to consumption or rather to household investments, varied moderately from country to country.

As a mirror image of the above trends, on the financing side, the boom phases were exclusively characterised by rising indebtedness of the private sector, particularly that of households, at a rate significantly exceeding the euro area average. Corporate indebtedness rose at an exceptionally high rate in Portugal and Spain.

Owing to the above, the boom period was characterised by a rapid rise in unit labour costs and thereby substantial appreciation of the real exchange rate, the increasing share of the service sector, and typically that of the construction industry, as well as a rapid decline in the external balance. At the same time, in countries – with the exception of

Chart 2-6
Manufacturing ULC based real exhange rate compared to Eurozone



Note: 2000–2007, compared to euro area.
Source: Eurostat.

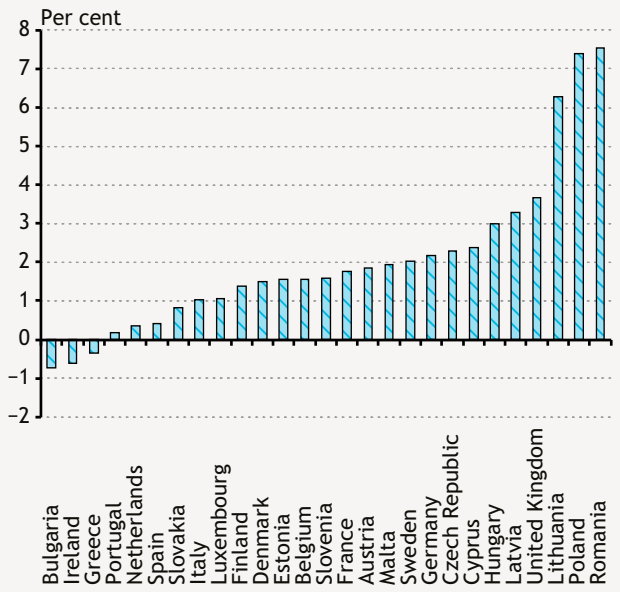
Ireland – with a high balance of payments deficit, productivity in foreign trade sectors increased more slowly than the euro area average.[31]

It is important to note that the downturn automatically occurs in the models due to worsening competitiveness caused by real appreciation. This was the case only in

[30] It is important to note that the real estate market boom linked to mortgage lending commonly characterised the excessive credit growth periods of developed and emerging countries witnessed in the past decades. This is principally attributable to the effect of real estate collateral value on the cycle.

[31] According to the BIS (2011) analysis, weak productivity growth is partly attributable to overheating itself. The excessive growth of the construction industry and financial system absorbed resources – capital and qualified labour – away from the productive sector.

Chart 2-7
Real interest rate in the EU27 in the 1999–2003 period



Note: In case of Greece 2001–2003.
Source: Eurostat.

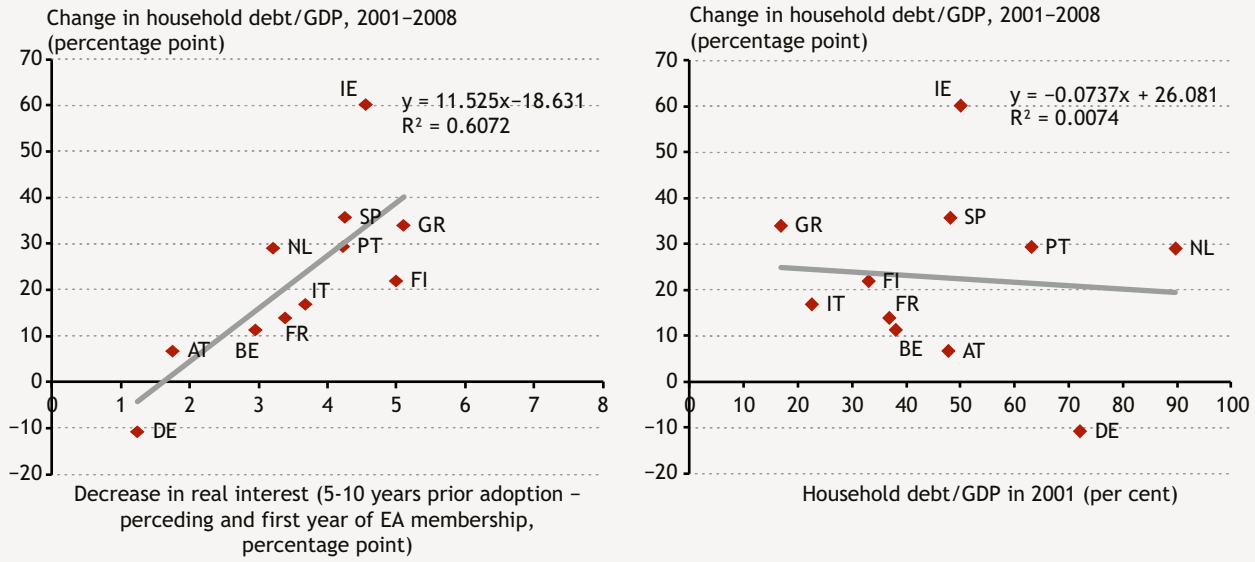
Portugal; the boom remained persistent in the other countries and only collapsed as a consequence of the financial crisis. At the same time, household and corporate indebtedness continued with slow growth in the 2000s in Portugal; there were no wage adjustments, high internal demand led to a high balance of payments due to rigidity on the supply side.

What role did falling interest rates during accession play in the above trends? Upon review of the total sample of the EU-27, we may observe that the lowest real interest rates in the years following introduction of the euro were measured in the peripheral countries of the euro area.

In addition, the pace of household indebtedness – which plays a key role in the process – shows a strong correlation with changes in the contemporaneous real interest rate in the years preceding introduction of the euro, while there is no correlation with the initial GDP-proportionate household loan stock. Econometric estimates with a wider sample show that the real interest rate is a significant factor in household and private sector lending.[32] The empirical results, however, are not straightforward in determining the extent to which monetary conditions (and changes therein) in themselves are responsible for the emergence of credit bubbles leading to a severe financial and economic crisis.

In the following, we review the factors that contributed to the development of boom-bust cycles in countries affected by interest rate convergence. On the demand side, the boom was strengthened by inflationary expectations that resulted in lasting low real interest rates in the period

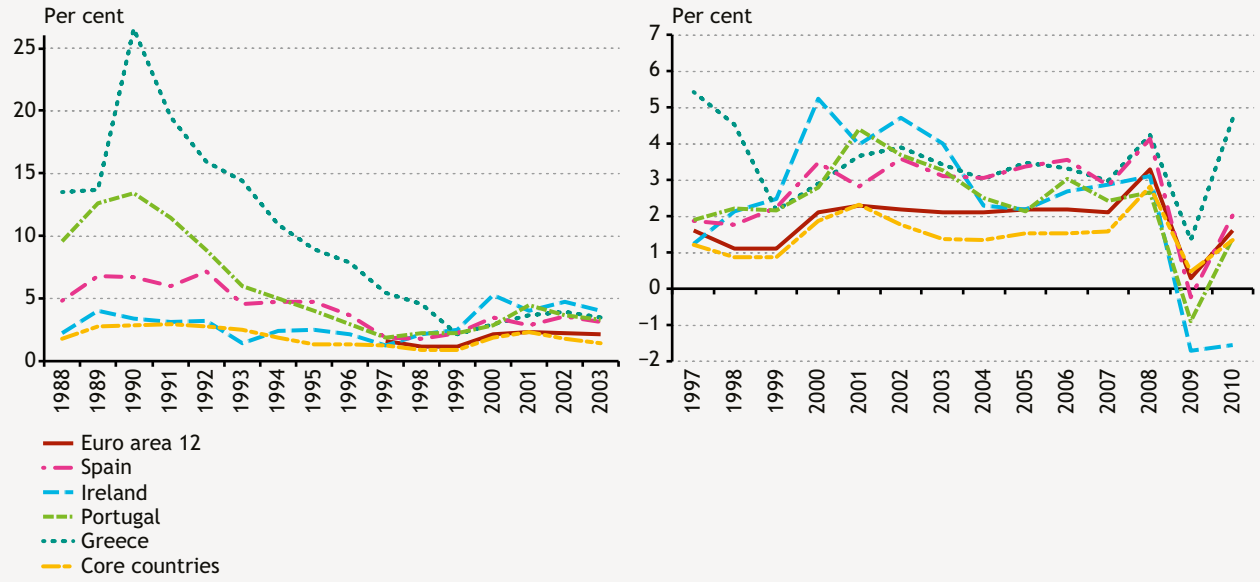
Chart 2-8
Household borrowing dynamics and decrease in real interest rate (left panel) and household indebdetness in 2001 (right panel)



Note: In case of Greece 2001–2008.
Source: Eurostat.

[32] E.g. Kiss-Nagy Vonnák (2006), Backe et al. (2006), Eichengreen and Steiner (2008), Schadler et al. (2004).

Chart 2-9
Inflation, yearly average, per cent



Source: IMF WEO database.

following accession already and, in certain cases, by fiscal policy. The strengthened credit supply of the banking system also played an important role in the process, which was also affected by deepening financial integration resulting from euro-specific factors and country specific properties of the banking system. Finally, optimistic income expectations on the demand and credit supply side also heated the economy.

2.1.3.2 Demand factors of the boom-bust cycle

2.1.3.2.1 The procyclical real interest rate – role of inflationary expectations

Due to the single nominal interest rate in the euro area, in the case of inflation differentials the real interest rate behaves in a procyclical manner, impeding adjustment to asymmetric shocks. An opening output gap resulting from a demand shock, for example, contributes to rising inflation and a decrease in the real interest rate, and common monetary policy reacts to this only in proportion to the weight of the given country. In the case of an asymmetric shock, this may lead to excessively loose monetary conditions and thereby to a further rise in internal demand (e.g. Toroj, 2009; Roubini et al. 2007). It is important to note that a one-off inflation shock does not automatically lead to an *ex ante* decrease in the real interest rate, if market participants expect declining inflation. Thus, within the monetary union, the real interest rate may act as an 'automatic destabiliser' in the case of non-anchored or retrospective expectations. In this case, rising inflation also increases expected inflation, reducing the *ex ante* real interest rate as well (Angeloni and Ehrmann, 2004). However, even in the case of anchored expectations problems might arise, as – due to real convergence – the equilibrium interest rate is higher than that in the core countries. Thus, an interest rate level corresponding to the level in the core countries may imply a looser monetary position in this case as well.

In the period following introduction of the euro, inflation in the analysed peripheral countries was higher over the long term than the euro area average. As a result, real interest rates continued to decline in the years of euro area membership following the decreasing interest rates attributed to interest rate convergence, resulting in real interest rates that were lower than those in the core countries and other European countries, and surely below the balance level. What are the causes of long-term inflation differentials within the euro area? In theory, equilibrium real appreciation resulting from real convergence in less developed countries may also lead to higher inflation. However, studies examining the inflationary differences of euro area countries came to the unanimous conclusion that excess inflation in the peripheral countries is only partly attributable to the convergence process in the years following euro introduction. The different estimates identified numerous factors which played a role in shaping inflation differentials within the EMU. A key role is attributed to varying cyclical positions, the rapid increase in nominal wages, varying degree of exposure to exchange

rate and oil shocks and different commodity market regulation.[33] Several analyses, however, concluded that the inflation persistence characteristic of some euro area countries played a determining role in strengthening inflation differentials and their persistence.[34]

The lack of anchored expectations is a key factor contributing to inflation inertia, as a result of which the effects of various inflation shocks become persistent. This is also evidenced by the estimate of Franta et al. (2007), according to which the perceived inflation target significantly exceeded 2% in the years following adoption of the euro in peripheral countries characterised by high inflation in the past and was higher than the typical value in core countries. Arnold and Lemmen (2006) concluded that inflationary expectations depend more on the past inflation of a member country and less on the inflation target of the ECB. The peripheral countries implemented rapid disinflation in the period preceding adoption of the euro, which was sufficient to fulfil the convergence criteria, but fell short of anchoring expectations.

Overall, inadequately anchored and retrospective expectations contributed to the development of long-term inflation differentials and persistently low, often negative real interest rates, which may have played a role in sustaining the boom phases.

2.1.3.2.2 Fiscal policy

Fiscal policy was clearly loose only in Greece and Portugal in the boom period, as the deficit exceeded 3% in these countries.[35] With regard to the other countries, we may conclude that fiscal policy was not ex ante loose, but was ex post inadequately countercyclical, due partly to the underestimated output gap, on the one hand, and partly to the underestimation of cyclical revenue surplus resulting from the upturn on the real estate market, on the other (e.g. Kanda, 2010)[36].

Comparing Spain and Portugal, Fagan and Gaspar (2007) conclude that looser fiscal policy in Portugal played only a secondary role in the fact that the boom evolved at a faster pace and passed through faster as well. In Portugal, the structure of loosening is regarded to be more problematic; the substantial wage increases implemented in the government sector significantly contributed to the already rapid wage increases on a tightening labour market, and thereby to declining competitiveness. Overall, however, fiscal policy – with the exception of Greece – did not play a key role in shaping the boom phase.

2.1.3.3 Supply factors relating to the boom-bust cycle

2.1.3.3.1 Financial integration – euro area vs. global effect

Empirical evidence suggests that *in addition* to the real interest rate, credit supply factors also play a key role in the development of unsustainable credit booms, i.e. the active behaviour of the financial intermediary system, which can be given a basic boost by financial liberalisation and integration.[37] As noted above, financial integration among euro area countries accelerated after the establishment of the monetary union, and elimination of the exchange rate risk played a key role in this regard. This significantly increased the interest rate flexibility of credit supply (OECD, 2010).

The effects of the favourable international financial environment, ample global liquidity and strong international capital flows have also clearly contributed to the 'excessive flexibility' of the financial system (Borio and Disyatat,

[33] According to the results of Égert (2007), in the period 1995–2005, real appreciation in the PIGS countries cannot be explained with real appreciation calculated from the difference between productivity growth in the tradable and non-tradable sectors, the Balassa-Samuelson effect. Productivity trends account for the inflation differential only to a lesser extent, that is, long term inflation differentials emerging after the establishment of the eurozone are rather attributed to cyclical factors, inflation persistence and the degree of commodity market regulation. (Andersson et al., 2009). Ortega (2003) The rise in profit margins and nominal wages played an important role in determining the inflation differential of Spain and Portugal to Germany, attributable to the wage indexing practice, in addition to demand factors. According to the estimate of Stavrev (2007), price convergence linked to real convergence accounts for only 30% of inflation differentials.

[34] E.g. Angeloni and Ehrmann (2004), Licheron (2007), Andersson et al. (2009).

[35] For details, see Chapter 3.

[36] According to Jeager and Schuknet (2004), structurally loose fiscal policy is frequently linked to booming asset prices. In the case of asset price booms, a much larger revenue surplus is generated in comparison to an 'average' cycle, thus the commonly applied cyclical filters overestimate the structural balance.

[37] In their analysis relating to a wider group of developed countries, Ahrend et al. (2008) found that in addition to financial liberalisation/innovation, excessively low nominal interest rates – interpreted with the difference based on the Taylor rule – also contributed to the rise in real estate prices and an increase in mortgage loans. In contrast, the analysis of the IMF (2011) concluded that interest rate levels did not play a determining role in the imbalances of the period preceding the 2008 crisis; loose monetary policy shows a clear correlation with the development of lending only within the eurozone. In Scandinavian countries, the periods, phases of developing credit and real estate bubbles ending in a severe banking crisis were characterised by low after-tax real interest rates. According to the assessments, however, unsustainable indebtedness was given a strong boost by the large scale deregulation waves implemented in the mid-1980s. (e.g. Jonung, 2008).

2011). In the past decade, particularly from 2004, international financial integration accelerated, as indicated by the substantial rise in cross-border financial transactions and volumes, including particularly interbank transactions and exposures between countries (Lane, 2010; Forster et al., 2011).

The rapid rise in household lending was a common trend in the past decade in most of the developed and emerging countries, and did not only affect euro area countries (e.g. BIS, 2011).[38] The real estate market bubble generated through mortgage lending and the overheating of the construction industry was also present on a global scale (see Crowe et al. [2011], for example). The effect of the global financial environment is also reflected by the fact that the rise in debt did not cause an increase in risk premia either for governments or for banks or for bank customers, and therefore the build-up of imbalances was prolonged, there was no restraining force.

Thus, in addition to factors related to the establishment of the euro area, the speed of financial integration was also supported by global financial integration.

2.1.3.3.2 Banking system properties

In the peripheral countries, increasing capital inflows resulting from financial integration were generally intermediated by the national banking sector toward the household and corporate sectors (Forster et al., 2011). Therefore, in addition to the global international financial environment and rapidly expanding foreign borrowing possibilities within the euro area, the national banking systems also play an important role in the development of indebtedness in the private sector. The example of Italy presents an important lesson, where a credit boom did not emerge despite a major nominal interest rate decrease and the extremely low level of household lending. On the basis of the analyses of Casolaro et al. (2005) and Gambacorta (2008), the small size of the Italian household credit market is basically correlated with credit supply limits resulting from regulation; the credit demand of Italian households does not show country-specific characteristics.[39] The effect of regulation was reflected by high spreads and the most stringent credit standards in Europe[40]. From the end of the 1990s, household lending grew at a dynamic pace in Italy with the easing of regulatory constraints, although growth continued to be impeded by several factors; the rate of growth in the 2000s still remained much lower than rates measured in other peripheral countries.

Finland provides a similar example, where the interest rate spread was relatively high in the mid-1990s and lending expanded dynamically, albeit more slowly than in other peripheral countries, and where credit standards remained relatively tight. The unsustainability of the credit boom in Finland in the second half of the 1980s led to a severe banking crisis in the early 1990s, prompting banks to adopt more prudent lending policies.

The examples of Italy and Finland also shows that supply factors and the behaviour of the banking system play a key role in shaping the size and structure of the boom. In terms of the efficiency of financial intermediation, the Italian example is not clearly a positive one. The Italian and Finnish examples, however, suggest that the tightening of credit standards by regulatory means is capable of impeding a credit boom. This is supported by the analysis of the IMF (2011) as well, which finds a relevant correlation between external imbalance and credit standards underlying mortgage lending.

2.1.3.4 Excessively optimistic income expectations spurring both demand and supply

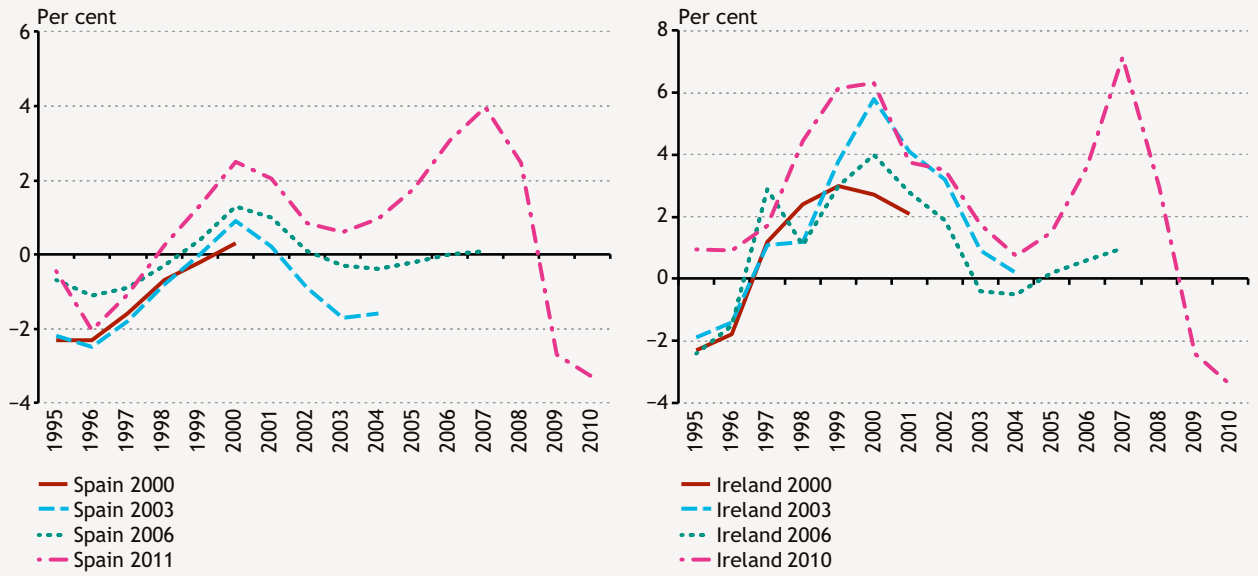
Numerous studies emphasise that excessively optimistic income expectations substantially contributed to overheating, supporting the rise in lending, wage increases and consumption on both the demand and supply side (e.g. Eichengreen and Steiner, 2008). It is difficult to substantiate the importance of excessive income expectations on an empirical basis, but on the basis of various model simulations, inflationary expectations may also play an important role in the process in addition to income expectations. With simulations carried out on macro-models estimated for European countries, Kolasa (2010) and Toroj (2009), for example, showed that excessively optimistic expectations of increasing income and productivity can in themselves strengthen an initial demand shock caused by declining real interest rates and thereby generate a boom-bust cycle. With perfectly rational expectations, participants are aware that rising income attributed to a demand shock is partly of a temporary nature, which also limits a rise in consumption and investments. With partly retrospective expectations, however, market participants project initial growth into the future as well, strengthening the demand

[38] USA, Iceland, Great Britain, Baltic states, Ukraine, Bulgaria, etc.

[39] In the 1990s, due to extremely slow judicial process and cumbersome regulation, the efficiency of the enforceability of contracts and liens was very low. The rise in lending was also stemmed by low competition, also linked to regulation, and the extremely stringent usury law adopted in 1996, limiting credit interest rates on a top-down basis.

[40] Even in the 2000s, Italy has the lowest loan-to-value ratio and shortest maturities in Europe (Gambacorta, 2008).

Chart 2-10
Output gap estimations of IMF



Notes: As a percentage of potential output.
Source: IMF WEO database.

effect and increasing the amplitude and length of the cycle. As a sign of optimistic income expectations, the output gap, i.e. level of overheating, was estimated to be lower in the boom period than subsequently.

2.1.3.5 Why did the competitiveness channel not function?

As noted above, theoretically the real exchange rate, strengthened through rising inflation, offsets the procyclical behaviour of the real interest rate through declining competitiveness, rechanneling growth to a balanced level with price and wage adjustments (the so-called competitiveness channel; see Blanchard, 2000; Roubini et al., 2007; Toroj, 2009). The degree, horizon and cost at which export possibilities, worsening as a result of real appreciation, can offset a growing output gap resulting from increasing internal demand – i.e. the sensitivity of the output gap to the real exchange rate relative to real interest rate sensitivity – is determined by numerous factors, such as the openness of the country, stance of external demand, flexibility of labour and commodity markets, non-price competitiveness factors, etc.

Export performance worsened relatively quickly and significantly basically only in Portugal, partly because declining competitiveness soon had an impact on the economic environment due to the spread of Far Eastern products which competed with Portuguese products. Price and wage adjustments, however, were not implemented and competitiveness was not restored; this – in addition to structural problems underlying the economy – contributed to the fact that the country achieved very low growth from the early 2000s, accompanied by a further increase in debt and external imbalance.

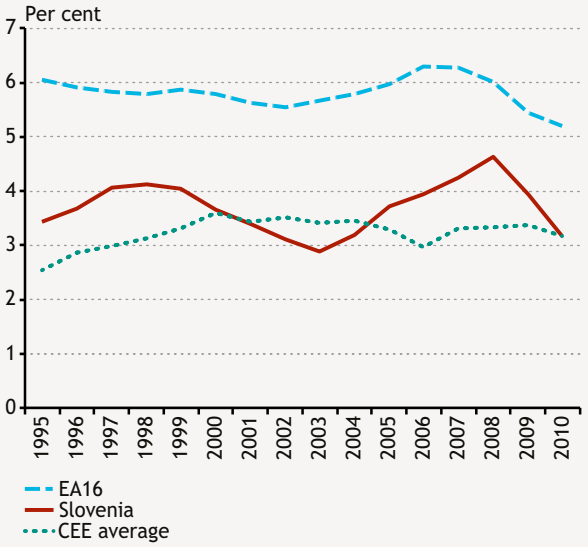
In the other countries, the worsening balance of payments is predominantly not attributed to declining export performance, but rather to increasing imports resulting from internal imbalance, the causes of which vary in the individual countries.[41] We can conclude that in contrast to the theory, the competitiveness channel does not necessarily exert a balancing effect which would dampen the initial boom over time. On the one hand, overheating developing in the non-foreign trade sector can obscure the effect of declining competitiveness for a longer period, particularly in more closed economies. Moreover, due to other, non-price competitiveness factors, the performance of the export sector does not necessarily show a pronounced decline which contributes to the persistent development of imbalances. Finally, the rigidity of wages and rigidity of the labour market impede adjustment.

[41] With regard to export performance, Spain and Greece are ranked in the middle; their share of the export market moderately declined in the period 1999–2008, but owing to non-price factors, much less than in Italy or Belgium, where real appreciation was on a lower level. Ireland, on the other hand, managed to significantly increase its export market share, and owing to a rapid increase in productivity, the unit labour cost based real exchange rate did not appreciate sharply, either, with rising wages.

Box 2-1
Lessons learned from the past years of Slovenia's use of the euro

Slovenia has been a member of the euro area since 2007. At the time of accession, it was regarded as a highly developed country in comparison to other countries in the region; its per capita GDP amounted to 80% of the euro area average. When the decision was adopted (in 2006), the economy did not experience serious disequilibrium, indebtedness, or problems of the banking system, although criticism arose in connection with the economy's competitiveness. The country managed to generate a mini-credit boom in the 3 years after 2006. According to the evaluation of the OECD,[42] excessively loose macro policies (including low real interest rates) supported the credit boom and the growth of internal demand and imports. Despite its relatively high level of development, during these years Slovenia was the fastest growing country in the euro area. Numerous factors suggested the development of rapid overheating. Firstly, the output gap opened to approximately 7.5% in 2008, based on the ex post analysis. Secondly, the current balance of payments worsened significantly; similarly to the credit boom in the peripheral euro area countries, the contribution of the construction industry to GDP rose to a high level, and home prices surged.

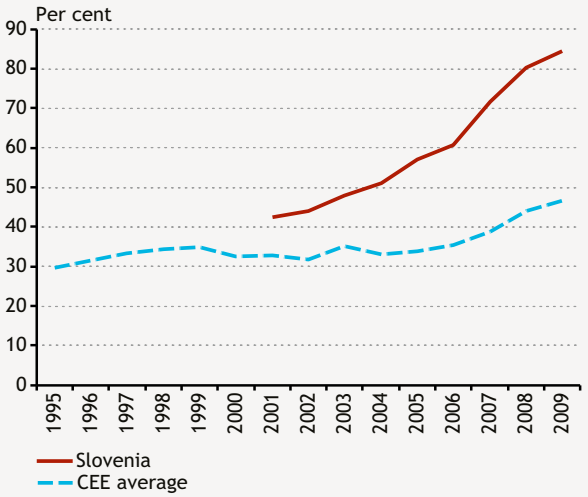
Chart 2-11
Construction investments as a percentage of GDP



Source: Eurostat.

Household indebtedness increased, but this did not lead to extreme indebtedness; it remains one of the lowest in the EU. The corporate sector, however, ran into severe indebtedness, both in terms of flows and levels, with the latter exceeding the euro area average. The banking sector financed the credit boom with external market funds; the loan-deposit ratio reached a high level. These increased the vulnerability of the banking sector upon eruption of the crisis.

Chart 2-12
Non-financial corporation debt, as a percentage of GDP



Note: Hungary excluding special purpose entities.
Source: Eurostat.

During the crisis, Slovenia suffered one of the largest declines among the EEA countries. This is attributable to several causes. Firstly, there is a high ratio of cyclical branches (automotive industry), which were significantly affected by the crisis, in the export sector. Secondly, the construction industry, accounting for a relatively high portion of GDP, was in decline prior to the crisis. Finally, the banking sector (depending on external funds) and companies struggled to obtain funds. Significant balance sheet adjustments commenced in the banking sector, which was dependent on external funds and experiencing a weakened capital position, and in the over-indebted corporate sector. The competitiveness related problems of the past resurfaced (high taxes on labour, high wages, moreover the minimum wage was increased during the crisis). As a result of the economic incentive measures and assistance provided to the banking sector, the budget deficit also increased at a high rate. The level of indebtedness, however, is still not high and the maturity composition of funds is favourable.

[42] OECD Economic Survey: Slovenia (2011).

2.1.3.6. Conclusion

In summary, the boom-bust cycle was most pronounced in countries where the demand shock resulting from interest rate convergence was accompanied by dynamically growing credit supply, partly attributed to financial integration and the favourable international financial environment and partly to the qualities of the national banking system. In other words, the nominal and real interest rate – which declined in the course of interest rate convergence – entail the risk of a strong rise in demand, possibly leading to persistent overheating and a credit boom, particularly if the financial intermediary system satisfies the growing credit demand. The trends may have been strengthened by unanchored inflationary expectations, reinforcing the procyclicity of the real interest rate, and excessively optimistic income expectations, fuelling both demand and supply, while adjustment is limited by commodity and labour market rigidity.

The examples of Italy and Finland suggest that the fact that a country joins the euro area with a higher initial interest rate does not automatically entail exposure to the boom-bust cycle, if conditions for a financial framework for rapid credit growth are not in place. The example of Ireland shows that a prolonged period of relatively low inflation, with a substantial inflow of capital and the active behaviour of the banking system, does not provide safeguards either.

2.2 To what extent Hungary could be an optimal currency area in the euro region?

We analyse the criteria outlined above for evaluating membership of the Hungarian economy in the euro area. In other words, we attempt to theoretically place the country in the space of optimal currency areas in the present and potentially in the future. In addition, we also aim at briefly considering criticism related to the analytical framework.

The analysis places greater emphasis on three topics. Firstly, we look at the importance of real economic and financial integration in terms of the benefits of accession. Secondly, we examine the extent to which the boom-bust mechanism poses a risk to Hungary and instruments which can possibly mitigate such risk. Finally, we focus on analysing the issue of labour market flexibility, particularly with respect to the government reforms implemented in recent years and those currently in progress.

Box 2-2
Choosing a benchmark for the analysis

In view of the fact that the euro area is quite heterogeneous in terms of the development and structure of the economies, we considered it appropriate to compare Hungarian indicators not to the whole of the euro area, but to a relatively homogenous groups. We generally compared these to four groups; this distinction is necessitated by the economies' varying level of development, the magnitude of their problems, the date of entry to the euro area and their relationship to the zone.

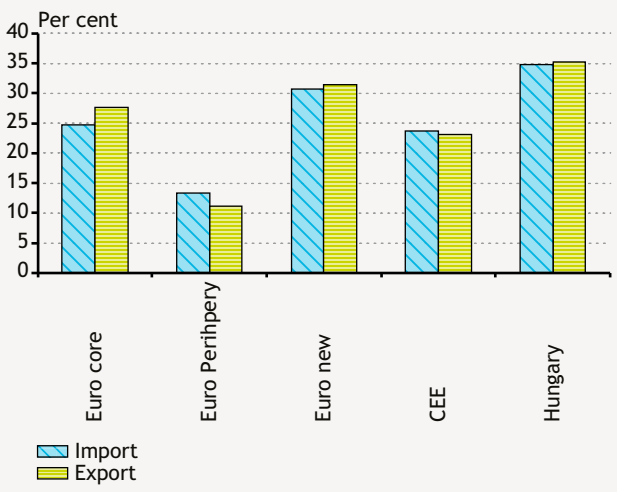
Euro core countries: Austria, Belgium, France, Netherlands, Germany. Euro periphery: Greece, Ireland, Portugal, Spain. New euro area members: Cyprus, Malta, Slovakia, Slovenia. CEE countries: Czech Republic, Estonia, Poland, Latvia, Lithuania.

2.2.1 BENEFITS OF EURO AREA MEMBERSHIP AND ECONOMIC INTEGRATION

Due to the elimination of the exchange rate risk, membership in the euro area can contribute to strengthening foreign trade integration in the real economy. In our previous analyses, we concluded that the Hungarian economy is one of the most integrated economies on a European scale, in terms of foreign trade development. The updated data have not significantly altered this conclusion. It is interesting to note, however, that in the past ten years Hungarian exports have increasingly targeted countries outside of the euro area. Although this trend was generally observed in relation to CEE countries, it was most pronounced in Hungary with respect to exports.

The trend is partly attributable to the fact that – following the transition – mutual foreign trade declined sharply within the CEE country group and only strong Western orientation

Chart 2-13
Trade integration with the euro area in 2009
(as a percentage of GDP)



Source: OECD.

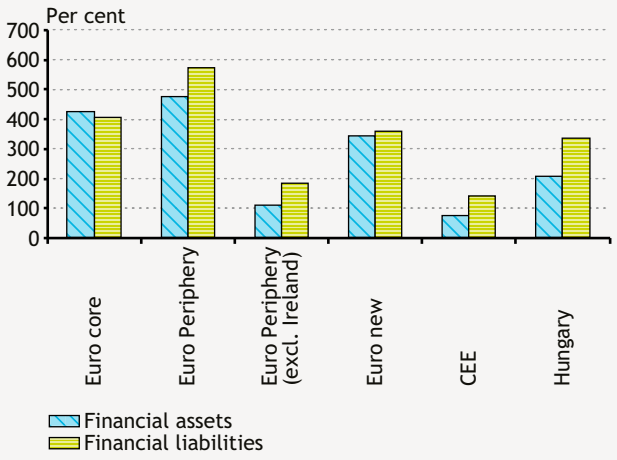
Chart 2-14
Change in the share of euro area trade between 2001–2009

(percentage point)

Source: OECD.

Chart 2-15
Gross financial assets and liabilities vis-a-vis the euro area in 2009

(as a percentage of GDP)



Source: Eurostat.

continued. Equilibrium estimates made a decade ago also suggested that the rate of foreign trade with the euro area has basically reached a maximum level. (see Jakab et al., 2000; Bussiere et al., 2005). Following the EU integration of several CEE countries (2004), foreign trade between these countries increased substantially.[43] Obviously, this trend could have been affected by the elimination of the exchange rate risk through possible accession to the euro area, as evidenced by the fact that foreign trade between euro area countries did not decline and by estimates referred to above, relating to the foreign trade generating effect of the euro.[44] In view of Hungary's high initial level of integration and trends in recent years, it is possible that the foreign trade generating effect of euro area accession will remain limited in the case of Hungary.

It would also be interesting to examine the amount of benefits generated by strengthening competition and growing price transparency. As noted above, micro-level studies have confirmed the existence of positive effects, but due to the 'event study' nature of the results, the extent of their adaptation to Hungary is uncertain.

Experience in the euro area so far suggests that a larger effect is expected from the deepening of the financial sector. This view may be further bolstered if we examine the current position of Hungary in international comparison. In comparison to euro area countries, it seems that the financial integration of Hungary remains below that of the core countries and Ireland, although Hungary's exposure is already quite high when compared to the other countries. In other words, there is room for the further deepening of financial integration after euro area accession, the degree of which, however, remains uncertain.

We also need to be aware that Hungary's external exposure is mostly in foreign currency. While the MNB is currently capable of carrying out its function of lender of last resort for up to the amount of foreign currency reserves in relation to foreign currency denominated debts, with euro area membership, the effectiveness of the lender of last resort function would significantly increase with respect to practically the entire debt. The euro+forint currency pair accounts for most of foreign currency debt, while other foreign currency pairs are significantly easier to manage from the point of view of the ECB.[45]

[43] See Munkácsy (2009), Hornok (2011).

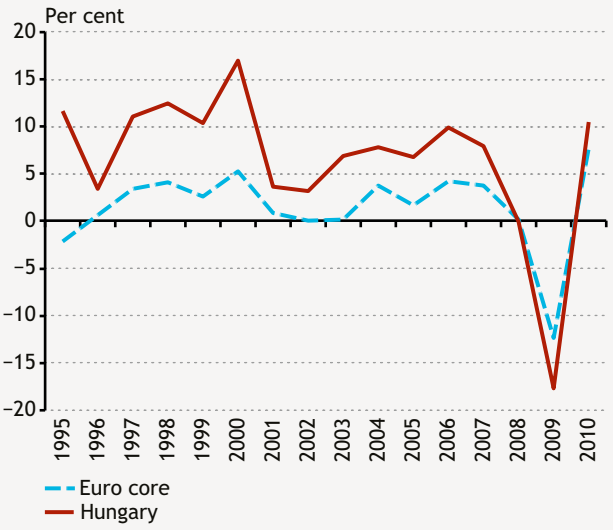
[44] Some argue that with the strengthening of globalisation between developed and emerging economies (e.g. China's joining the WTO), foreign trade between European countries was to *ceteris paribus* decline. In this case, there is no conflict between the positive foreign trade generating effect of the euro and the fact that the ratio of foreign trade between eurozone member states tended to decline following the introduction of the euro.

[45] If we were also take into account the swap positions, CHF exposure would increase to the disadvantage of the euro and forint. This, however, does not change the fundamental message, that exchange rate exposure would be more effectively manageable with membership in the eurozone.

2.2.2. RISKS: ASYMMETRY

In our previous analyses, we emphasised that in terms of the real economy, the sectoral structure and the rate of foreign trade within the sector in Hungary is very similar to that in core countries of the euro area. Evidence collected since 2008 also suggests that the export sector is strongly correlated with the German industrial cycle.

Chart 2-16
Industrial production of euro core countries and Hungary
(yoy, %)

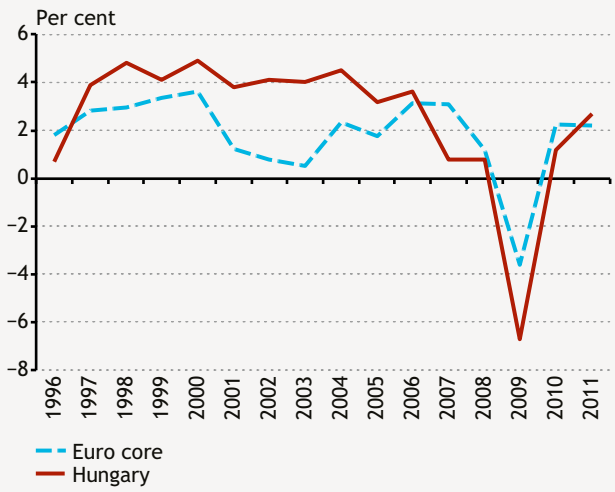


Source: Eurostat.

On the basis of the past decade, however, GDP data did not reflect the strong cyclical co-movement of the export sector. In this regard, the situation has improved since 2008, although it is principally linked to the common global shock and financial crisis. In our previous analysis,[46] we linked the disruption of cyclical harmony basically to the development of fiscal policy. Although we continue to see the effect of this trend in recent years (while most European economies loosened, or did not tighten the budget as an initial reaction to the financial crisis, Hungary tightened it in 2008–2009), the decline and subsequent recovery of export demand linked to the global financial crisis produced a more pronounced effect.

However, we can expect improvement in the cyclical harmony on the budget side in the future. Fiscal adjustment – in harmony with the European fiscal framework – will be a common trend in all European countries, and Hungary is no exception. The behaviour of private participants may

Chart 2-17
GDP growth of euro core countries and Hungary
(yoy, %)



Source: Eurostat.

cause substantial asymmetry in the process. We discuss this issue in greater detail below.

2.2.2.1 Possibility of asymmetric shocks in the private sector

Conflicting trends may emerge in the future in this area, although their effect over time is not likely to be similar. While the balance sheet adjustments of domestic participants may arise over the short term, international experience suggests that the development of a credit boom linked to introduction of the euro may be a possible risk in the medium term.

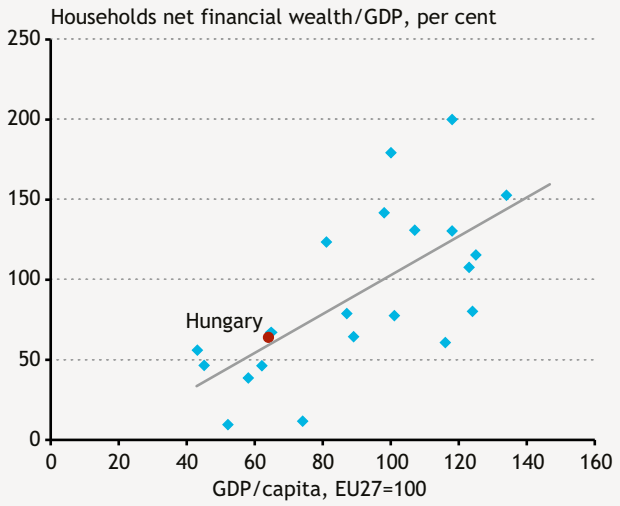
2.2.2.1.1 Legacy of the crisis in the coming years

Our convergence analysis last year analysed the indebtedness of individual domestic sectors in detail. At the time, we found that with the exception of the government sector, in all cases problems were linked to the structure of debt and financing and not the level of debt. In the past year, however, the balance sheet adjustment of the private sector proved to be stronger than our earlier expectations. To what extent can our findings from last year be substantiated in light of the above developments?

In the 2010 convergence analysis, we argued that the level of debt in the domestic household sector is not high in international comparison. We found the debt structure and financing costs to be problematic. In the past year,

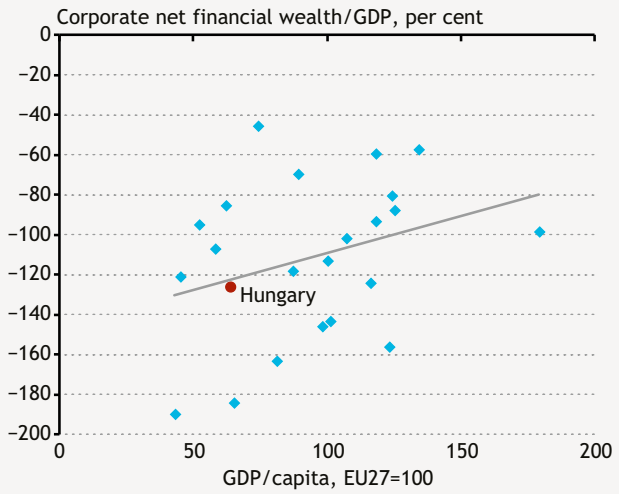
[46] Convergence analysis of 2008.

Chart 2-18
Households net financial wealth and GDP/capita in the EU



Note: Due to data constraints, household net financial wealth data is for 2009, GDP/capita data is for 2010.
Source: Eurostat.

Chart 2-19
Corporate net financial wealth and GDP/capita in the EU



Note: Due to data constraints, corporate net financial wealth data is for 2009, GDP/capita data is for 2010.
Source: Eurostat.

however, the Swiss franc has strengthened significantly against the euro and this may modify the validity of the previous conclusions. The positive correlation observed on the basis of international, particularly European samples between household assets and the level of economic development can help in determining whether households are excessively indebted.[47] If the population of a country borrows at an excessive rate, its asset position will significantly decline relative to the level of development. Such a basis of comparison also implies, as confirmed in our analysis last year, that the *level* of household debt is not considered high on an international scale.

The structure and financing cost of debt poses a fundamental problem, as reflected by the high level of instalments proportionate to income. In this regard, the situation has significantly worsened in the past year, compounding the balance sheet adjustment pressure of households.

It is also important to note that the changing risk perception of households may also affect the level of balance sheet adjustment. In the case of Hungary, for example, higher-than-average balance sheet adjustment may be necessary due to the fact that debt is denominated in foreign currency, where changes in the exchange rate are obviously very unpredictable. In addition to strengthening of the Swiss franc, this may partly explain why the Hungarian savings rate underwent one of the strongest increases since the outbreak of the crisis.

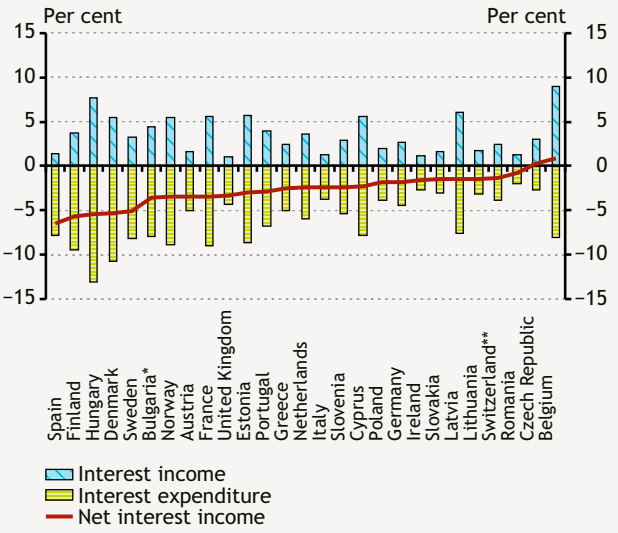
With regard to the corporate sector, in last year's analysis we similarly identified the debt structure and the financing cost as the basic source of asymmetric shock and not the level of debt. Similarly to the household sector, a similar correlation emerges in this case as well, based on an international benchmark: in a European sample, a lower level of economic development is linked to lower assets, and in this case, to higher debt. This concurs with the correlation defined in theory, according to which an inflow of funds should be favoured over higher expected profits in the future. However, in view of the fact that the future growth prospects are uncertain, an excessively high amount of debt relative to the level of development may imply that a bubble is developing and the indebtedness of the sector is too high. Upon analysis of 2010 data, we uphold the view that the *level* of domestic corporate net debt in international comparison is *not* excessively high – this in itself does not necessitate a substantial balance sheet adjustment.

Financing costs, however, have significantly increased recently, and are among the highest based on an international sample. This is presumably correlated with the high country

[47] Several, mutually non-exclusive explanations may explain the phenomenon. Firstly, micro-data suggest that the propensity to consume declines with rising income. Secondly, currently developed countries predominantly financed their economic growth with domestic funds, that is, growth in investment was conditional on the availability of a sufficient amount of household savings. In contrast, with the globalisation of financial markets, opportunities have opened up for convergence financed with external funds that may also necessitate an initial decline in the net asset position on lower levels of development.

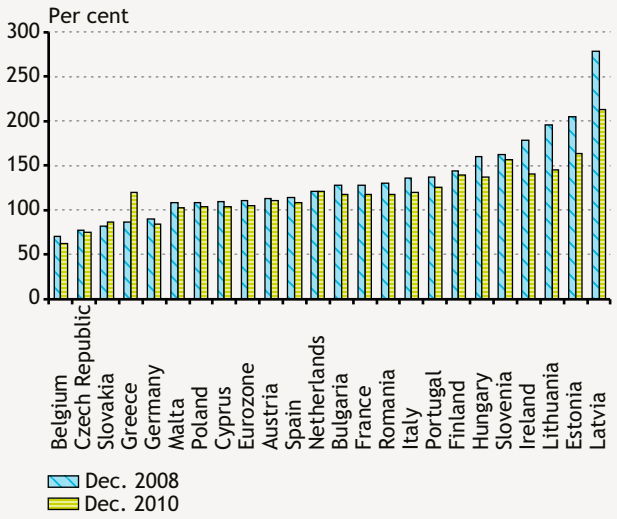
Chart 2-20
Interest rate expenditure and income of non-financial corporations

(in 2009, as a percentage of GDP, per cent)



** 2007.*
*** 2008.*
Source: Eurostat.

Chart 2-21
Credit/deposit ratios



Source: central banks.

risk premium, and similarly to the case of households, it may warrant balance sheet adjustments in the coming period.

Last year's analysis also identified risks in relation to the banking sector. The problem in the sector is linked to strong reliance on external funds, characteristic of an initial position, on the one hand, and high off-balance sheet positions, on the other. In the past year, dependence on external funds and the loan-deposit ratio declined significantly; the decrease in external debt, however, was partly accompanied by a rise in off-balance sheet positions. In other words, the balance sheet adjustment constraint due to financing risks in the banking sector has remained prevalent. This trend was reinforced by the declining capital accumulation capability of the Hungarian banking sector in regional competition, partly also attributable to worsening portfolio quality and extra burdens imposed on the banking sector.[48]

Overall, the balance sheet adjustment in the private and particularly in the household sector – on a larger scale than in the core euro area countries – will constitute an asymmetric shock in the coming years, possibly further strengthened by the banking sector's dependence on external funds and its declining capital accumulation capability. By nature, however, such balance sheet adjustment is linked primarily to the structure of debt and its financing costs and not to its level. Owing to the above, the time frame and extent of this process may depend significantly on the country risk premium and global risk tolerance. In view of the fact that on the basis of government plans and accession criteria, Hungary may become a member of the euro area at the end of the decade, at the earliest, we can assume with confidence that balance sheet adjustment will have been completed by the time at which it might pose a problem in terms of membership.

2.2.2.1.2 What is the probability of a future credit boom?

In light of the current conditions in Hungary, the above question may seem futuristic, but on the basis of experience relating to euro area membership, we nevertheless regard the possible development of credit booms to carry the highest risk in terms of the future. This conflict is partly resolved by the remote target date of the adoption of the euro and the fact that following a prolonged period of decline, cycles may suddenly reverse due to the delayed reaction of the supply side in the real estate sector.[49]

[48] See Report on Financial Stability (April 2011).

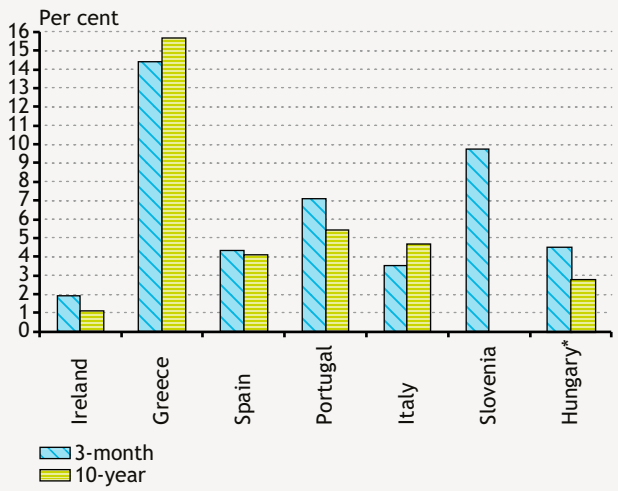
[49] In view of the fact that quantities react with significant delay, the reversal of the cycle initially increases prices on the housing market. Poterba (1984) The price increase raises loan collateral, partly by revaluating existing housing assets, that may in turn promote borrowing and improve income prospects

The phenomenon of boom and bust emerging after accession to the euro area has been elaborated on above. In considering the possibility of this phenomenon occurring in Hungary, on the basis of the foregoing, two issues need to be explored. The rate of the decrease of the real interest rate expected in connection with euro area membership and possibly along the path leading there, on the one hand, and the structural elements, incentives in the domestic financial sector and real economy which possibly support excessive lending in the future, on the other.

Real interest rate and euro area entry

In the peripheral countries, the decrease in the real interest rate was partly caused by the decline of short-term and long-term yields in the course of interest rate convergence and partly by excess inflation sustained or further strengthened in the period following accession.

Chart 2-22
Interest rate differentials in average of 5-10 years prior to euro adoption



*August 2010–July 2011.
Source: Own calculations based on Eurostat.

At first glance, we may assume that in the coming years, the probability of a marked decline in the real interest rate, as experienced by earlier peripheral members of the euro area, is lower. Although Hungary's current forint nominal interest rate spread is comparable to levels measured in the affected countries in the years prior to accession, as a country with a high level of debt, we cannot expect full interest rate convergence due to the European sovereign debt crisis. Markets within the euro area put a higher price on individual country risks, in contrast with the general trend in the period preceding the crisis, that is, euro area membership does not automatically mean that nominal interest rates decline significantly upon accession. In addition, the rate of excess equilibrium inflation following accession may also have decreased in the period following the crisis. The pace of real convergence slackens with the tightening of financing constraints (see last year's convergence analysis for details), and thus the rate of equilibrium real appreciation resulting from real convergence is expected to be lower than in previous years.

Several factors, however, prompt caution in relation to this issue. Firstly, due to growth that is higher than in euro area core countries, the equilibrium real interest rate will presumably be higher than in the core countries, possibly resulting in a significantly looser cyclical position of the real interest rate than would be the case at first glance upon comparison of nominal interest rates. Secondly, the margin of domestic household loans is high in international comparison,[50] i.e. the interest rate decrease of credit products that are relevant in terms of household credit demand may be greater by several percentage points than that of market yields, if competition intensifies. Thirdly, considering that excess inflation in peripheral countries in the past was predominantly not attributed to balance factors, this phenomenon also carries risks in terms of the future. This holds particularly true, as the decrease of the expected real interest rate may be much larger than observed after adoption of the euro, due to higher inflationary performance in the past.

Role of other factors in the credit boom

As noted above, beyond the decrease in the real interest rate, the credit supply behaviour of the financial sector, structural properties of the real estate market and the expectations of economic participants may all play an important role in the development of a possible credit boom. In respect of the credit supply behaviour of the financial sector, its regulation is discussed in detail in Chapter 4. It seems, however, that although some progress has been made with respect to macro-prudential regulation (e.g. introduction of LTV limits), current Hungarian macro-prudential regulation seems inadequate in relation to both the institutional framework and the instruments serving the reduction of the risk of future credit booms.

In view of the fact that excessive lending is always accompanied by overheating on the real estate market, it is

[50] The APR of forint denominated mortgage loans currently approximates 4%, in contrast with the 1-2% in European countries. The difference is even greater in relation to consumer loans.

useful to review incentives that support the development of a boom on the real estate market. The 2004 study of the OECD (Catte et al., 2004) assesses factors that may substantially affect the sensitivity of the interest rate reaction of the housing market and home prices. These are: (1) penetration of mortgage market financing, (2) high ratio of privately-owned homes, and (3) fiscal incentives.

Reviewing the literature on the Hungarian mortgage market on the basis of these factors, we may establish that the interest rate sensitivity of the housing market is not negligible over the medium term. On the basis of the characteristics of the Hungarian real estate market, we find that the ratio of privately-owned homes is very high in international comparison, and the value of housing assets is considerably high relative to the level of development; the GDP-proportionate value of the latter is comparable to that of developed OECD countries.[51] It follows from the above that with a rise in home prices, the growth in assets affects the wider population. With regard to the penetration of mortgage market financing, the level of lending falls short of levels measured in developed countries, but the products are available. In relation to fiscal incentives, Hungarian economic policy has been traditionally generous. It not only encouraged home purchases and construction on the tax side, but also disbursed large amounts of interest rate subsidies.

We may summarise the above observations relating to credit boom risks as follows. Firstly, the risk of a credit boom will not arise in the next few years, although the validity of this claim depends significantly on the future development of the forint/Swiss franc rate and the country risk premium. Introduction of the euro, however, is a medium-term target and may significantly affect financing costs. Thus, within this time frame, the risk of a credit boom similar to the one seen in earlier peripheral countries cannot be ruled out. Introduction of the euro can stimulate the real estate market on both the credit demand and supply side. In view of the fact that in international comparison, the structure of the domestic real estate market may strongly react to a decreasing real interest rate and changing financial regulation, the risk of this phenomenon should not be underestimated in connection with adoption of the euro.

2.2.2.1.3 To what extent can economic policy reduce the risk of a boom and bust?

In the euro accession period, by fixing inflation expectations early on at the euro area level, monetary policy can prevent inflationary inertia causing excess inflation higher than the equilibrium resulting from real convergence.

With euro area entry, basically two macro-level economic policy instruments remain under national control: fiscal and macro-prudential policy. Although European restrictions (SNE, ESRB) will apply to these instruments as well, these are not necessarily linked to the euro area, but rather to EU membership, i.e. our instruments will not undergo any substantial change under euro area membership. On the basis of the foregoing, we believe that each of the instruments can help curb credit booms where independent monetary policy is lacking.

Fiscal policy can prevent overheating on the real estate market in two ways: firstly, through the reduction of fiscal instruments which promote real estate investments, and secondly, by curbing aggregate demand and accumulation of reserves for hard times.

The home price boom, for example, can be moderated if the fiscal incentives supporting the purchase of privately-owned homes are reduced; the government interest rate subsidisation scheme, for example, should be avoided in periods when interest rates are significantly cut (Crowe et al., 2011). According to Conefrey and Fitzgerald (2009), targeted fiscal counter-incentives may be necessary to curb the boom (e.g. taxation of mortgage payments, transaction-based tax, i.e. burdens that increase the costs of borrowing/home investments). Market value based property tax also automatically limits the expansion of the real estate market (Kierzenkowski, 2010).

Notwithstanding the above and in view of the experience of the peripheral countries, it is doubtful whether fiscal policy alone can prevent overheating if bank credit supply is very strong. It is therefore also necessary to apply macro-prudential policy instruments which may be successful in slowing down credit supply. Considering the increased importance of these policies, we discuss experience relating to their effectiveness and some Hungary-specific dilemmas in detail, in a separate chapter below.

2.2.3 FLEXIBILITY: LABOUR MARKET

As noted earlier, with the absence of an independent exchange rate, a flexible labour market can significantly help in adjustment to asymmetric shocks and to growing competition after entry to the euro area.

In our 2008 convergence analysis and other analyses (Kátay, 2009), we consistently concluded that the Hungarian labour market, in terms of the institutional environment, mostly resembles the highly flexible markets in Anglo-Saxon

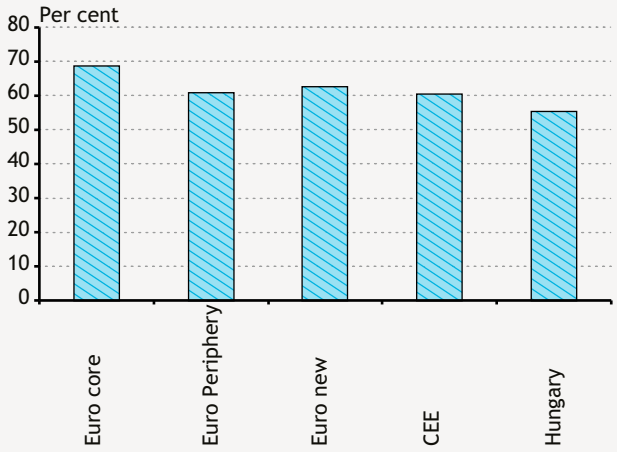
[51] See Vadas (2007).

countries. We may initially assume that wage flexibility is relatively high, where the risks of possible euro area membership are relatively low. Our previous assessment relating to high wage flexibility has also been confirmed by analyses conducted within the wage dynamics network (WDN). Micro-level data (Kátay, 2008) suggest that wage flexibility is more favourable in European comparison, and wages are effectively adjusted to corporate level conditions. This suggests that the institutional framework of the labour market does not limit the flexible adjustment of companies.

Research, however, also concluded that the prospect of re-employment is low despite the flexibility of wages; it is not very likely that someone who leaves the labour market will be able to re-enter it. This is most clearly indicated by the fact that the domestic labour market has been basically unable to remedy the fall in employment in the 20 years following the transition.[52] In other words, the extremely low rate of employment, and substantial regional imbalances in employment rates in international comparison prompt caution in connection with the favourable assessment of labour market flexibility.

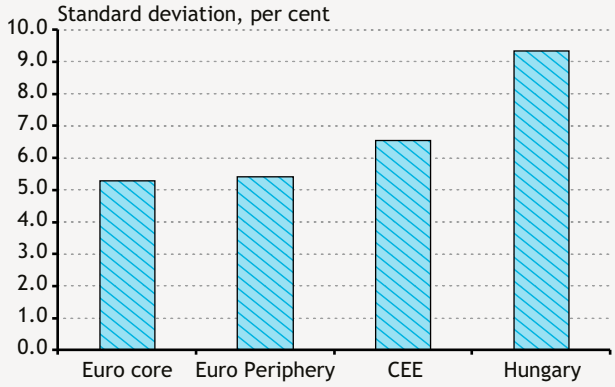
On the one hand, the low employment rate and persistent regional asymmetries suggest that wages are unable to fall to the extent necessary to absorb the large pool of the working-age population who are unemployed. On the other hand, there are also other factors, in addition to those determining wages, which are worth examining.

Chart 2-23
Employment rate in 2010
(population at the age of 15-64)



Source: Eurostat.

Chart 2-24
Regional employment disparities, 2000–2009



Note: Based on NUTS2 regions. Due to low data coverage euro periphery does not contain Ireland, whil the CEE group contains Slovakia, but the Baltic states.Firstly, the low rate of employment and persistent regional imbalances suggest that wages are unable to decline at a rate necessary to absorb the mass of working age population. Secondly, there are other factors beyond the level of wages which should be analysed.
Source: Eurostat.

Inspired by the conflicting picture outlined above, this chapter aims to examine the issue of labour market flexibility in a wider context than has been the case in our previous analyses. In line with Pissarides' approach, labour market flexibility is the ability of the labour market to flexibly react to new challenges.[53]

By applying the above definition, the conclusions drawn on labour market flexibility are more pessimistic than previously. In our view, namely, although a low rate of employment may be attributed to different causes, labour market flexibility/adaptability is still best measured with the level of employment.

2.2.3.1 Insufficient wage adjustment at the bottom of wage distribution

On the basis of various empirical studies, we can conclude that the rigidity of wages impedes the employment of low qualified employees. Firstly, empirical results suggest that labour demand is quite flexible in reacting to changes in the real wages of low qualified employees. Secondly, unqualified labour is easy to substitute with capital.[54] Following the turn of the millennium, however, the rise in the relative wages of unqualified workers was accompanied by a further decline in relative employment. According to the analyses of Köllő (2009), this is not attributable to some equilibrium mechanism (substantial decline in relative labour supply),

[52] See Köllő (2009).
[53] More precisely, Pissarides (2008) defines labour market rigidity as follows: '… labour market rigidity – the inability of labour markets to respond quickly to new challenges…'
[54] Kertesi and Köllő (2001), Tarjáni (2004).

but rather to economic policy changes (significant increase in the minimum wage, introduction of qualified minimum wage, strengthened presence of trade unions).

The equilibrium adjustment of wages may be insufficient to reach a level enabling the substantial increase of employment not only because wages do not rise for administrative reasons. This may also be attributed to the fact that the reservation wage of employees is too high compared to their productivity. The high level of reservation wages in Hungary may be correlated with the high substitution rate (government benefits/available net wage) and the high related costs of employment. These effects may arise on different levels, in varying forms among the particular employee groups. In relation to employees with low qualifications, the relatively high level of social transfers relative to minimum wages and high commuting costs are considered to be poor incentives. The low level of employment of mothers with small children is mostly limited by the insufficient level of day-care institutions, a lack of part-time forms of employment, while the leniency of retirement regulations contributes to the low supply of employment to the elderly population.[55] In addition, mobility on the labour market and the persistently high level of reservation wages may be attributed to the low availability of rented housing on the market and the regional concentration of job opportunities.[56]

2.2.3.2 Wage adjustment is not the sole problem

It is also important to emphasise that the substitutability of labour input used in production may be very low in some cases. If the structure of the available labour supply varies from that of labour demand, matching employees with employers is slow and is not necessarily possible. In this case, the elimination of wage adjustment barriers and the decrease of reservation wage levels does not result in the employment of inactive people, but unemployment rises.

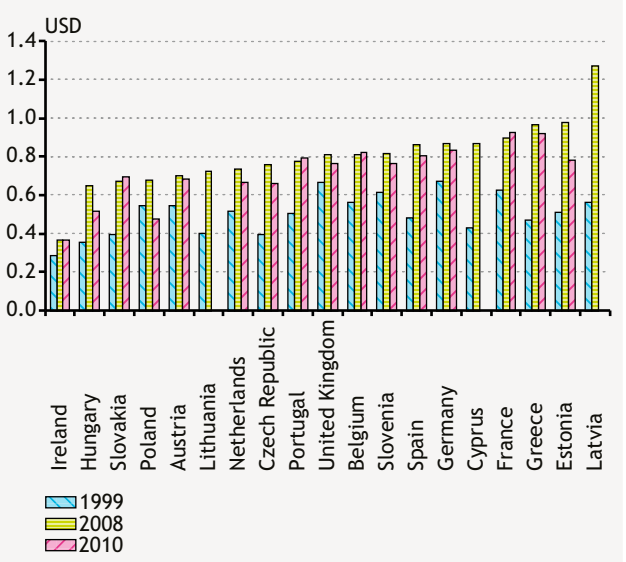
The larger the structural changes in the economy, the higher the probability of this scenario. Problems arise if these structural differences are persistent and systemic. In such cases, extreme or socially unrealistic wage developments would theoretically be necessary for demand and supply to match up.[57] This problem is more prevalent in Central Eastern European countries, including Hungary, than in other countries, and chiefly attributed to the high ratio of low qualified workers within the population. The qualification related problem is most effectively remedied by improving the qualifications of workers, supported with the more effective implementation of active labour market programs in the shorter term and a higher level of schooling in the longer term. Although spending on active labour market programs in Hungary is not low in international comparison, their targeting and effectiveness is strongly doubtful (Cseres, Gergely and Scharle, 2009).

2.2.3.3 Lessons learned from the crisis in relation to the labour market

The consequences of the financial crisis on the labour market can be divided into two areas: short-term effects and medium-term effects. In terms of short-term adjustment to the recession, it seems that costs are lowest if wages/hours are flexibly adjusted. This solution, however, is realistic only on a temporary basis. Labour restructuring between and within sectors is a long-term effect of the recession. As a result, following recovery from the recession, the level of frictional unemployment may rise in the longer term, as demand-supply adequacy declines.[58]

With regard to the adjustment ability of the Hungarian labour market, the adjustment observed during the crisis basically

Chart 2-25
Unit labour costs in manufacturing, in USD



Source: OECD.

[55] See Cseres, Gergely and Scharle (2007) for details.
[56] See Horváth (2011) relating to the latter.
[57] Consider, for example, the amount of the wage cut necessary in the textile industry to make Hungarian textile industry worker competitive with his Vietnamese or Bangladeshi colleague.
[58] See Chapter 2 of last year's convergence analysis.

reflects our above conclusions. On the one hand, corporate adjustment to declining profitability was flexible. Examining the manufacturing industry, which has the greatest exposure to international competition, we can observe that – despite unit wage costs being among the lowest – the sector undertook one of the strongest adjustments in the European sample between 2008 and 2010.[59]

It is also important to note that significantly higher-than-average wage rigidity of low qualified workers was also observed during the crisis. This is supported by the analysis of Köllő (2010), in which the author examines labour market adjustment on a micro-level during the crisis. According to calculations, in the lower 10% of wage distribution, the real value of gross wages also increased in the middle of the crisis, while a decline was measured in the higher deciles. By contrast, most of the decline in employment is attributed to the layoff of low qualified workers. In other words, there were signs in the middle of the crisis that the downward rigidity of wages impeded the continued employment of low qualified workers at the bottom of the wage distribution.

Finally, we have yet to see the longer-term effects, but on the basis of the above argument, we should be pessimistic in relation to the medium term as to the ability of the currently unemployed or those laid off as a result of economic structural changes to find employment in a changing economic structure. These medium-term issues, however, lead us to examine the manner in which government measures affect the institutional framework of the labour market. Before this analysis, we briefly summarise the outset.

2.2.3.4 Summary of developments prior to government reforms

Thus, the assessment of labour market flexibility (in 2010) prior to government reforms is conflicting. Most indicators suggest that corporates are able to adjust flexibly, that is, they are able to benefit from the advantages of the basically decentralised institutional framework. However the employment outcome stands in sharp contrast. Since the transition, the Hungarian labour market has been practically unable to recover from the fall in employment; aggregate employment has not increased in the private sector since 2000. These problems are partly attributable to administrative rigidity at the bottom of he wage distribution, the high level of reservation wages relative to productivity and partly to skill frictions. We briefly summarise the above in the table below.

2.2.3.5 The Hungarian labour market and labour market flexibility after the crisis

The current government has commenced a comprehensive transformation of labour market incentives and the institutional framework. According to the government, it has the open objective of radically increasing the rate of employment which is low in international comparison; thus, management of the above described problems relating to

Table 2-1
Flexibility of the Hungarian labour market based on current information

	Strengths	Weaknesses
Causes	• institutional environment enables flexible hiring • company level wage agreements	• high substitution rate relating to low qualified workers, those nearing retirement age, parents with small children • high ratio of low qualified workers • significant minimum wage increases • active labour market programmes with low effectiveness • high commuting costs • lack of rental housing market • low nursery capacities • low ratio of part-time forms of employment
Consequence	• individual wages react sensitively to one-off productivity shocks • high real wage adjustment in a crisis in international comparison	• low aggregate rate of employment • high regional employment imbalances • poor demand-supply adequacy

[59] We should point out a few things in relation to this issue. Firstly, adjustment was partly supported by the depreciation of the exchange rate during the crisis; this channel will obviously not be available with membership in the eurozone. Secondly, the decrease in labour costs was also supported with cuts in labour taxes, that is, adjustment related to nominal wage costs does not exclusively reflect wage flexibility. And in addition, adjustment in work hours was relatively low in European comparison. See Labour Market Yearbook, 2011.

labour market flexibility has been raised to a government level.[60]

In the Table 2-2, we briefly summarise the potential effect of the measures defined in the Structural Reform Plan, the Convergence Programme and the plans of the 2012 budget plan on labour market flexibility.[61] Overall, we think that the announced measures can be divided into three groups. Some are favourable and others are unfavourable in terms of labour market flexibility, while it is very difficult to assess the effects of some measures.

The reduction of labour tax rates, improved flexibility of employment conditions, and the tightening of social transfers, point in the direction of a more flexible labour market. The planned strengthening of part-time employment and the rental housing market similarly produces a positive effect. While the former measure may increase the employment of secondary jobseekers, the latter may improve labour mobility.

The positive effect of these measures, however, is offset by the complete phasing out of tax credits, the significant increase in minimum wages and the regulation of wage rates by government decree. Based on the logic applied above, these measures – increasing the reservation wage of employees with low productivity and restraining by administrative means the matching of demand and supply on the labour market in the segment with low productivity – limit adjustment in areas with the most severe employment problems.

The substantial expansion of public employment and the reduction of the period of unemployment aid seem to be in conflict. With regard to the first measure, from a social point of view, community service is clearly a more favourable option for employable citizens than reliance on aid. International experience, however, suggests that public employment does not significantly improve the prospects of employees on the market, and therefore its alternative costs are high in comparison to programmes that focus on the latter measure, aiming at re-employment on the market.[62] As regards the second measure, it is necessary to assess the correlation between the incentivising effect of shortened eligibility for unemployment aid and the possible rise in qualification frictions. A shorter period of unemployment aid, namely, may encourage jobseekers to take jobs for which they are over-qualified, as they are concerned that they will not receive any benefits within a short time.

Quantification of the macroeconomic effects of tax and transfer measures[63]

In our analysis, we attempted to quantify the effects of tax and transfer measures announced in the Convergence

Table 2-2
Changes on the labour market in terms of labour market flexibility

Change	Positive/Negative	Note
Decrease of general tax rate	+	Increases labour supply
Phasing out of tax credits	–	Increases reservation wage of low qualified workers, reduces labour supply
Tightening of social transfers	+	Increases labour supply
Reduced period of unemployment aid eligibility	?	Incentive effect vs. worsening qualification adequacy
Expansion of community service	?	More favourable than aid provided to inactive workers, yet helps little in improving private employability
Substantial minimum wage increase, wage increase regulated by decree	–	Limits wage adjustment, causing decline in the employment of low qualified workers
New labour code bill	+	Working time account-type regulation enables greater flexibility
Strengthening of rental housing market	+	May increase the mobility of labour
Support of flexible forms of employment	+	Help growing employment for secondary jobseekers
Total	?	

Note: Based on information available up to 23 September 2011.

[60] See Convergence Program, April 2011, for details.
[61] In terms of the tax scheme, in accordance with the 2012 budget plan we assumed the complete phasing out of tax credits and a single 16% tax rate. We did not take into account the temporary compensation scheme, as it is not relevant in terms of long term effects.
[62] See Cseres-Gergely-Scharle (2007) for details.
[63] Calculations performed by Gábor Kátay and Áron Kiss.

Programme, the Structural Reform Programme and the 2012 budget on employment.[64] Our calculations basically quantify the effects on the private sector; we are not taking account of the effect of expanded community service.

We can define the adjustment of the macro-economy to tax and transfer changes as follows. Firstly, the individual decides to seek a job or not. Labour supply expands on the extensive margin in reaction to the relative growth of income from employment, that is, participants who did not intend to work in the past will more likely seek a job. Secondly, the employed react on the intensive margin to the change of the marginal tax rate; a decreasing marginal rate increases the number of worked hours. These two factors account for the change in total labour supply, i.e. in total effective working hours.[65] The increase in labour supply, with unchanged demand, initially decreases the level of gross wages. This increases the marginal product and rate of return on capital, resulting in a capital inflow. In a small, open economy, capital supply reacts quite flexibly to yield changes; the increasing quantity of capital increases the marginal product of labour, i.e. labour demand. The growing amount of capital increases employment and gradually restores wage levels, while capital yields decrease to original levels. Capital and the use of labour which is higher than observed at the outset leads to higher GDP. It is important to emphasise that the expansion of employment is conditional on the tax cut initially resulting in a decrease in gross wage costs, as this is when labour demand is able to absorb surplus labour supply. Net wages rise despite falling gross wage costs, as the tax wedge has decreased and this promotes labour supply. With any measures (e.g. increase of minimum wages) which offset the decrease of gross wage costs, labour demand is unable to absorb growing labour supply, that is, not employment, but unemployment grows.

Box 2-3
The microsimulation model

The microsimulation models first analyse the effect of tax and transfer changes on the level of individuals, then calculate the estimated macroeconomic effects by adding up the individual effects. The advantage of microsimulation over macroeconomic level methods is that it is capable of considering differences between individuals and households: certain groups are more affected by changes in the tax scheme than others, but the given reaction to the changes may also vary by group. The model is described in greater detail by Benczúr, Kátay and Kiss (2011).

The microsimulation model is based on the 2008 data flow of the Household Budget Survey (HBS) of the KSH (Central Statistical Office). The HBS contains detailed information on the composition of households (earners, pensioners, number of supported children, etc.) and the income of individuals. This enables us to examine the effect of various changes in the tax and transfer system on the income of individuals and households. Adjustment has two forms: so-called intensive and extensive adjustment. *Intensive* adjustment of the labour market occurs when the individual works more or with higher intensity in reaction to a tax cut, and therefore generates more income (or vice versa: generates less income in reaction to a tax increase). *Extensive* adjustment of the labour market occurs when the individual decides to enter employment, or the opposite, terminates employment in reaction to changes in income from employment or income available without work. In the simulation, intensive adjustment is based on the estimates of Bakos, Benczúr and Benedek (2008) and Kiss and Mosberger (2011), and those of Benczúr, Kátay, Kiss and Rácz (2011) in relation to extensive adjustment.

The model also takes into account the secondary macroeconomic effects of changes in the tax scheme (and behaviour reactions of the labour market to these). In this process, by summing up the behaviour effects of individuals, it first calculates the aggregate change in labour supply, then examines the degree to which wage levels, capital and output change in reaction to it in a small macroeconomic model. Then, on the basis of the new wage levels calculated by the macroeconomic model, it recalculates the labour market adjustment of individuals and its aggregate macroeconomic effect. This procedure is repeated until all indirect effects are integrated in the results, that is, until the system reaches a state of equilibrium. The macroeconomic model is a simplified model of a small, open economy: capital adjusts flexibly with support from the international capital market, labour adjust flexibly through a change in real

[64] See the Box 2-3 for brief description of the model.
[65] Labour supply is defined as effective because we take into account that it includes employees with varying levels of productivity. This, however, is not equivalent to assuming a labour input with limited substitutability in production, caused by qualification frictions. See box for details.

wage costs. This means that the dynamic results of the model measure long-term effects, that is, they evaluate the effect of the analysed measures over a period that is sufficient for capital adjustment to occur. This time frame may correspond to approximately ten years, depending on the size of the shock and the environment of economic activity.

The new model is the most accurate tool we have had to date for describing the employment decisions made by job seekers at various levels of qualification, financial status, and family situation depending on changes in taxation and government transfers. Having said that, the model has certain limitations that must be addressed as well. The success of the system relies on three key assumptions, namely that employees with different levels of productivity are perfectly interchangeable, that gross revenues in real terms will decrease flexibly, and, finally, that capital supply will respond flexibly to increased marginal product. In reality, none of these three assumptions can be regarded as a sound approach.

First of all, frictions between qualification levels, as we have suggested before, may prevent stimulated activity and lower wages from creating a demand for labour, and may in fact contribute to higher rates of unemployment. Second, the government measures, including the raising of the minimum wage along with other expected raises of wages and salaries, may keep wages from sinking to a level where they could exert a market clearing influence. As a result, the available labour demand will be unable to absorb the swollen supply, even assuming homogeneous labour. Finally, in a financial crisis, the flexibility of capital supply will dwindle even in a small, open economy, preventing the requisite inflow of capital into the country despite reduced labour supply and real wages. This latter risk has been modelled by assuming increased levels of risk premium.

All of this notwithstanding, it should be emphasised that the model is capable of quantifying the effects of changes in tax and transfer mechanisms, even though it is clearly not suitable for tracing the impact on employment of changes in the institutional underpinnings of the labour market (such as a new Labour Code, flexible forms of employment, and the bolstering of the rental housing market).

With regard to quantified results,[66] overall we believe that tax and transfer changes only slightly increase employment and GDP in the long term. The former is principally attributed to the fact that while it is increased through the tightening of the transfer system, the reduction of tax rates and corporate gains tax, it is decreased by the phasing out of tax credits and the long-term special tax levied on the financial sector.

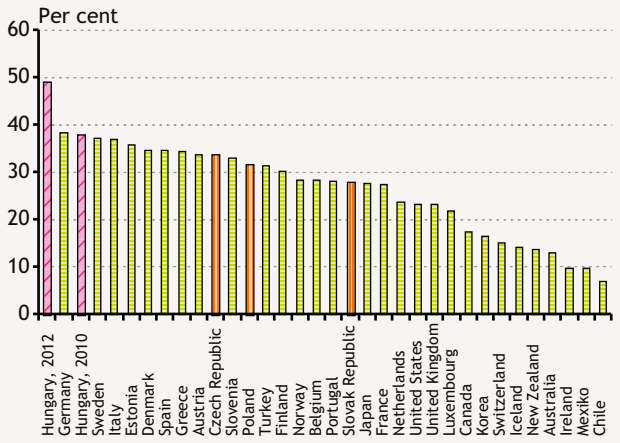
Transformation of the tax scheme is more likely to improve the GDP outlook through increased worked hours of existing employees (particularly the effect of the abolishment or decrease of the tax rate levied on higher-than-average wages in 2010), while employment is primarily decreased by declining labour supply caused by the abolished tax credits. The Chart 2-26 also effectively illustrates the adverse

Table 2-3
Combined long-term effect of tax and transfer measures defined in the convergence programme

	Tax measures		Transfer measures (3)	Total (1)+(2)+(3)	With a 100 basis point total risk premium increase
	PIT, contrib. and VAT changes (1)	Capital taxes (2)			
Effective working hours	3.2%	0.2%	1.4%	4.7%	3.1%
Employment	−0.8%	0.3%	2.2%	1.5%	−0.5%
Capital stock	2.3%	3.5%	1.1%	6.8%	−16.6%
GDP	2.9%	1.4%	1.3%	5.5%	−3.8%

[66] Our calculations are related to the tax and transfer scheme in effect in 2010, therefore we applied the following assumptions to the simulation. (1) The PIT scheme will be a 16% flat tax scheme, with the phasing out of tax credits. (2) The employee health insurance contribution will increase by 1 per cent, pension contribution by one half per cent; the employer's health insurance contribution is payable for at least one and a half times the minimum wage. (3) Corporate tax is decreased to 10% for up to HUF 500 million in sales revenue, otherwise it is 19%; one-third of the special tax levied on the financial sector will remain in force; measures announced in the 2012 budget plan to loss accrual and tax on company cars. (4) The tightening of rules announced in the Structural Reform Programme, relating to disability pensions and unemployment benefits, will be fully implemented; extension of child care aid for up to the age of three. (4) Our calculations did not take into account the development of public employment that basically expands government employment.

Chart 2-26
Labour tax wedge at the 40% of average wage in OECD countries



Note: Single employees without children, as a percentage of total labour costs.
Source: OECD and authors calculation.

employment effect caused by the phasing out of tax credits. Although as a result of the 16% flat tax scheme, the tax wedge relating to higher income may be ranked in the middle of the OECD ranking, since all OECD countries apply tax credits or lower tax rates in relation to lower income, employees with low wages and productivity in international comparison will suffer a major competitive disadvantage.

The benefits of the tax and transfer scheme's transformation are considerably sensitive to whether the necessary amount of capital flows into the economy, which generates extra labour demand and absorbs possibly increased labour supply. If the country risk premium increases by 100 basis points in the longer term, even the small benefit of the tax and transfer scheme's transformation will melt away and turn negative.[67]

2.2.3.6 Closing thoughts on labour market flexibility

Overall, we may establish that for the time being, we cannot be fully optimistic in relation to the flexibility of the Hungarian labour market and thereby its euro area maturity. Although the negative shocks on the corporate side are flexibly manageable by international standards, labour market output (the persistently low rate of employment since the transition, regional employment imbalances) suggests that the effectiveness of the Hungarian labour market in adjusting to challenges is low, i.e. its flexibility is poor.

According to our calculations, a substantial rise in employment in the private sector is not likely as a result of the government measures of the tax and transfer system. Furthermore, with the long-term rise in country risk premia, a long-term decline in employment in the sector is probable. The sharp increase of minimum wages may further worsen the situation, as it makes it particularly difficult for employees with low productivity, making up a higher labour supply, to find employment. In other words, increasing activity is more likely to cause higher unemployment than increasing employment.

The question is the extent to which the wider institutional environment is capable of channelling the prior effects in a positive direction. Although the government measures suggest shifts in this direction in several areas, the transformation of the institutional framework of the labour market is contradictory in some cases, and the plans and impact assessments necessary for the accurate assessment of the measures' effects are not available in sufficient depth. The aggregate employment rate can also be improved through the planned substantial expansion of public employment, but the sustainable development of the Hungarian economy can be effectively supported by increased employment on the market.

We are of the view that an increase of the employment rate in the private sector in the long term would necessitate the consistent modification of incentives targeting currently inactive groups and the implementation of more effective active labour market policies. As regards the first factor, similarly to other countries, it would be necessary to keep in place the institutional framework of tax credits or otherwise support the employment of low qualified employees. In relation to active labour market policies, the efficiency of the programme needs to be improved to allow the identification and elimination of factors impeding the business employment of affected groups.

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[67] The study of Benczúr et al. (2011) contains more detailed calculations relating to the transformation of the tax and transfer scheme.

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3 Fiscal policy means of managing asymmetric shocks

In a monetary union, fiscal policy can serve as one means of managing asymmetric shocks. On the one hand, the ability of a member state to implement economic stimulation through budgetary easing requires fiscal room for manoeuvre, understood, in the traditional approach, as a budget deficit that maintains low average levels across the economic cycle. On the other hand, the usefulness of fiscal policy as a tool indispensably presupposes the ability to sustain a low deficit over the longer term. Additionally, counter-cyclical fiscal policy plays a vital role both in avoiding and mitigating the consequences of the credit boom discussed above.

The crisis has revealed that when it comes to the options of fiscal policy, investors tend to accord ever greater importance to debt, along with the traditional, deficit-based approach. In addition, in terms of fiscal room for manoeuvre, the crisis has highlighted the vulnerable points of the European fiscal framework, not least the capacity of imbalances in the private sector – notably on account of subsidisation of the banking system – to result in stronger government intervention.

While all of the member states posted a deficit below 3 percent, several countries displayed symptoms of a lack of room for manoeuvre in terms of the structural position (MTO) and public debt. In 2008–2009, each country experienced an intense rise in the budget deficit and public debt, which in the case of member states with a handicapped initial position, such as Greece and Portugal, led to a massive deterioration of their risk assessment. Initially, some countries, including Ireland and Spain, seemed to possess sufficient room for manoeuvre prior to the crisis, but they too succumbed to a sharp increase in financing costs and doubts about the feasibility of a sustainable fiscal policy, due to government subsidies of the finance sector, excessive fiscal expansion, and a deeper-than-average recession. The troubled countries have characteristically resorted to substantive discretionary government measures, besides permitting automatic stabilizers to come into play. All things considered, the steepest rise in the indebtedness ratio has been seen in the periphery countries, although the quickening pace of indebtedness has certainly affected the entire euro area.

Optimally, 'in good times' member states should create room for manoeuvre of sufficient dimensions for investors to deem the fiscal processes and the debt path sustainable subject to minor corrections, even if that space should come to be 'used up.' The crisis has taught us that, in this sense, fiscal policy in and of itself is not a panacea that will cure all ills as they emerge. This knowledge provides crucial criteria for determining and assessing fiscal room for manoeuvre, and it is certainly to be considered in the context of reforming the European fiscal framework. In the future, as the importance of monitoring macroeconomic imbalances is increasingly recognised, we will be able to screen out events similar to those sustained by Ireland or Spain, where the problems of the private sector managed to put the country in a predicament, even though the requisite fiscal room for manoeuvre seemed to be available.

In light – or rather in the shadow – of the European debt crisis, and from the perspective of Hungary's maturity for the euro, it is of the utmost importance for Hungary to properly assess its fiscal room for manoeuvre and fiscal sustainability. Over the medium term, and assuming the current macroeconomic outlook, the structural position of Hungary's budget will not be able to drop to anywhere near the MTO unless the Government succeeds in implementing in full all of the measures announced under its various programs, including the Structural Reform Programme, the Convergence Programme, and the 2012 Budget Bill, and unless the cutting of expenditures envisaged for 2011 proves to be a lasting trend. Pending the aforementioned conditions, the Hungarian public debt may indeed embark on a path of permanent reduction, which is definitely a plus compared to other states of the euro area, although this advantage is offset by an indebtedness ratio which is expected to remain high by the standards of countries at a similar stage of development. What all of this means is that the stubbornly high level of public debt in Hungary may continue to hamper the uses of the room for manoeuvre in connection with the deficit, despite the country's favourable current

fiscal position. It is of essence to note, then, that there are a number of arguments for Hungary to set a debt target lower than the Maastricht debt criterion.

Looking at the structure of the fiscal adjustment now being debated, along with the general goals that have been set, several circumstances seem to bode well for fiscal sustainability and economic growth, such as: (1) over the medium term, the adjustment relies on cutting spending for the most part; (2) taxes on labour and capital are being reduced, while (3) tax rates on consumption are expected to increase to help stay the planned deficit path. Other plans that augur well for growth are that government transfers and consumption have been identified as the two top spending targets for reduction.

That said, the perception of structural reforms and other consolidation measures has been more of a mixed bag, given that economic policy-makers have recognised the gravity of the situation, identifying the major priorities and areas most in need of reform and making a commitment to implement the necessary measures. On the other hand, the plans are fraught with considerable risks, not least because the statutory provisions underpinning these measures have yet to be drafted or introduced, and their prospects for success are therefore impossible to judge at this stage. Furthermore, action may well be called for in several other fields, including health, public education, municipalities and tax evasion. The change of the private pension fund system may have improved the position of the budget over the short term, but is undesirable with a view to long-term fiscal sustainability. It remains to be seen in what way the sum total of the measures will change the private sector incentives, thereby impacting the chances for long-term growth – a key factor in attaining fiscal sustainability.

3.1 Introduction: room for manoeuvre and sustainability

In a monetary union, where sovereign monetary policy no longer exists, fiscal policy can become a potent tool of economic policy which can be used to manage asymmetric shocks. In the case of a negative shock, this means that fiscal policy undertakes a measure of fiscal easing in an attempt to moderate the effects of recession, triggering a rise in public deficit and debt (Csajbók and Csermely, 2002). Fiscal policy may also be instrumental in handling the boom-bust phenomena discussed in the previous chapter: During the rising phase of the cycle, fiscal austerity can diminish the risk of bubble creation, whereas during a period of bust a fiscal policy of easing can be invoked for help – although this, once again, presupposes appropriate fiscal room for manoeuvre.

The ability of a Member State to implement economic stimulation through fiscal easing requires fiscal room for manoeuvre, understood in the traditional approach, as a budget deficit that maintains low average levels across the economic cycle. On the other hand, the usefulness of fiscal policy as a tool indispensably presupposes the ability to sustain low deficit for the longer term. This in turn calls for measures of lasting effect that will be conducive to economic growth as well. This is particularly important for Hungary in light of international experience, which indicate that, for rising countries undergoing a major period of debt reduction, outgrowing the debt was much more critical a factor than the improvement in the primary balance (Cottarelli, 2010a).

Giving the notions of fiscal room for manoeuvre and sustainability a broader interpretation – which certainly has application in the European fiscal framework – one might say that the necessary room for manoeuvre must be sufficient to prevent the sustainability of fiscal processes from being called into question, even in times of fiscal easing; in other words, to prevent a rising debt path even in the longer term. Of course, making this assessment (and this has been borne out by the crisis experiences of the euro area countries) greatly depends on the rate of increase of the deficit and the debt, as well as on the prevailing growth outlook – an important lesson Hungary itself has had to learn. These observations notwithstanding, room for manoeuvre and the sustainability remain rather slippery concepts to define, in part because of their susceptibility to market expectations, not to mention the tendency of their perception to change over time as a function of international sentiment and the level of confidence in the economic policies of the given country.

This study is principally aimed at answering the question of how sustainability can be attained in Hungary. Our analysis is divided into three parts. We begin by interpreting the notion of fiscal room for manoeuvre in the context of the current European institutional mechanisms, and identifying the criteria for a sustainable fiscal adjustment. We then review the types of fiscal policy adopted by euro area countries during the crisis, particularly in terms of whether they had fiscal room for manoeuvre at their disposal and how they used it, and we examine the lessons that can be learned from these processes. In the third part, we attempt to evaluate Hungary's position in terms of fiscal room for manoeuvre and fiscal sustainability, assuming that the current budget policy will be carried on into the future.

3.2 The theoretical framework: Fiscal policy in the monetary union

FISCAL ROOM FOR MANOEUVRE

The euro area obviously equals the monetary union of the member states, but this is a union which – for optimal operation – indispensably relies on coordinating fiscal policies while permitting independent budgets in each member state. Fiscal integration is essentially provided for by the fiscal framework of the Stability and Growth Pact (SGP), which attempts to keep deficits at bay. The definition of the fiscal room for manoeuvre is not entirely trivial, and the crisis has certainly underscored the ability of that definition to change over time. We will begin by presenting the traditional approach to the notion and follow in the next chapter by attempting to refine the picture by raising a few questions and dilemmas on the basis of relevant international experience.

The European fiscal framework (and first and foremost the SGP) sets the goal of a low structural deficit (i.e. one that is cyclically adjusted and without one-off items), assigning a ceiling of 3 percent to the official deficit. In order to prevent countries from breaching this ceiling in 'bad times,' that is in periods of weak economic growth, it is imperative to keep the deficit below the 3-percent Maastricht threshold. This function is served by adopting a medium-term budgetary objective (MTO) in correlation with the structural balance. The MTO is a country-specific threshold that supports two goals. First, it enables automatic stabilisers in an attempt to ensure that the deficit can be kept below 3 percent even during a slump. Second, the MTO rests on an estimate that takes into account various factors for longer-term sustainability, including the impact of the aging population. These two components – namely, the 3-percent threshold and, once that target has been achieved, the further reduction of the deficit until the MTO is met – coupled with the requirement of submitting annual Stability and Convergence Programmes, collectively constitute what is known as the preventive arm of the SGP. Additionally, Member States with a deficit in excess of 3 percent of GDP are subject to the so-called Excessive Deficit Procedure, the single most important measure of the 'corrective arm.'

Basically, it is this framework which outlines the concept of fiscal room for manoeuvre as the attainment of a low deficit level which remains sustainable in the long term and enables the operation of automatic stabilisers.[68] This definition, however, is worth expanding by further considerations. For one thing, fiscal policy may on occasion have to resort to discretionary measures beyond allowing automatic stabilisers to come into play – measures that can be rather effective in managing asymmetric shock in their own right. Another important lesson we learned from the crisis is that the options of fiscal policy can be radically restricted not only by the current deficit, but by the rate of government indebtedness as well. Thirdly – and this is again something that the crisis highlighted starkly – in certain cases the problems of the private sector (mainly through the banking system) may intensify government intervention and thus cause a significant hike of the deficit and public debt. The question is whether it is advisable, or indeed possible, for fiscal policy to prepare for such an eventuality by fashioning the requisite room for manoeuvre. Finally, the retrospective evaluation of the fiscal room for manoeuvre may also be affected by the correction of available data and situation reports (potential GDP, estimation of cyclical position). We address these issues in detail in the next chapter.

While the crisis did not affect the foundations of the European fiscal framework as described above, progress has been made in several areas without revising the numerical thresholds applicable to deficit and debt.

1. The EU may tighten *ex ante* coordination, primarily by introducing the European Semester. This is expected to help enforce fiscal discipline.

2. Sanctions are now available under both the preventive and corrective arms of the SGP, providing Member States

[68] Automatic stabiliser effect means that public revenues and expenditures track the cyclical trends of the economy, resulting in an improving fiscal balance during a boom and a deteriorating balance during a slump. Consequently, the demand effect generated by the budget will reduce the amplitude of economic fluctuations in the private sector.

with an incentive for a more disciplined management of funds and more efficient adaptation. Less than formidable in their magnitude, the sanctions that the European Commission may impose include the requirement of low-interest bearing or, later, non-interest bearing deposits from euro area members.[69]

3. For countries with a public debt ratio of over 60 percent of GDP, the rate of mandatory debt reduction is set at one-twentieth of the portion in excess of that 60 percent per year. Not only is this new regulation capable of stopping the debt from escalating further but may present a harsh restriction for certain countries, particularly in view of prevailing debt dynamics.

4. In the future, efforts to detect signs of impending crisis in time will rely not only on monitoring fiscal imbalances but also on monitoring macroeconomic imbalances in the broad sense of the term.[70] This must definitely be seen as a major step forward, considering the fact – which the crisis made only too clear – that the problems of the private sector can quickly surface as overall fiscal problems.

It is important to note that while ex ante coordination has already entered into force, the other amendments, for the time being, continue to exist in the embryonic form of proposals waiting to be adopted (see Chapter 1 of this publication for more details on changes in the institutional structure).

SUSTAINABLE FISCAL POLICY

As mentioned before, in judging the efficiency of fiscal policy, one must address not only the issue of whether the fiscal room for manoeuvre itself exists, but also whether that room for manoeuvre has been achieved or is being achieved in a sustainable way. It follows that the low level of the deficit must be locked in by measures of permanent effect that will not be reversed to force a repeated adjustment over a short span of time, but will optimally contribute to bringing about and bolstering the conditions for long-term economic growth. In view of the high and volatile deficit that has plagued the country's fiscal policy in recent years, Hungary would be certainly well advised to implement a programme of deficit reduction based on the above criteria, and therefore we now review the features that characterise a successful fiscal consolidation.

There are many studies analysing and evaluating fiscal adjustments, and their number has continued to rise in recent years given the pressure for fiscal consolidation in the wake of the crisis. By and large, the studies tend to advocate adjustments characterised by permanently low deficits, decreasing debt ratios (fiscal sustainability), and higher (long-term or potential) growth rates. In the short term, the adjustments are essentially contractive in nature entailing as they do a setback in economic growth. However, in the longer term, the structure of the adjustment will have a remarkable impact on the opportunities of economic growth. If the adjustment is genuine and favourable in its structure, certain non-Keynesian effects may come into play that may cushion the economic setback even in the short term.[71]

Studies devoted to the analysis of adjustments and the review of the literature include Alesina-Ardagna (2010), Baksay et al. (2008), Blanchard et al. (2010), Coenen et al. (2008), Cotis (2007), Cottarelli (2010a), Cottarelli (2010b), European Commission (2010), and Leigh et al. (2010).

In the following, we summarise some of the most important findings recurring in these studies.

1. One of the most common observations favours the cutting of expenditures (along with more efficient public spending) over increasing revenues as a means of fiscal adjustment. This may amplify any non-Keynesian effect and is more beneficial for economic growth.

2. A desirable order of priority may be set up as regards the targets of expenditure cuts: social transfers first of all

[69] For non-members the suspension of EU funding would come up, but the magnitude of this sanction would not exceed 0.1-0.2 per cent of GDP, which is also applied to the Eurozone members.

[70] In the case of macroeconomic imbalances, sanctions are not expected to be imposed except upon those euro-area states that fail, on two consecutive occasions, to adhere the Council's recommendation, or fail, also on two consecutive occasions, to submit a satisfactory correction action plan. The amount of the sanction is up to 0.1% of the offending country's GDP posted for the previous year. Similarly to the rules set forth in the SGP, the Commission has the power, in exceptional cases, to propose a sanction at a lower rate.

[71] For a discussion of this topic, see Horváth et al. (2006) or Benczes (2006). 'Non-Keynesian effects' basically refers to the phenomenon when a fiscal adjustment triggers processes that stimulate economic growth even in the short term. This means that the adjustment entails milder output loss (in exceptional cases, possibly a higher growth rate) even in the short term, which makes it easier for economic policy makers to adopt the necessary measures. Note, however, the unfolding debate in economist circles around the issue of whether non-Keynesian effects really exist. For instance, Krugman (2011) claims, citing Guajardo et al. (2011), that the doctrine of fiscal adjustment capable of stimulating short-term economic growth has been refuted – an assertion controverted by Alesina (2010).

(not only cuts but increasing efficiency and target precision, better application of the means-tested principle instead of generic entitlement to benefits), followed closely by government consumption (wages and material expenses), and finally – as a last resort – government-invested projects.

3. On the side of revenues, economic growth is best served by reducing the ratio of the most distortive tax categories. This means taxes and contributions on labour (and the taxation of capital), whose reduction therefore offers the greatest benefit, while raising the rate of less distortive tax types (such as consumption tax or property tax) will have a smaller impact on economic growth. In any event, should an increase in tax revenues become inevitable, it is certainly better to implement it by expanding the tax base and shrinking tax allowances than by simply raising rates.

4. The more politically sensitive the field affected by the measures, the more intense the commitment, and the more potent the non-Keynesian effects that can be expected. On the down side, deeper transformations may encounter greater social resistance, which will hamper their implementation.

5. The enactment and operation of fiscal rules and fiscal monitoring institutions may help with consolidation, attainment and maintenance of fiscal discipline, and strengthening credibility.

6. Structural reforms (in the labour and product markets and the large redistribution systems) may contribute to the success of the adjustments. This effect is both direct, through lower budget expenditures, and indirect, due to higher revenues from greater economic growth. Structural reforms will admittedly cost money in the short term, but in the longer term they will result in net savings if appropriately planned and implemented.

Besides strategies pertaining to the structure of the adjustment (Items 1-3) there are so-called mixed strategies as well. A case in point is an adjustment that initially relies on tax hikes and a cut of government investment, followed by a reduction of transfers and government consumption. This is usually the strategy followed when time is too short to develop structural reforms which need careful preparation or when there is pressure to improve the balance quickly. Having said that, raising taxes cannot be regarded as a successful starter strategy unless the initial level of tax revenues is relatively low.

3.3 Lessons of the fiscal policies of euro area countries during the crisis

In this chapter, we propose to investigate whether the Member States of the euro area had fiscal room for manoeuvre at the onset of the crisis, and if they did, how they exploited that room. One of the most valuable lessons of the crisis is that a quickly changing economic environment and the permanent deterioration of growth expectations will make the fiscal room for manoeuvre turn out to be much tighter in hindsight than originally supposed. Another factor that narrows the fiscal policy options has to do with the inevitably rising pressure in many countries for intervention in the private sector in the wake of the financial crisis, which will aggravate fiscal vulnerability by two effects – to a decisive degree by increasing debt and, to a smaller degree, by increasing the deficit.

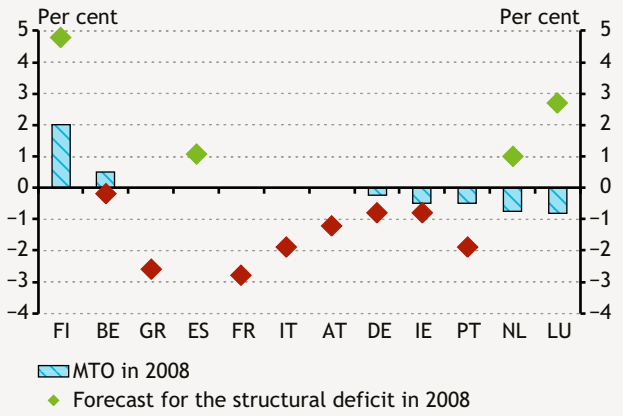
FISCAL ROOM FOR MANOEUVRE[72]

In early 2008, official budget statistics suggested that the 2007 deficits and the fiscal processes projected for 2008 would permit fiscal easing, considering that deficit levels in ESA terms in the euro area countries stayed below 3 percent.[73] In both years, the average budget deficit of the 12 Member States of the euro area settled around 0 percent of GDP.[74] In light of these figures, practically every one of these countries opted for fiscal stimulation, enabling deteriorating balances in the wake of the emerging economic crisis (automatic stabiliser effect), then attempting to soften the effects of the setback by adopting discretionary measures.

As for meeting the MTOs, by far not all of the countries possessed fiscal room for manoeuvre at the outbreak of the crisis. Data already available in early 2008 reveal that, even though the deficit in each of the EMU Member States stayed below the 3 percent threshold, 8 of the 12 countries had in varying degrees failed to meet their MTOs. The most serious shortfalls were noted in Greece, Portugal, Italy, and France, while countries such as Finland, the Netherlands, and Spain perceived the outlines of a structural position exceeding their MTOs.

Public indebtedness levels varied even more widely. While some of the member states posted very low debt rates (Ireland 26.9%, Finland 31.9%, Spain 35.3%, the Netherlands 42.4%), others gave evidence of much more severe

Chart 3-1
Eurozone's MTOs and forecasts for the structural deficits in 2008
(in the percentage of GDP)[75]



Source: European Commission (2008).

[72] In presenting the available room for manoeuvre, we try to limit our use of data to those that were available at the outset of the crisis. Basically this means data sourced from the 2008 spring forecast of the European Commission – from a period before a series of fiscal measures were introduced, when it was completely impossible to foresee the magnitude of the impending economic recession as clearly as we can see it in hindsight. For the most part, these forecasts convey the same picture that decision makers could see as they assessed their fiscal room for manoeuvre (European Commission, 2008).

[73] However, revised data at available to us show that, in 2007, the deficit was not below 3 percent either in Greece or Portugal.

[74] The present analysis is confined to the 12 euro-area countries that had been members of the euro area at and prior to the outbreak of the crisis, so it leaves the data of new entrants (Slovenia, Slovakia, Estonia, Cyprus, and Malta) out of consideration.

[75] This study employs official Eurostat abbreviations: BE: Belgium, BG: Bulgaria, CZ: Czech Republic, DK: Denmark, DE: Germany, EE: Estonia, IE: Ireland, GR: Greece, ES: Spain, FR: France, IT: Italy, CY: Cyprus, LU: Luxembourg, LT: Lithuania, LV: Latvia, HU: Hungary, NL: Netherlands, AT: Austria, PL: Poland, PT: Portugal, RO: Romania, SI: Slovenia, SK: Slovakia, FI: Finland, SE: Sweden, UK: United Kingdom.

Table 3-1
Room for manoeuvre available for euro area Member States
('X' marks a substantial shortfall from target or a debt ratio significantly in excess of 60 percent)

	Government deficit	Structural balance (MTO)	Public debt
Finland	✓	✓	✓
Netherlands	✓	✓	✓
Ireland	✓	✓	✓
Luxembourg	✓	✓	✓
Germany	✓	✓	✓
Spain	✓	✓	✓
Austria	✓	X	✓
France	✓	X	✓
Belgium	✓	✓	X
Portugal	✓	X	X
Italy	✓	X	X
Greece	✓	X	X

government debt (Italy 103.2%, Greece 92.4%, Belgium 81.9%).[76]

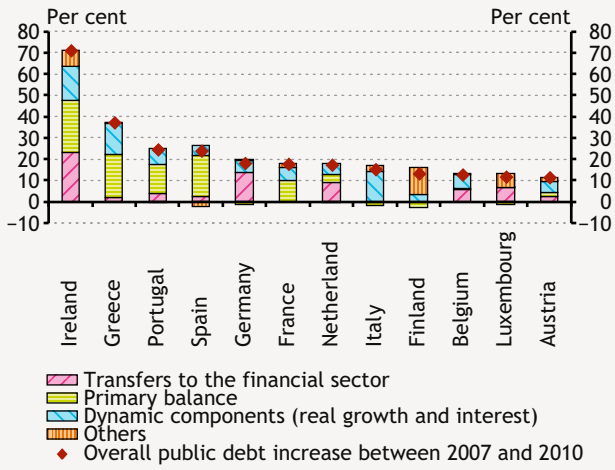
Though formally all euro countries had a fiscal deficit below 3% in 2008, by and large, the countries within can be divided into three groups: (1) countries that possessed fiscal room for manoeuvre on the basis of their structural deficit and indebtedness; (2) countries where room for manoeuvre was substantiated by one of the two indicators only; (3) countries without any meaningful room for manoeuvre.

Based on the above classification, the most favourable initial positions were held by Germany, the Netherlands, Luxembourg and Finland, as well as by Spain and Ireland, although these latter two countries soon faced a massive rise in financing costs. The middle category included France and Austria, both characterised less by debt problems than by a structural position significantly lagging behind the MTO, as well as Belgium, where consolidated deficit levels coexisted with high government debt. Most handicapped were Greece, Portugal and Italy, each struggling with serious difficulties regarding the current deficit and indebtedness.

The structure of fiscal easing in the euro area Member States

In 2008 and 2009, all of the euro area Member States posted rising deficit and public debt. Countries with a lower initial debt level saw deficit levels rising more steeply than the average. Of the initially handicapped countries, the deficit grew at a high rate in Greece and Portugal, and somewhat less sharply in Italy. The economic recession and various government measures, including the financial subsidisation of the private sector, caused public debt ratios to escalate significantly as well. The greatest increase was noted in the periphery countries of the euro area, where the dynamic factors (i.e. the combination of recession and higher yields) conspired with deteriorating primary balances to make a major contribution to higher debts.[77]

Chart 3-2
Decomposition of the change of the public debt ratio in the eurozone between 2007 and 2010
(in the percentage of the GDP)



Source: 2011 spring forecast by the European Commission.

[76] Of course, the then available 2007data have since then changed for several countries, and also rose for 2008 due to the economic crisis and government measures.
[77] The precise methodology of debt dynamics calculations is presented in detail by Czeti and Hoffmann (2006), among others.

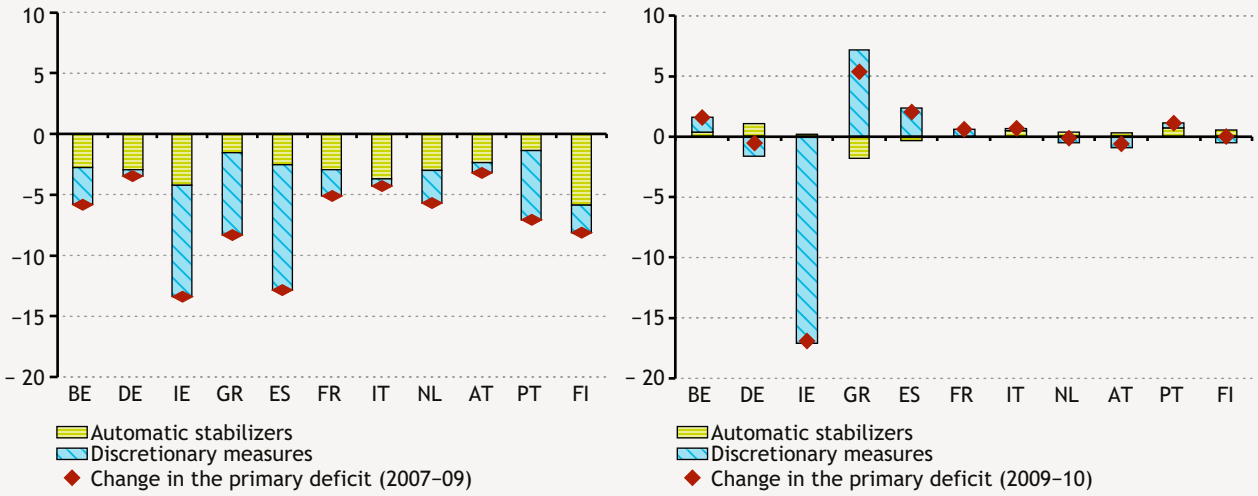
The increase in the deficit is rooted in two fundamental factors: (1) balance impairment due to the operation of automatic stabilisers; and (2) discretionary government measures, including the subsidisation of the financial intermediary system. The costs of subsidising the financial system typically appeared as part of the debt, with far less impact on the deficit, except in Ireland.

Box 3-1
Methodology of breaking down changes in the budget balance

The separation of cyclical and discretionary factors can be examined based on official and cyclically adjusted primary balance indicators. The total effect is interpreted as a change in official primary balances; the effect of individual measures is defined as the change of cyclically adjusted primary balances; while the impact of automatic stabilisers is understood as the difference between the two above changes. The method applied involves several uncertainty factors.[78] For one thing, one must take into consideration the uncertainty of cyclical adjustment and possibility of subsequent corrections. This has to do with potential GDP revisions and the problematics of structural break, which influence the assessment of the cyclical position. Our view of the picture can also be distorted by certain further factors, which cannot be categorised either as a measure or as a cyclical effect.[79] During the years directly preceding the crisis, many countries experienced surplus revenues that could not be explained with reference to the cycle or measures. Arising from changes in the flexibility of the tax base, these revenues declined during the crisis, so that missing these 'windfall revenues' may well have played their own part in the deterioration of the balance, besides the contribution of cyclical effects and measures.

Chart 3-3
Decomposition of the changes in the primary balances in the eurozone between 2007 and 2009, and 2009 and 2010 respectively

(in the percentage of GDP)



Note: positive – improving; negative – deteriorating primary balance, without Luxembourg's data.
Source: AMECO database.

[78] Certain studies seek to determine the impact of discretionary measures by compiling an itemized list of certain government measures (the so-called 'action-based approach,' cf. Leigh et al., 2010) rather than on the basis of cyclically adjusted budget balances. While this method is theoretically capable of representing the measures more accurately, not all of the countries have available good-quality public databases in this regard. Moreover, it is not always easy to define just what we mean by 'measure,' and what the 'no policy change' scenario would be; (this can mainly become a real problem when we deal with expenditures, where the uncertainty of the trend's GDP estimate may have a significant impact on the scope of the measures). For an in-depth discussion of the topic, see, P. Kiss and Szemere (2011).

[79] Such factors include (1) the impact of changes in asset prices on revenues (which may be regarded as a cyclical process in its own right, even if the phenomenon cannot be properly grasped by the conventional methods of cyclical adjustment); (2) changes in the flexibility between tax revenues and tax bases (e.g. changing efficiency of collecting taxes); and (3), as a special case of the above, the problematics of windfall revenue. It is in part the description and numerical modelling of these effects that is attempted by Kremer et al. (2006) using the data of a handful of euro-area countries from 1998 to 2004.

In our calculations, while the rising deficit in 2008–2009 certainly had a lot to do with the recession, some of the countries (notably Greece, Ireland, Spain and Portugal) also adopted discretionary measures that had a considerable impact on the budget.[80] Approached in this light, investor confidence seems to have been most severely undermined for countries which adopted significant fiscal easing measures, including subsidisation of the private sector, in addition to permitting automatic stabilisers to exert their influence.

In the majority of the countries under review, 2010 did not see a substantive change in primary balances. Exceptions to this general trend included Ireland, where bailing out the banking system required major government measures that further augmented the deficit and the debt (without transfers to the financial system, we would have seen austerity measures being adopted in Ireland in 2010), as well as in Greece and Spain, where meaningful work on consolidation of the budget is now underway.

The countries cited in talking about the European debt crisis found themselves in a tight place for somewhat divergent reasons. Greece simply had no room for manoeuvre in relation to the debt or the deficit, even as it implemented some of the most far-reaching budget easing. In Ireland, despite the favourable initial position, most of the massive rise in debt was caused by the costs of bailing out the banking system, a fiscal easing broader than in other countries that started from a similar initial position, and a remarkably profound recession. Portugal suffered from an initial position unfavourable from the MTO perspective, while Spain ran into problems due to excessive fiscal expansion, despite its advantageous initial position.

3.3.1 DILEMMAS OF ROOM FOR MANOEUVRE

As a result of the crisis, deficits significantly exceeded the 3 percent ceiling in all member states, which is clear evidence that the fiscal regulatory framework planned for 'normal' periods failed to work as such. This raises a number of essential issues and dilemmas regarding the European framework of fiscal policy, all of which may be grouped around a single question: How large is the shock for which fiscal policy must prepare by generating the appropriate room for manoeuvre? Let us propose three criteria for investigation, which recognise the exceptional nature of the situation and quickly led to using up the room for manoeuvre designed for 'normal times.'

1. Normal versus extreme economic situations

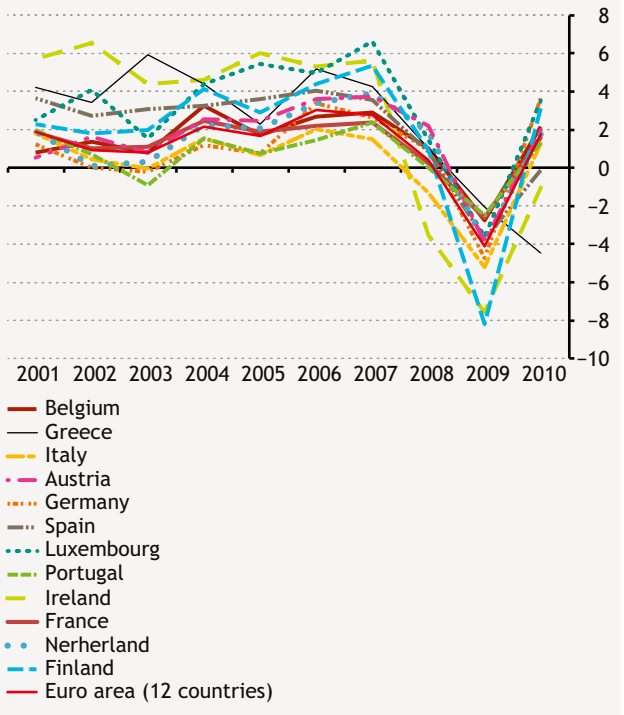
2. Differences in assessing fiscal room for manoeuvre *ex ante* and ex *post*

3. Handling the financing difficulties of the private sector, particularly the banking system

3.3.1.1 Normal versus extreme economic situations

The global financial crisis went hand in hand with an economic recession so extreme that it was no longer subject to the requirements of the SGP. Compared to average growth of nearly 2 percent prior to the crisis, the 12 countries of the euro area in 2009 saw GDPs declining by 2 to 8 percent, and more than 4 per cent on average. Pursuant to the SGP, in such an eventuality the fiscal framework can no longer be used a guidance, because it was not designed to help Member States keep their deficits below 3 percent under such extreme recession conditions, even if they happen to manage to meet their MTO.

Chart 3-4
GDP real growth rates of the eurozone countries
(per cent)



Source: Eurostat.

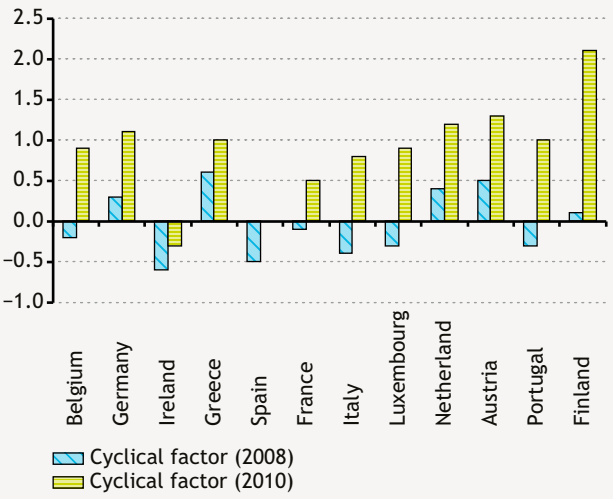
[80] Starting from an analysis of structural primary balances, Blanchard et al. (2010) obtained results of a comparable order of magnitude regarding the extent of fiscal measures in each country.

3.3.1.2 Assessing fiscal room for manoeuvre *ex ante* and *ex post*

Assessing fiscal policies followed during the crisis, one encounters another major dilemma: at the onset of the crisis, some of the Member States had reason to think they had room for manoeuvre to stimulate the economy by means of fiscal policy, only to find in retrospect that this room for manoeuvre was not available to them after all. This dilemma is probably mainly informed by varying opinions regarding the cyclical position of the economy and thus of the budget, as the crisis forced a number of countries to revise their view of potential GDP. As a result of downward-adjusted potential GDP, cyclically adjusted budget balances seemed less attractive *ex post*, so in hindsight the room for manoeuvre turned out to have been smaller than believed at the inception of the crisis.

Chart 3-5
Change of the 2008 cyclical factor between 2008 and 2010

(in the percentage of GDP)



Note: Positive value means that the structural (cyclical) balance is more unfavourable than the official one.
Source: European Commission (2008), European Commission (2010).

Using the publicly available forecasts (European Commission, 2008; European Commission, 2010), we compared the European Commission's predictions in 2008 with how it assessed 2008 structural position in hindsight, in 2010. Of course, the values changed for the entire balance as well, which in turn alters the structural balance, but even screening out this effect we still find that the so-called 'structural factor' deteriorated substantially, by an average of 0.9 percentage points, from 2008 to 2010.[81] This means that the structural position appears nearly 1 percentage point less favourable in hindsight than at the beginning of the crisis. Interestingly, in Greece, Ireland, and Spain, the rate of retrospective correction remained moderate, meaning that in these countries the room for manoeuvre apparent in hindsight did not narrow appreciably from how it was perceived back then. By contrast, the largest correction was seen in Finland, which at least partially explains why the deficit in that country rose more sharply than the euro area average.

3.3.1.3 Government subsidisation of the financial sector

In forming a view of the adequacy of fiscal room for manoeuvre and the fiscal policy followed during the crisis, it is essential to consider the degree of government intervention to assist with the problems of the private sector, particularly the banking system. At one time or another, and in varying degrees and forms, between 2008 and 2010, almost all countries of the euro area extended subsidies to the financial system from the public budget. Among the forms of transfers for the financial sector, it is necessary to make a distinction between funds materialising in the deficit and/or public debt on the one hand and, on the other hand, government guarantees omitted from the official statistics, which may increase budget risks.

Ireland was the only country that accounted (mainly in 2010) a considerable sum, in excess of 20 percent of the GDP, as part of the budget deficit, while the other member states claimed to have extended substantially lower subsidies, with a deficit impact approaching zero. By contrast, several countries posted such subsidies at the expense of the public debt, with not only Ireland, but Germany, the Benelux countries and, outside the euro area, Great Britain all experiencing a substantial hike in indebtedness, in excess of 5 percent of GDP, as a result of providing support for the financial sector (Figure 2).

The crisis forced every one of the countries to assume financial guarantees for the financial sector, at a rate far outstripping the magnitude of subsidies posted as part of the public debt. In terms of guarantees, Ireland, Greece, Belgium and Great Britain first come to mind.

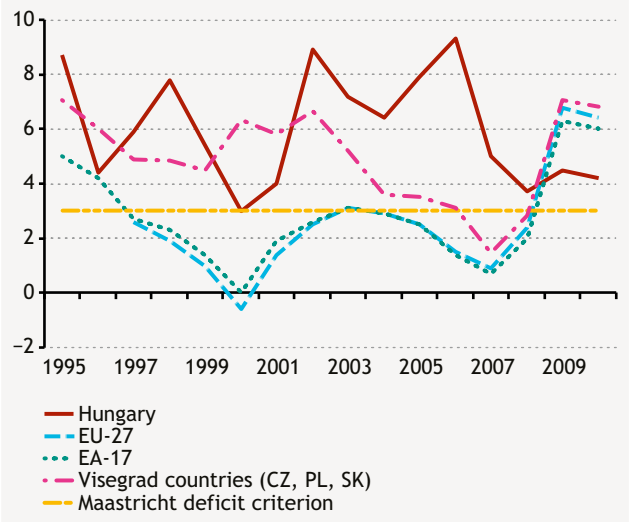
[81] 'Structural factor' means the difference between the official balance and the structural balance. Because the structural factor represents the sum of the cyclical factor and generally less significant one-off factors, it offers a good approximation of the impact of changes in cyclical position on the fiscal balance.

3.4 Room for manoeuvre in Hungarian fiscal policy

Reviewing the past two decades of Hungarian fiscal policy, we see budgets which have never really possessed substantive room for manoeuvre in the sense outlined at the beginning of this study.[82] The public deficit compared to GDP in Hungary has never been below 3 percent and as such it has remained significantly above the average of both the euro area and the European Union as a whole. During the decade or so before the crisis, the Union-wide average deficit settled permanently below 3 percent, while the Hungarian deficit averaged levels over 6 percent. This was high not only by euro area standards but compared to countries at a level of development similar to that of Hungary as well. Prior to 2002, the Visegrád Group of the Czech Republic, Poland, and Slovakia consistently posted deficit figures that averaged close to Hungarian levels, but in 2002 a process of consolidation started that eventually sank the deficit in this group below 3 percent.

In addition to the persistent high deficit levels, Hungary's public debt may have been less than the average of more developed euro area Member States, but it substantially outstripped the average of other countries in East Central Europe with a comparable level of development. The only period during the past two decades when Hungary's debt ratio remained below 60 percent was between 1998 and 2004. Owing to the high deficit levels, the effects of the recession prevented the budgetary consolidation following the crisis from doing more than just stabilising the debt rate, which caused the country's debt to climb to nearly 80 percent of GDP by the end of 2010.

Chart 3-6
Government deficit of Hungary and several groups of countries
(in the percentage of GDP)



Source: Eurostat.

3.4.1 WHAT KIND OF FISCAL TARGET MECHANISM CAN GUARANTEE THE REQUISITE FISCAL ROOM FOR MANOEUVRE?

The cornerstones of the fiscal framework currently applicable to Hungary are represented by the Maastricht deficit and debt criteria as well as the MTO, the 50 percent debt ceiling set forth in the Constitution and the Act on Fiscal Responsibility.

At present, Hungary must observe its own fiscal rules in addition to the Union's fiscal framework. Legislated by Parliament and now in force, the so-called real debt rule prohibits the real value of the national debt from being increased from one year to the next. Furthermore, the Constitution requires that the indebtedness ratio of the central budget be decreased each year until it reaches the 50 percent threshold. Of these two provisions, the real debt rule – if the real GDP growth rate is positive – is more restrictive in nature. That said, these rules do not speak to the methods of achieving these targets, leaving these considerations up to the legislature.

The Fiscal Responsibility Act, adopted in 2008, not only enacted a series of fiscal rules but also set up a legally independent institution, before the entire framework was overhauled in 2010. As a result of this revision, the GDP-proportionate debt ceiling was enshrined in the Constitution, while the country's Fiscal Council – after having also been restructured – was vested with broader

[82] In this analysis, we relied heavily on the budget chapter of the MNB 's September 2011 *Report on Inflation* and our *Analysis of Public Finance*, published in June 2011. The evaluation reflects mid-September conditions and is based on information available before September 20, 2011.

powers to control fiscal processes or, as the case may be, to even block the legislative process. In contrast to the past, however, the reformed Fiscal Council no longer continuously monitors fiscal processes throughout the year, nor does it promptly assess the fiscal impact of individual amendments, since its scope of inquire is largely confined to the period covered by the prevailing Budget Bill for the upcoming year.

Currently, Hungary's MTO or medium-term deficit objective stands at 1.5 percent, but this target comes under periodic revision by the EU Commission. The overhaul of the private pension fund system in 2010 may entail an increase of implicit fiscal commitments, which in turn may lead to the assignment of a more stringent MTO during a revision. Depending on the situation, the 3-percent ESA criterion for the deficit may be more or less stringent than the MTO requirement.[83] One important thing learned from the crisis is that in evaluating fiscal room for manoeuvre, a decisive role must be accorded not to the deficit, but rather to the debt. For this reason, it only makes sense that the adequacy of deficit targets must be assessed with reference to the debt target and debt dynamics.

Pursuant to the Maastricht criteria, Member States are required either to maintain the gross national debt below 60 percent, or in case of initial levels higher than that, to follow a declining debt path. Additionally, Hungary's new Constitution, adopted in 2011, assigns a 50-percent debt ceiling for the central budget. However, if we take into account municipal debts[84] – which currently amount to about 5 percent of GDP – this constitutional limit will not be seen as substantially more stringent than the EU-imposed criterion. The problem of the optimal debt level is discussed ubiquitously in the literature, with the emerging consensus that a lower debt will better stimulate growth, albeit subject to substantial uncertainties (see Box 3-2). Beyond these considerations, there a number of other reasons why Hungary would be well advised to set the aim at a debt ceiling below the 60-percent limit.

1. The GDP-proportionate debt level of other countries at a comparable level of development is lower than 60 percent.

International comparison of national debt ratios in terms of level of development (expressed as GDP per capita) is relevant in more ways than one. First, the capacity to produce revenue can be seen as an index of the ability of the state to collect taxes and thus to repay debt (Ódor and P. Kiss, 2011). Second, market actors tend to form a view of a country's fundamental situation in comparison with other similarly advanced countries. It follows that more developed countries are capable of sustaining a higher debt ratio over the long term, but a debt ratio persistently higher than that of similarly developed countries may lead to an increase in the risk premium expected by investors and to asset prices being more sensitive to changes in investor sentiment.

The average debt ratio of Hungary's competitors at a similar level of development is less than 60 percent of their output. The average of the Visegrád Three (Czech Republic, Poland, Slovakia) is 45 percent at present, while the average of East-Central European countries which joined the EU after 2004 stood at 34 percent at the end of 2010.

2. The need to reduce the country's foreign debt may also justify a lower level of public debt.

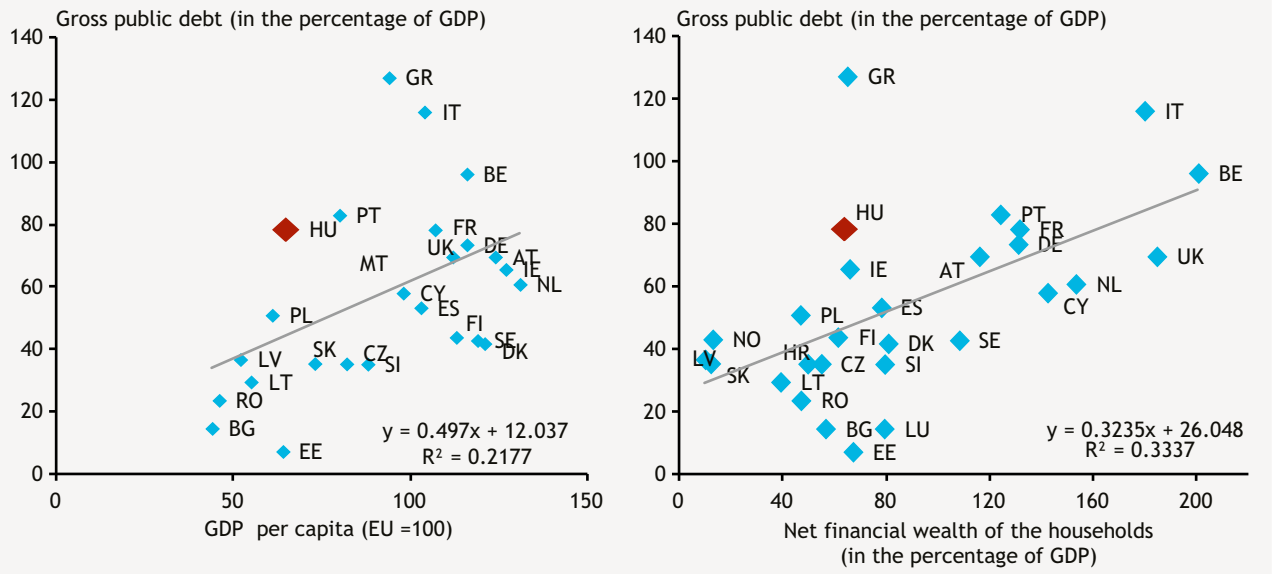
The behaviour of the private sector is crucial with respect to the impact of fiscal policy on external balance processes. If households display a strong inclination for savings or deem the rise of the budget deficit to be temporary and thus increase their savings to prepare for future austerity measures ('Ricardian behaviour'), then households' financial assets may increase in conjunction with a rising state debt. In such a scenario, the indebtedness of the government does not entail foreign debt. Belgium, Italy and Japan are examples of countries where high government debt is combined with only moderate foreign indebtedness, because the considerable financial assets held by residents play a major role in financing public debt, either directly or indirectly through other sectors. A comparison based on households' financial assets also favours a public debt level of 40-50 percent for Hungary – once again a rate far below the 60 percent limit.

A rate of foreign and domestic debt which is high for the country's level of development is reflected by the level of

[83] If the output falls significantly short of the potential, meaning that the output gap has a considerable negative value, then even a structural position consistent with the MTO cannot guarantee that the Maastricht deficit target will be met. Conversely, if the output level exceeds the potential, even the fulfilment of the 3-percent deficit criterion will not necessarily mean that the structural deficit target deemed desirable for long-term sustainability will be met.

[84] The Constitution reserves the right of the Government to make municipal debt conditional upon the Government's approval in the future: 'In the interest of preserving fiscal balance, law may stipulate conditions or the approval of the Government for a municipality to take out a loan or undertake any commitment in the amount specified by law.' In and of itself, introducing mandatory Government permission must be seen as a major step toward establishing central control over municipal indebtedness. At the same time the fact that the gross national debt figure set forth in the Constitution is not consistent with the Maastricht criteria makes it possible, despite the ceiling, for the indebtedness index monitored by markets and international institutions to rise over 60 percent.

Chart 3-7
GDP per capita, net financial wealth of the households comparing to the gross public debt



Note: in 2009, per cent.
Source: Eurostat.

the risk premium expected on investments in Hungary and by the susceptibility to changes in investor sentiment. In a comparison with the Visegrád Countries, which serve as the reference peer group for Hungary, looking at the period from 2008 to 2010 as a whole we find that Hungary's risk indices rose most steeply during the crisis, despite a relatively favourable fiscal deficit level,[85] while the lowest rate of increase in these indices was noted for the Czech Republic and Slovakia, which had the lowest debt ratios. Upon outbreak of the crisis in 2008, Hungary suffered the most from the sudden setback in investors' risk appetite; correspondingly, in the spring of 2010, it was the relative position of Hungary which was most severely affected by the debt crisis in Greece that later spread to the peripheral euro area.[86] Reducing the rate of foreign and domestic debt may be reflected in expectations of lower premiums on domestic investments, in other words in a permanent reduction and more even variation of the costs of financing the entire economy.

3. A lower target figure would make sense in light of the asymmetric risks pointing toward a higher debt level, and the vulnerability that stems from the structure of the debt.

As a result of its quasi-fiscal activities, the state has undertaken significant implicit and explicit guarantees. Any assumption of debt liabilities may in the future be reflected in rising deficit and indebtedness rates.

From the point of view of gross public debt, a further risk is entailed by the fact that financing reserves assume greater significance in times of crisis. Ensuring the uninterrupted service of the public debt and the deficit, along with the need to cover unexpected expenses that may not necessarily form part of the deficit, calls for increasing the liquid financial assets available to the state, which in turn also contributes to a provisional increase of the gross debt at a constant net public debt level.

As a result of the high foreign currency ratio of the public debt and the relatively short average maturities, rising yields and a weakening exchange rate of the forint may trigger a substantial increase in the indebtedness ratio. At higher debt levels, the rate of indebtedness becomes more sensitive to declines in economic output and fluctuations in yields. This means that a unit of GDP reduction and rising interest rates will make the dynamic component cause a greater increase in the debt ratio. In 2009–2010, the

[85] In respect of the fiscal debt, in 2008 Hungary did not fall significantly short of the Visegrád Countries, and in 2009–2010, Hungary's budget balance was considerably better than those of the other countries.

[86] In the significant rise of the CDS-spread in 2010 – besides the international effects affecting the whole region – plays a role the ambition of the economic policy, which tries to help the economic growth by a fiscal stimulus. There was no room for manoeuvre, hence parallel with declaring Government's commitment to the low deficit risk indicators have decreased. The country-specific factors are shown in Kocsis and Nagy (2011).

combined influence of contraction of GDP, the weakening exchange rate and the interest burden accounted for a total of 9 percent of the increase of the debt ratio.

4. For lack of independent monetary policy within the euro area, there is a greater need for fiscal policy intervention.

In a monetary union, fiscal policy can serve as a powerful tool for managing asymmetric shocks. In the event of a negative shock, this means that fiscal policy undertakes fiscal easing measures in an attempt to mitigate the effects of any recession, triggering a rise in the public deficit and debt. The risk of an emerging boom-bust cycle, as described in the previous chapters, highlights the need for fiscal room for manoeuvre to handle the lending boom when Hungary joins the euro area.

It follows from the above that Hungary must definitely consider a sustainable, meaningful reduction of the debt ratio as a number one priority for economic policy, and would be well advised to set a target lower than the 60 percent Maastricht debt criterion. One way of accomplishing a lower debt ratio may be by assigning a structural deficit target lower than the one currently in force.

In defining the structural deficit target as may be deemed necessary for attaining the desired debt objective, we must invoke the experiences of the crisis and bear in mind that the view of a cyclical position may be significantly revised over time, and that a crisis may induce a break in the level of potential output. Due to the downward adjustment of potential growth, the structural position of the budget may turn out to be persistently less favourable than previously estimated.

Box 3-2
What is the optimal level of public debt? – an overview of the literature

The relevant Maastricht criterion defined the desirable level at 60 percent, but this merely reflected the typical average debt levels of the would-be Member States prevailing at the time the euro area was formed, without being supported by any theoretical underpinnings.

Although the European debt crisis did prompt a handful of studies analysing the optimal level of the debt, no consensus has been reached in this regard. Perhaps the only common denominator is the observation that higher rates of state debt entail lower average levels of growth, primarily on account of the crowding-out effect. Instead of seeking to define the optimum debt level, the studies tend to look for tolerance limits beyond which a significant slowing of growth and/or unfavourable debt dynamics may trigger processes which do not bode well for fiscal sustainability.

1. A The 60-percent ceiling is widely regarded as authoritative for developed countries, European or otherwise, while the ceiling most often thought applicable to developing countries is defined at 40 percent. For instance, this is the debt rate target assumed by Cottarelli (2010a) and Cottarelli (2010b) in estimating budget adjustment needs. The 60 and 40 percent limits are arrived at as the pre-crisis average of the relevant groups of countries. Generally, the studies proceed on the assumption that the 'optimal' debt level must be lower in developing countries.

2. Based on the analysis of very long-term data of developed and developing countries using simple statistical methods, Reinhart and Rogoff (2009) argue that no significant discrepancies between the rates of growth of individual countries can be observed until the GDP-proportionate debt hits 90 percent. Beyond this threshold, the average rate of growth declines by 1.5 percentage points, but there is no meaningful difference below this limit.[87] Kumar and Woo (2010) also examine the strength of the correlation between economic growth and state debt. They find that higher public debt entails lower growth rates, but that truly significant differences only arise between very low debt levels (below 30 percent) and very high debt levels (over 90 percent). A 10 percentage point increase in the initial debt level reduces the rate of real per capita GDP growth by only 0.2 percent over the next 5 years. In developing countries, this coefficient is somewhat higher, as the more powerful financing restrictions force these countries to sustain a higher output loss at higher indebtedness rates.

3. In a study published under the auspices of the IMF last fall, the authors (Ostry et al., 2010) define what they call 'fiscal space' essentially on the basis of a country's historical track record of adjustment and current debt. The so-called debt limit shows the point

[87] In developing countries with a debt ratio of over 90 percent, the output loss is even higher, at about 3 percentage points.

where the country's past fiscal efforts (the reaction function of the primary balance relevant to the debt level) assign the debt level beyond which – under the given yield and growth conditions – the 'customary' adjustment policy followed in the past is no longer sufficient, and the debt path would become explosive without extraordinary efforts compared to the historical trends.[88] *Fiscal space* is then simply determined by the difference between the debt limit and current debt. The authors reckon that among the developed countries Japan, Greece, Italy, Portugal, Ireland, and Spain have the least fiscal space.

3.4.2 WHERE DO WE STAND ON THE ROAD TOWARD CREATING FISCAL ROOM FOR MANOEUVRE?

The ongoing pressure for adjustments in recent years may bring an improvement in the structural indices that express the position of the budget in the longer term – an improvement that is not uninterrupted, but is certainly remarkable in view of the measures planned for 2012–2013. According to our calculations, if the measures announced to date are implemented in full they will guarantee the fulfilment of the 1.5 percent MTO, although in the short-term the ESA deficit may exceed the target limits undertaken in the Convergence Programme.

In estimating the fiscal position, two indices are particularly worth tracking: the official ESA-terms balance and the balance of general government in the broader sense, excluding the cyclical movements of the economy. The first index serves to assess the performance of the Maastricht deficit criterion, while the second indicates the direction in which the balance is headed in the medium term, and as such can also be of use in evaluating MTO performance. The budget indices used by the MNB are reviewed in greater detail by Hoffmann and P. Kiss (2010).

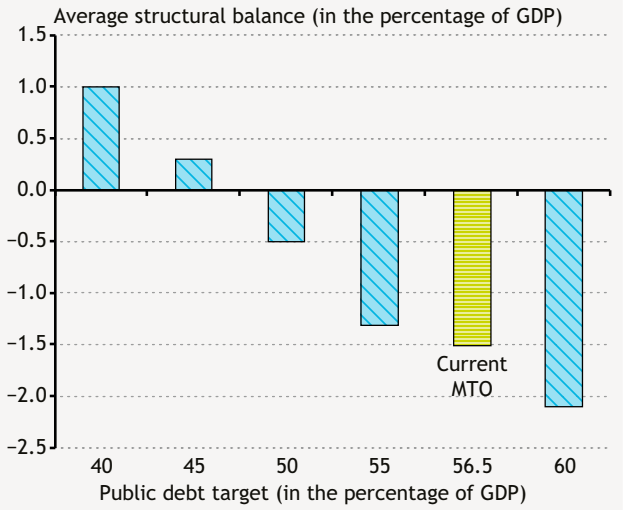
Following this year's current balance, which shows a surplus owing to the effect of temporary factors according to the ESA index, the Hungarian public deficit may remain above 3 percent in 2012–2013. In contrast to the official balance indicator, our cyclically adjusted SNA-method index predicts a deficit level below 2 percent in 2013, which means that, as far as the fundamental fiscal processes are concerned, we are well on our way toward accomplishing the MTO.

Public debt also has a chance to decrease during the coming years. In 2011, the lowering of the debt-to-GDP ratio was caused, in addition to the rather high structural deficit, by the partial redirecting to the state of the assets of the private pension funds. However, in 2012–2013, the current deficit (the surplus of the primary balance), decreasing in the context of the consolidation, coupled with a slowly unfolding economic growth, may further lessen the indebtedness of the state.

If the primary balance generated by the adjustment measures persists, the debt rate may be expected to drop below 60 percent by around 2019 – assuming full-scale implementation of the proposed government measures, a real yield around the current levels, and a long-term growth rate of around 2.5 percent.

We have also looked at the average structural balance that would be required during the period after 2013 to guarantee that the debt targets for 2020 can be met. The simulation is based on the current debt and our perception of potential growth, assuming average real interest rates burdening the debt as being constant, and a stable exchange rate level.

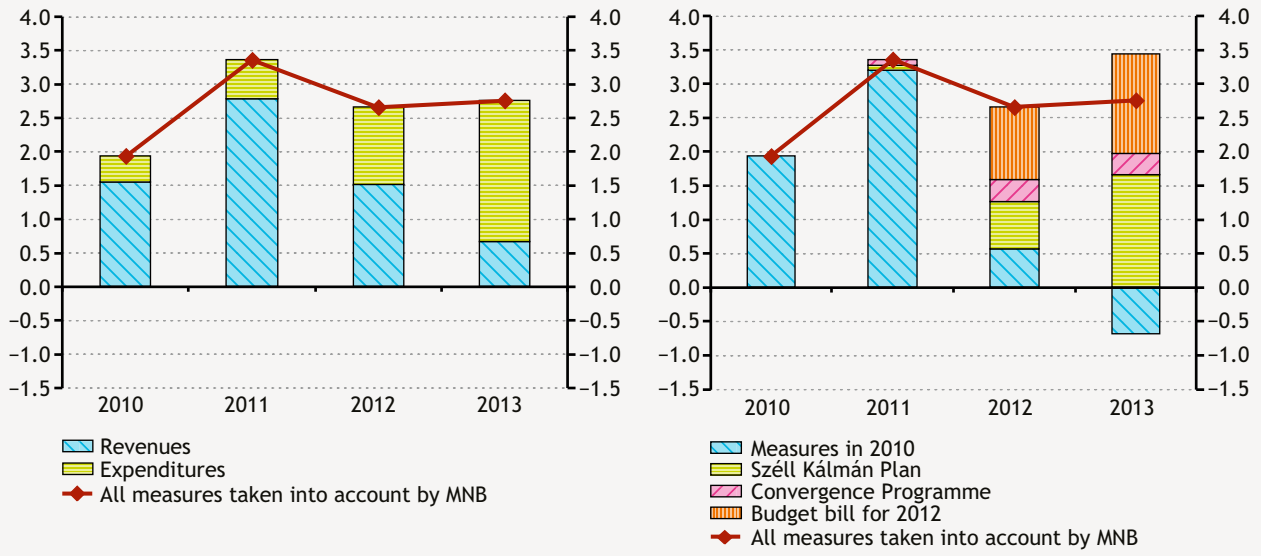
Chart 3-8
Gross public debt targets and the required average structural balance
(until 2020)



Note: We assumed the macro and fiscal projections of the Report on Inflation until 2013, after that stable structural primary balance, GDP real growth rate converging to 2.5%. Regarding real interest rates we assumed the level around 2 per cent after 2013 in our simulation.
Source: Authors' calculation.

[88] As the debt limit in the developed countries under review falls between 150 and 260 percent of GDP, it cannot at present be regarded as being effective in these countries. Because of uncertainties inherent in the methodology, however, these values respond very sensitively to changes in independent variables, and therefore the authors estimate the existence and extension of the fiscal space based on probabilities rather than hard figures.

Chart 3-9
Breakdown of government measures
(as a ratio of GDP)



Note: The chart illustrates the impact of announced government measures considered by the MNB. For 2011, we factored in the receipt of HUF 529 billion from the overhaul of the private pension fund system as featured in the original Budget Act. The MNB's own calculation are based on government measures announced as of June 2010, with positive values standing for effects improving the balance. Owing to the massive uncertainties in the wake of these announcements, the charts are to be regarded as approximations in terms of orders of magnitude.
Source: Authors' calculation.

A structural deficit level comparable to the current MTO at 1.5 percent may scale back the public debt to about 56-57 percent. However, a gross debt target of 50 percent seems impossible to achieve unless the medium-term deficit target is defined slightly more stringently than the MTO, at around 0.5 percent. Finally, reaching the 40-percent debt level, which is typical of our competitors in the region and in general of countries at a level of development similar to ours, could only be guaranteed at a structural surplus of nearly 1 percent.

Provided that the proposed government measures are implemented, the position of the Hungarian national budget may improve over the medium term as debt levels decrease while remaining still high, but this has no bearing on the imperative to examine the quality issues of sustainability for the longer term. In the following, we will take a look at how the quality criteria described at the beginning of this chapter are being met in the context of ongoing fiscal adjustments and the plans of the government as they are taking shape.[89]

Adjustment structure

Having started in 2010, the consolidation does not favour the budget in the short term, but can be said to have a rather more favourable structure in the medium term, although the outlines of a breakthrough in the area of structural reforms have yet to be seen. In the medium term, the adjustment relies on cutting back expenditures for about three-fourth of its total value, even as the total tax burden will slightly increase in the medium term. Expenditures are mainly characterised by a cut in government transfers, while revenues are most affected by lower taxes imposed on labour and higher tax rates on consumption. In the short term, the sectoral taxes, imposed on various sectors impair the profitability in these sectors and may be detrimental to the investor sentiment, thereby potentially contributing to lower growth rates in the longer term – to an extent and with a permanence that is difficult to predict.

1. Early in the period, the consolidation package relies heavily on temporary measures to increase revenues, whereas in the medium term **expenditure-side measures** may come to dominate the picture, provided that they are implemented. In the medium term, that is starting in 2013, the majority of balance-improving measures will be associated with expenditures, while on the revenue side – where one-off items are expected to be phased out – the combined effect of a cut of the personal income tax and the corporate tax along with the hike of use tax types will

[89] The analysis relies on the net effect of the measures as estimated by the MNB and, in the statement of expenditures, also excluding tax content.

result in slightly increased revenues compared to a path without these measures. Cutting spending may bring a substantial reduction in the Hungarian expenditure level, which has been considered rather high by regional standards.

2. Incorporating the larger part of these measures, the Structural Reform Programme aims at reducing **spending** by purpose-designed specific measures, while the Convergence Programme, which contains fewer new measures, focuses on extending the deadline on 2011 holds and nominally fixing (or minimally raising) individual expenditure items. In both scenarios, however, further measures are needed to actually realise the savings which have been planned. For the most part, the Structural Reform Programme relies on scaling back transfers, whereas the Convergence Programme seeks to rein in government consumption. Within the whole package of measures affecting the expenditure side, those pertaining to transfers predominate. This becomes especially important in light of the fact that, of all the expenditure categories, it is in the area of social and welfare spending where Hungary meaningfully differs from its peers in the region.[90] The most important proposed measures are as follows: reform of the pension system (especially regarding disability pensions and early retirement); cutting back pharmaceutical subsidies, social transfers, and labour market expenses; curbing the capacities of higher education; and reducing the subsidisation of public transport. It must be emphasised that the substantial savings associated with these measures are not expected to materialise before 2012, which makes it impossible to judge their efficiency at this stage. It is also worth noting that the Structural Reform Programme has changed somewhat since it was first announced, with considerable delays and even cancellations expected in respect of some of the measures, which will entail a more modest reduction in expenditures; the Government has filled the adjustment gap thus created by measures intended to boost revenues, put forward in the 2012 Budget Bill.

3. On the **revenue side of the budget,** the medium-term effect of the measures may be weaker, and in fact materially short of the expenditures in net terms, the individual revenue items have nevertheless been thoroughly reshuffled. After 2012, of the temporary measures only half of the extra tax on banks is expected to survive, and the one-off receipt of assets transferred from the private pension funds will no longer have an impact. On the other hand, the balance will be permanently improved by the additional payments from citizens switching to the state pension system and the increase in VAT, contribution rates and the rates of other lesser tax categories, while revenues missed due to the easing in the personal income tax and corporate tax systems will impair the balance. The overall medium-term trends will include a considerable reduction of taxes on labour, raising taxes on consumption, and only minor increases in taxes on capital, these due to the survival of the extra bank tax at half its initial rate and the extension of the tax rate originally applied to enterprises with low revenues only. The tax burden on labour – known as the 'tax wedge' – will be eased to a considerable extent only for taxpayers with higher income levels, which will mainly augment the labour supply along the intensive rather than the extensive margin.

Further evaluation criteria

In addition to the structural changes in the budget, there are other factors that will affect the reception of the measures. In several areas, the plans and intentions of which we are aware may certainly exert a beneficial influence pending implementation, but are not amenable to conclusive evaluation at this point.

4. **The economic policy adopted by the Government is committed to launching and completing reforms in socially and politically sensitive areas.** It is nevertheless important to bear in mind that, since the democratic transition in Hungary, innumerable attempts have already been made to scale back government centralisation and reform the largest redistribution systems, but few of these reforms have been seen through to a successful end. Problem areas pertaining to the structure of budget and the growth opportunities of the Hungarian economy were identified and alternative response plans were proposed years ago.[91] It is up to those responsible for the current economic policy to execute these ambitious, essentially well-conceived reforms.

5. As discussed previously, substantial revisions in fiscal rules and institutions have been introduced as well, with the related impacts being both negative and positive.

6. **Structural reforms** have recently been announced in several fields, but are mainly focused on the labour market. Some of the measures under the Structural Reform

[90] The picture is somewhat complicated by the fact that an economically irreproachable comparison of Hungary's expenditure structure with those of, say, the countries of the Visegrád Group cannot be conducted based on official data alone. If we perform the adjustments and corrections required for a conscientious comparison, the Hungarian expenditure level will no longer seem quite that high compared to the Visegrád countries. For a more detailed discussion of the topic, see P. Kiss and Szemere (2009) and P. Kiss and Szemere (2011).

[91] Cf. for instance CEMI (2006); MNB (2006); Baksay et al. (2008); P. Kiss and Szemere (2009).

Programme and the Convergence Programme may turn out to be conducive to consolidation and bring a sustainable fiscal policy closer to reality, but because the specific details are still being worked out as we speak, the true effect of these measures remains to be seen. Chapter 2 provides a detailed discussion of how the tax and transfer-related measures will impact the labour market. We are of the opinion that further action is called for in several other fields, notably in the human capital sectors such as health and education, as well as regarding the reform of the municipal system. The earlier waves of fiscal adjustment did attempt reform in these areas, but failed to implement far-reaching change beyond simply cutting expenditures.

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4 Macroprudential instruments for the management of asymmetric shocks

In the case of giving up their independent monetary policies, Member States may essentially be able to apply macroprudential policy to mitigate the evolution of credit booms and other risks which jeopardise the stability of the financial system of the Member State. The essence of macroprudential policy is that it aims at dampening frictions and swings in financial intermediation basically in preventative, forward-looking manner. In most of the cases it reaches its goals through the application of so-called microprudential tools which ensure the stability of individual institutions but that are calibrated at systemic level. For example, macroprudential policy limits excessive lending by applying rules that make borrowing more difficult and more expensive (stricter cover rates, higher capital requirements etc.). Macroprudential oversight is a relatively new duty, which largely came to being because of the current crisis; its framework is not fully developed even in the most developed countries or in the Union. This is well reflected by the fact that the European Systemic Risk Board, which is entrusted with this task, also started to work only this year.

The number one criterion for establishing the institutional framework is to provide the designated responsible institutions with the appropriate incentives and tools for achieving macroprudential objectives. In Europe, two models appear to be taking shape. In countries where the macroprudential supervision is integrated as one of the functions of the central bank, it is typically the central bank that becomes the macroprudential authority. Countries with a separate designated macroprudential supervisory authority typically set up a financial stability committee comprising members delegated by the supervisory authority, the government, and the central bank. Theoretically at least, in countries with integrated micro- and macroprudential functions, the authorities are enabled to commit the entire arsenal of tools available to them in fighting systemic risks. With the committee model, opportunities for direct macroprudential intervention tend to be rather limited. The powers of the macroprudential authorities are confined to identifying problems and drafting intervention proposals, but the actual decision-making remains reserved for Parliament or the regulatory agency. In any event, regardless of the set-up, communication and enforcement generally follow the so-called 'act-or-explain' mechanism.

In Hungary's system of macroprudential institutions, responsibility for maintaining financial stability is shared by the financial supervisory authority, the central bank, and the Ministry for National Economy, the last of which acts as the regulator and also disposes over budget funds. At the same time, the macroprudential dimension is yet to emerge in terms of the harmony between objectives, liabilities, and tools, with the Financial Stability Board currently functions only as a consultative body. This is far from being a satisfactory institutional solution, particularly given that a similar consultative forum proved unable to prevent the escalating of foreign-currency residential lending, which was the most flagrant macroprudential fiasco of the period from 2004 to 2008. In short, it would seem vital to improve the efficiency of the present institutional system.

More efficient elaboration of macroprudential framework than the current one is justified not only because of the past failures. The institutional framework requires modification in connection with the introduction of the Basel III rules as well. On the one hand decision has to be made on who will have the decision-making powers related to the calibration and activation of the countercyclical capital buffer as well as on the right to prescribe possible additional requirements related to systemically important institutions.

In addition, the domestic macroprudential institutional system needs to be prepared for the European level macroprudential coordination exercised by the European Systemic Risk Board (ESRB). Following the crisis the centralisation of decision-making powers at the European level accelerated, i.e. in addition to the single monetary policy, the concentration of fiscal powers also started. At the same time, the European-level micro- and macroprudential supervisory authorities which were

established in early 2011 are expected to expand their intervention powers in the medium term to the prejudice of national authorities. The new European regulatory concept,[92] *in turn, aimed at the standardisation of prudential rules* ***(maximum harmonisation),*** *thus limiting Member States' opportunities to individually intervene with a macroprudential objective. Although Member States are striving to widen their macroprudential room for manoeuvre referring to the deficiencies of the single market, the different national characteristics and the varying weight of the financial sector in their economies, they are expected to be given an opportunity for this only under the strong control of the ESRB.*

In the European Union and in the euro area, the evaluation of individual steps in an EU context is of especially high importance, as integrated financial markets may transfer the shocks and as well as allow the circumvention of individual steps. Therefore, efforts need to be taken for recognition by other Member States and for the enforcement of individual instruments introduced at the member-country level ***(reciprocity).***

[92] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0453:FIN:EN:PDF.

4.1 What is macroprudential policy suitable for and not suitable for in the management of asymmetric shocks?

Catching-up economies in the European Union are especially exposed to possible external shocks if market developments become unidirectional. At the level of the financial system as a whole, they may result in excessive outflows of loans and deviation of certain asset prices from the equilibrium level, while at the level of individual banks they may lead to an excessive dependency on interbank resources and deterioration in the loan portfolio. In relation to joining the euro area, upswings fed from external sources have proven to be unsustainable in several cases in the past, and entailed a rapid decline and high capital outflows (see Chapter 2). In order to avoid this essentially overshooting-based phenomenon in connection with Hungary joining the euro area, adequate monitoring mechanisms need to be developed and a set of instruments necessary for keeping developments under control needs to be in place.

According to the prevailing attitude of the pre-crisis period,[93] monetary policy does not have to interfere in the period of the excessive outflows of loans and the accompanying asset price increases, as neither the identification of the problems nor the assessment of their magnitude is easy, and regarding the given problems the efficiency of the interest rate policy is also uncertain. According to this opinion, intervention with interest rates is relatively more cost-effective after than before the crisis *('clean-up ex post')*.

Another group of economists (including mainly the position formulated by the Bank for International Settlements [BIS]),[94] however, emphasised already prior to the crisis that via asset price bubbles the excessive outflow of loans may generate an additional excessive increase in consumption and investment, which may entail a serious downturn in the real economy as a result of reaching the turning point in the credit cycle or a crisis that might occur earlier. At the level of the participants in the financial system, monetary policy which is declared to be reactive carries moral hazards, and the efficiency of a subsequent mitigation of damages may also become highly questionable if the solvency of the banking sector and thus its sustainability becomes problematic during the crisis.[95] Therefore, overheating in the financial sector needs to be prevented by targeted central bank intervention *('lean against the wind ex ante')*.

Following the crisis, with the decline in the reactive trend, in addition to a more active application of monetary policy, central banks paid increasing attention to macroprudential instruments, which meant a more targeted intervention.

4.1.1. ARGUMENTS FOR MACROPRUDENTIAL INTERVENTION

After 2008 several comprehensive evaluations[96] pointed out that problems coded at the systemic level, the interdependence of financial institutions and risk exposure to identical factors played a significant role in the gravity of the crisis. In order to avoid crises of a similar nature, experts considered more efficient risk analysis, a regular evaluation of risks and the application of old and new macroprudential instruments to be necessary.

Accordingly, macroprudential policies may be considered as a part of financial stability policies.[97] Within that, however, they expressly emphasise prevention, considering the prevention of the development of systemic crises to be their main task. The most wide-spread target area of macroprudential policies is the moderation of the cyclical character of the financial system through capital requirements, provisioning or liquidity regulations or perhaps leverage ratios, but infrastructure and transparency enhancement steps that aim to increase systemic resilience

[93] Bernanke and Gertler (2001).
[94] Borio and Shim (2007).
[95] Nier (2009).
[96] See de Larosiére et al. (2009) about the deficiencies of the supervisory system of the European Union.
[97] The other main branch of financial stability policies is the set of crisis management instruments, the lender of last resort function of central banks, deposit insurance and bank resolution.

also belong to this concept. In parallel with the interest rate policy, or as its alternative, they may appear in central bank policy in a way that they theoretically do not come into a conflict with the management of inflation targets.

4.1.2 LIMITS AND DIFFICULTIES OF MACROPRUDENTIAL POLICIES

As macroprudential instruments have a direct impact on the financial system, they can exert their effect best if both the fiscal and the monetary environments are supportive, i.e. if they do not clash with any of these policies. This, however, is not necessarily achieved in the case of euro area Member States, exactly because of the heterogeneity of the area. In addition, in a European context it also needs to be ensured that financial groups operating in the internal market should not be able to circumvent national-level barriers, i.e. limitations put into effect by a given member country should be enforced during any transaction related to the given country, irrespective of the location where the transaction is concluded (reciprocity).

However, the efficient application of macroprudential instruments is surrounded by uncertainty not only because there is relatively little relevant practical experience (apart from the examples of some countries presented later), but also because the use of these instruments involves numerous contradictions and difficulties from a theoretical aspect as well:

- *uncertainty of objectives:* macroprudential policy is only able to determine what it would like to avoid: the occurrence of systemic risks. However, this system of objectives is asymmetric on the one hand, as these risks materialise at the occurrence of extremely negative events, and indirect on the other hand, and thus it is difficult to make it operational.

- *uncertainty of indicators:* whereas both in monetary policy and microprudential supervision relatively unambiguous instruments exist to measure the attainment of objectives (inflation in monetary policy, capital adequacy and liquidity indicators in microprudential supervision), from a macroprudential aspect it is difficult to determine the state of equilibrium with the specific values of individual indicators. Although the dynamics of the expansion of loans, the rate of change in asset and real estate prices, the average LTV ratio of housing loans, etc. may all indicate an excessive credit boom, it is difficult to determine the threshold value above which one may talk about the evolution of bubbles, especially if these indicators suggest contradictory processes. Similarly, in a less developed country, where loans outstanding start from a low basis from the outset, an annual 20% increase in loans outstanding may not disturb the equilibrium, whereas the same indicator in a more developed country may already suggest the development of bubbles.

- *inconsistency of benefits and costs in time:* on the way to overheating, an economy and its participants continuously benefit from the developments that cause the overheating. Borrowers can increase their consumption, benefiting both the companies that produce for the domestic market and the state, which collects tax revenues. Therefore, restraining excessive loan dynamics – prior to the bursting of the asset price bubble – results in costs for these players over the short run. Accordingly, although prevention of the crisis pays off over the long term, amid the general optimism of the period of upswing, participants are inclined to underrate the uncertain future profits that can thus be gained compared to the short term and certainly incur costs.

In the light of the above, macroprudential authorities are in a very difficult situation, as the result of their successful functioning – the *non-occurrence* of the crisis – cannot be seen, only the immediate costs and their possible failures are clear. Some authors[98] also point out that in fact already prior to the crisis the supervisory authorities of developed countries had the means that would have been needed for the prevention of the crisis, but amid the general optimism they did not apply these means because of the short-term costs stemming from their use. Accordingly, due to the inconsistency of costs and benefits over time, macroprudential decision-makers need to enjoy independence similar to that of central banks and have a longer mandate that is independent of political cycles.

To sum up, the main challenges of macroprudential policy are that decisions which are costly over the short term, have uncertain long-term effects and have results that are difficult to observe must be taken on the basis of indicators that are of uncertain reliability and are difficult to calibrate. It is important to point out that these effects may influence the behaviour of regulators even if the institutional framework is clear, and the supervisory authorities have precisely designated objectives as well as the means required for their achievement.

[98] Palmer and Cerruti (2009).

Box 4-1
Have there been any successful macroprudential policies in the past?

Spanish dynamic provisioning[99]

In the late 1990s, the share of non-performing loans declined markedly in Spain. As a result, provisions for problematic loans also fell considerably. The Spanish central bank, which attends to monetary as well as supervisory tasks, became concerned that a possible surge in the ratio of nonperforming loans would entail provisioning requirements of a magnitude that would jeopardise the smooth operation of the Spanish banking sector. Therefore, in 2000 they introduced the system of dynamic provisioning, some details of the rules of which were amended in 2004. Based on the new set of rules, so-called anti-cyclical statistical provisioning was put into place; these special reserves have to be accumulated in times of economic upswing, against profit. In order to avoid excessive provisioning and thus to limit tax evasion, statistical provisioning had an upper limit as well.

One of the advantages inherent in the new system was that as the developments in statistical provisions paint a picture of expected loan losses, it allows a better assessment of the actual financial situation of banks that can be expected over the longer term. On average, statistical provisions amounted to 10% of the net operating income (in the period between 2000 and 2009), which did not prove sufficient for absorbing loan losses completely during the ensuing crisis. However, this was not an objective of the central bank upon formulating the rules, as it could not undertake to exactly forecast the depth of a future recession. Looking back, dynamic provisioning was unable to smooth lending cycles substantially or to restrain the excessive lending activity, as the rules did not require a serious extent of provisioning that would have effectively restrained banks' ability and willingness to lend in times of prosperity. It is positive, however, that the system of dynamic provisioning reduced the provisioning burden on banks during the crisis, playing an important role in the fact that banks were able to manage the loan losses without having to raise significant amounts of capital.[100]

Although the idea of a general, European-level extension of the Spanish model arose on several occasions in the regulatory wave following the crisis, due to the special data needs and its complicated relationship with accounting rules, anti-cyclical rules appearing on the level of capital requirements received support instead.

India

The Reserve Bank of India (RBI) has applied various types of macroprudential rules in order to achieve and maintain the stability of the financial system since 2004. Between 2004 and 2008, the rapid GDP growth of the Indian economy was accompanied by significant capital inflows and a rapid increase in bank loans outstanding. This was coupled with a sharp increase in asset (mainly real estate) prices.

Starting from October 2004, the Reserve Bank of India ordered banks to apply time-varying risk weights and provisioning rules assigned to the exposures to individual sectors.

As a result of the measures, excessive outflows of loans declined by 2007, due to the increase in lending costs and the signalling effect of the Reserve Bank. It was the provisioning rule that proved to be really effective, as – through the reduction of profitability – it mitigated the increase in loans outstanding in a more efficient manner. Risk weights did not represent an actual restraint on lending, because the general capital situation of the banking sector significantly exceeded the regulatory requirement. As a consequence of the financial crisis, the Reserve Bank eased the risk weights and the provisioning rules as well in October 2008. However, the effect of the anti-cyclical rules proved to be asymmetric: it was able to manage the problem of excessive lending more efficiently in the period of upturn than the achievement of a stable supply of credit at the time of the downturn. It is difficult to draw a final conclusion, because monetary policy and macroprudential regulation were applied simultaneously in the periods of tightening and easing, making their impacts hard to separate. While monetary policy may have contributed to keeping the total increase in loans under control, macroprudential rules may have played a role in the moderation of the increase in loans to certain special sectors, which were considered highly risky.

[99] For details about the system of dynamic provisioning applied in Spain, see Saurina (2009).

[100] The fact that the Spanish banking system still had to be restructured significantly is attributable to another reason, i.e. to the problems of foundation banks (so-called 'caja'), which operated practically without any institutional controls.

Examples from South-East Asia

Hong Kong. The monetary authority of Hong Kong has applied a lending limit for mortgage loans as a macroprudential instrument in order to preserve the stability of the banking sector and to mitigate the systemic risks stemming from the exposure of banks to the real estate market since 1991. Underlying reasons for the introduction of the LTV rules included the high proportion of household mortgage loans within banks' total loans outstanding[101] and the strong historic volatility of real estate market prices[102] as well as the fact that in the absence of an independent monetary policy the monetary authority was compelled to apply alternative policy means.[103] Other measures, for example PTI[104] limits, were also introduced in addition to the LTV limits.

The measures proved to be effective in the period of the Asian financial crisis; they were able to mitigate banks' losses and prevented bankruptcies of banks.[105]

From 2007 on, real estate prices increased sharply again, even following the 2008–2009 financial crisis, which triggered another tightening of macroprudential rules. These steps, however, have had limited success to date: the increase in real estate prices is not slowing down, but the number of transactions declined following the interventions. The question arises whether the macroprudential authority that regulates the increase in domestic loans outstanding may be able to restrain the real estate market boom, which is mostly driven by the strong demand of buyers from mainland China.[106]

South Korea. Here, due to the increasing prices of housing and households' mortgage loans total, a maximum LTV rule[107] was introduced starting from 2002. From 2005 on, the limits regarding the loan-to-value ratio were complemented with DTI rules.[108] The LTV and DTI rules were eased in 2008, when the real estate market slowed down, but in 2009 they were tightened again, as real estate prices started to grow.

In terms of the efficiency of macroprudential rules, South Korea achieved mixed results. Following the introduction of the LTV limit they succeeded in slowing the increase in loans outstanding and the appreciation of housing prices in 2003 and 2004. In 2009, however, in the month following the simultaneous tightening of the LTV and DTI rules, loans outstanding hardly declined, and the growth rate of housing prices also failed to be reduced significantly.[109] The results highlight the difficulties of calibrating the instruments and also that the level of the LTV cannot be further reduced as it is already low at present as well (40% in the areas classified as speculative).

[101] Since 1991 the share of household mortgage loans within banks' total loans outstanding has continuously exceeded 20%, reaching its maximum value of 37% in 2002.
[102] In December 1996, for example, real estate prices increased by 30% compared to the same period of the previous year.
[103] The Hong Kong dollar has been tied to the US dollar within a Currency Board Arrangement since 1983.
[104] Payment-to-Income, the ratio of the instalment to the monthly net income.
[105] Borio and Shim (2007).
[106] Crowe et al. (2011).
[107] Crowe et al. (2011).
[108] Debt-to-Income based debt ceiling, i.e. it is compared to the annual income of the debtor.
[109] Crowe et al. (2011).

4.2 What are the significant factors in the success of macroprudential policy?

4.2.1 INCENTIVES

Upon setting up an efficiently functioning macroprudential institutional system, a key issue is that the responsible authorities should have adequate incentives for the achievement of the long-term financial stability objectives. Above, we have demonstrated that stemming from the preventive nature of macroprudential policies, macroprudential decision-making is accompanied by high uncertainty and mistrust as well, which usually means the assumption of short-term costs that are certain, in order to achieve longer-term stability objectives that are affected by a number of external factors as well. Accordingly, these decisions require necessarily subjective judgment in the assessment of risk indicators, in determining the necessity of intervention steps, but also in the subsequent evaluation of the efficiency of risk-reducing steps. In an environment like this, it is of key importance that the set of objectives of the institutions vested with macroprudential mandates should be well-defined, clear and consistent. What the international examples have in common is that the responsible authorities were able to adopt the required decisions and to do so in time, still in the emerging phase of the risks. This required two essential factors. One was an undisputed mandate, which was obviously in place: In each case the central bank also acted as the macroprudential supervisory authority, so there could be no doubt that it had a share of the responsibility for maintaining financial stability. The second requirement was for a well-founded vision regarding the precise location of the equilibrium of the intermediary system, combined with the courage to introduce unpopular measures in order to stop unsustainable processes jeopardizing that equilibrium. Considering that the success of these measures could not be assessed for another 5 to 10 years to come, the triumph over the so-called 'inaction-bias' owed a great deal to the macroprudential authority's freedom from political influence.

After the identification of the objectives, responsible authorities need to have dedicated means as well for the achievement and maintenance of systemic stability. However, conflicts of interest that need to be addressed may also arise in connection with the set of instruments that is only evolving at present (see below). A conflict may evolve between the use of the already existing instruments for 'original' and macroprudential purposes, but conflict may also arise in the case of new instruments as a result of systemic and individual-level effects that have opposite directions.[110]

Considering the aforementioned uncertainties, the regular accountability of the authorities vested with macroprudential responsibility has special importance. The subsequent reporting obligation related to the evaluation of risks and risk-reducing steps may be the guarantee that the authorities use their responsibility and take the necessary preventive steps. Nevertheless, transparency should also be given a role in the evaluation of the macroprudential authority, as over the long term the enforcement of consistent and responsible operation can only be ensured by the control exercised by the professional and wider public.

4.2.2 INSTITUTIONAL SETUP

Institutional setup as a pillar of macroprudential oversight plays an important role in the success of the management of systemic risks. The most important issue is that among the authorities involved in financial stability there needs to be one that is clearly responsible for preventive macroprudential policy and that responsibilities should be coupled with adequate powers and concrete instruments as well. In other words, it needs to be clearly defined who is responsible for the exploration of systemic risks, for finding the adequate risk-reducing instrument and for taking the policy decision that entails intervention. The evolving practice in this regard has been to adopt one of two solutions. The first – the one adopted by the international examples previously presented – is to assign macroprudential responsibility to the central bank. The alternative to this is to have the necessary

[110] An example for the first case may be the definition of banks' contribution to the deposit insurance system on a macroprudential basis. Namely, if the payment obligation of institutions is intended to be determined as a proportion of their contribution to systemic risks, for certain institutions it may even result in obligations of an unaffordable magnitude. An example for the second case may be the easing of LTV limits in recession, which may result in an upturn in lending activity at system level, but at the level of individual banks it may even lead to significant portfolio deterioration.

decisions made by a council or board, which usually consists of members from the country's central bank, supervisory authority, and ministry of finance. In delineating the functioning and powers of these boards, it is definitely necessary to define the ways in which the board's decisions will be binding for each member – in other words to define how much of each member's discretionary powers will be transferred to and vested in the board. Given that these boards have not yet accumulated an appreciable track record, it is impossible to form an objective view of the aptness of this institutional model.

4.2.3 SPECIFIC INSTRUMENTS

First, macroprudential instruments limit the cycle-amplifying effects of the financial sector (procyclicality); second, by reducing the so-called cross-sectional risks they add to the shock-absorbing capacity of the system. In terms of the set of instruments it is an important aspect that the responsible authorities should not have one macroprudential instrument that 'can do everything' (e.g. a capital requirement rule that is recalibrated every time on the basis of newly arising risks), but an activity-based set of instruments that consists of several elements and may be used in a flexible manner. Past examples make it clear that the authorities handled various problems – including excessive credit expansion and, which presents a more complicated challenge, capital inflow – by deploying complex tools, such LTV and DTI rules and, as regards capital inflow, increasing risk weight and setting specific reserve rules, all the while enjoying the support of monetary policy to the extent that this was feasible. By and large, one can say that unique problems require unique solutions and, ideally, a responsible authority should be allowed to select from a wide array of means and chose the specific combination it deems most appropriate to the situation at hand.

The development and standardisation of the set of instruments is going on at present as well both at the levels of international organisations and individual countries.[111] The set of instruments, which reflects international consensus, comprises so-called microprudential instruments which existed earlier as well and which can also be used for systemic risk purposes, but, of course, new instruments are also being created. Typical instruments are shown in the table below.

However, the efficiency of the instruments used at the level of individual countries largely depends on to what extent they can be circumvented as a result of the lack of international coordination. The necessity of coordination basically arises between the countries of parent and affiliated institutions of banking groups; coordination can be bilateral, European-level or global.

Table 4-1
Possible means of reducing systemic risks

Time dimension
• Countercyclical capital buffer • Leverage ceiling • Strict provisioning policy • Increased provisioning depending on the phase of the bankruptcy • Introduction of 'through-the-cycle' elements into risk management models and asset evaluation models • Determination of ceilings on credit growth • Additional provisioning requirement in the case of excessive credit dynamics • Higher risk weights in the case of certain types of loans (e.g. foreign exchange loans) • Determining LTV ratio ceilings for housing loans (or higher capital requirement in the case of loans with a higher LTV ratio) • Determining ceilings for the debt-to-income (DTI) ratio or the payment-to-income (PTI) ratio for the borrowing households (or higher capital requirement in the case of loans with higher ratios) • Higher collateral requirements for corporate loans • Determining rules for benchmark interest rates in the case of housing loans
Cross-sectional dimension
• Capital or additional liquidity buffer due to size, complexity or inter-relationship • Liquidity buffers and requirements in order to ensure the stable on-balance-sheet liquidity sources • Maturity transformation limits (maturity ladders, liquidity coverage ratio) • Ceilings for loan-to-deposit ratio • Leverage limits • Limitations on exposures between institutions (e.g. between parent and affiliated institutions) and on interbank exposures • Limitations on uncovered foreign-exchange positions (net open position, the share of net external resources) • Changing capital requirements in the case of large exposures • Limiting sectoral concentration in lending • Active communication of authorities regarding the existence and magnitude of risks

Sources: CNB (2011), Elliott (2011), Ha and Hodgetts (2011).

[111] IMF (2011).

4.3 Directions of development of the European and Hungarian institutional systems

Based on the previous chapter, three pillars of the institutional systems responsible for pursuing macroprudential policies need to be built up, in order to set up operational and efficient structures. First, it is necessary to define the macroprudential objectives, then the responsibilities among competent authorities have to be distributed, and finally the instruments related to the individual spheres of responsibilities have to be created and allocated. In some places, these three pillars started to be formulated prior to the crisis, but a real acceleration in the process took place after drawing the lessons from it. Below is a presentation of the solutions for developing these three pillars at European level, member country level and in Hungary.

4.3.1 OBJECTIVES

There is consensus regarding the ultimate goal of macroprudential oversight: the goal is to reduce the probability that disorders in the operation of the financial system result in major real-economy downturns and/or significant burdening of the state budget from time to time.

However, turning this general goal into more specific interim objectives is not so simple, as eventually the (procyclical) behaviour of the financial system (which is determined by many factors) must be affected. Interim objectives are related to at least the following three areas:

- *increasing the flexibility and shock-absorbing capacity of the financial system:* due to the business relations among financial institutions and the exposure to the same types of risks, the difficulties of certain systemically important institutions may very easily drag the financial system of the given country or region as well into crisis.
- *reducing the amplitude of the lending cycle:* although some strengthening of the business cycles by the procyclical behaviour of the financial system is unavoidable,[112] the objective is to keep this cyclicality under control. For periods of cyclical boom, the present approach[113] will stipulate the accumulation of capital buffers, which may result in reigning in excessive credit expansion. During a slump, these buffers can then be freed up to mitigate negative effects, potentially contributing to the much-needed restoration of lending activity.
- *reducing asset price volatility:* in relation to the above point, the high fluctuations in not only the credit cycle but also in the prices and turnover of other financial instruments and real assets need to be mitigated, because they may cause shocks for individual economic agents and financial institutions, and may strengthen the credit cycle in themselves (although they may be its consequences as well).

The European Union established its own macroprudential supervisory authority, the European Systemic Risk Board (ESRB) in January 2011; its mandate[114] – in line with the above – covers the prevention and mitigation of systemic risks. In addition, the ESRB has to contribute to the undisturbed operation of the internal market, and has to facilitate the continuous contribution of the financial sector to economic growth.

At member country level, the formulation of macroprudential mandates is in an initial phase. According to a survey conducted in early 2011,[115] macroprudential responsibility was practically not named in the member countries of the EU, and was generally considered a part of the financial stability function.

[112] For example, according to the institutional memory hypothesis of Berger and Udell (2002), which is supported by the author with empirical data as well, banks' willingness to take risks is also significantly influenced by the time elapsed since the previous crisis and by how well bank employees remember the loan losses suffered then. As more time passes since earlier crises, the memories of losses suffered are fading, whereas right after a crisis, as a result of the losses suffered, risk appetite declines radically and turns into excessive cautiousness and risk aversion.

[113] BCBS (2010).

[114] Regulation (EU) No 1092/2010 of the European Parliament and of the Council.

[115] Instruments Working Group (ESRB) June 2011.

In Hungary, monitoring and reducing systemic risks is basically the task of the MNB. Pursuant to the MNB Act,[116] the MNB, in cooperation with other competent authorities, supports the development and conduct of the policy relating to the stability of the financial intermediary system, explores the risks to the financial intermediary system as a whole, and promotes the prevention of systemic risks as well as the reduction or elimination of the systemic risks that have arisen. According to the HFSA Act,[117] the Hungarian Financial Supervisory Authority supports the MNB in the performance of these tasks. In connection with its regulatory and fiscal authority tasks, the third participant in the financial stability framework is the Government, i.e. the Ministry for National Economy.

4.3.2 DISTRIBUTION OF RESPONSIBILITIES

Although in the European Union the ESRB was established as a macroprudential coordinating authority, the actual rights of macroprudential intervention and thus the ultimate responsibility remained with the European Commission and the Member States.

In the Member States, the macroprudential function is either considered to be a part of the financial stability mandate and operated under the existing institutional system, or it is identified as a separate policy area. Although the independent macroprudential decision-making structure has not started to function in practice anywhere yet, conflicts of interest and functionally interdependent areas have been identified, and the institutional solutions have been created. The practices of individual member countries may be classified into the following categories:

1. In some member countries, the monitoring of systemic risks falls within the competence of trilateral[118] financial stability committees, which originally performed crisis management coordination tasks. Accordingly, the actual responsibility is distributed among the authorities in connection with the basic functions. This solution was chosen by the countries that maintain independent microprudential supervision.

2. The macroprudential function belongs to the central bank. In these cases, two approaches are visible. The management of macroprudential risks either appears as an independent policy area within the central bank, and an independent high-level decision-making forum is also connected to it, or the analysis and reduction of systemic risks is carried out relying on the existing structures, basically subordinated to monetary policy objectives.

It is apparent that although the strength of their mandates varies significantly, central banks in individual Member States are unavoidable factors of macroprudential oversight. This stems from the systemic approach of central banks, the comprehensive knowledge of financial markets and systems, the decision-making ability independent of economic policy and from the lender of last resort function of the central bank. Assigning the macroprudential function to the central bank can bring about synergies in relation to the experience in analysing business cycles as well as in the quantification of fiscal effects.

4.3.3 MACROPRUDENTIAL INSTRUMENTS

Macroprudential policies become effective by putting macroprudential instruments into action. Existing microprudential instruments may become macroprudential ones if they are applied against systemic risks. At the same time, new instruments are also being developed.

Table 4-2
Current institutional solutions for supervisory responsibility

Institutional models	Independent insitutions with coordination committiee	Macroprudential function at the central bank
EU countries	DK, HU, PL **AT*, DE*, EE*, FI***	BE, BG, CZ, ES, **FR****, IE, IT, LI, NL, PT, RO, SI, SK, **UK****

*Note: in the cases marked * there is close cooperation between the central bank and the supervisory authority, and in Germany and Austria the central bank performs banking supervision tasks as well directly.*
*In the cases marked ** ther is an independent, high level body responsible explicitly for monitoring moacroprudential risks and for providing recommendations.*
HU: Hungary, SE: Sweden, PL: Poland, DK: Denmark, LI: Luxembourg, EE: Estonia, FI: Finland, DE: Germany, AT: Austria, NL: the Netherlands, BE: Belgium, UK: United Kingdom, RO: Romania, CZ: Czech Republic, IE: Ireland, FR: France, SK: Slovakia, SI: Slovenia, BG: Bulgaria, ES: Spain, PT: Portugal, IT: Italy.

[116] Article 4(7) of Act LVIII of 2001 on the Magyar Nemzeti Bank.
[117] Act CLVIII of 2010 on the Hungarian Financial Supervisory Authority.
[118] The three participants: the central bank, the microprudential supervision and the ministry of finance, which has the budgetary funds at its disposal.

At the European level, the ESRB does not have any means of direct intervention; it may issue recommendations and warnings on an 'act-or-explain' basis, which means that the addressee has to act in the spirit of the recommendation/warning, or has to justify the failure to intervene. The ESRB may address its recommendations/warnings to the Union as a whole, to one or more Member State(s), to one or more European Supervisory Authority (ESAs) or to one or more national supervisory authority (authorities).[119] However, it is a problem here as well that no actual sanction is attached to these instruments. Therefore, the ESRB can really efficiently participate in the promotion and coordination of national macroprudential interventions.

At the Member State level, the scopes of instruments available for macroprudential authorities vary considerably. Theoretically, in countries where micro- and macroprudential supervisions are completely integrated, authorities can put the entire set of instruments available into action against systemic risks. In other cases the possibility of direct intervention with a macroprudential objective is usually limited. The powers of macroprudential authorities cover the identification of problems and the formulation of proposals for intervention; actual decision-making usually remains the responsibility of the parliament and the regulatory authority. Even in this case, communication and enforcement are usually carried out according to the 'act-or-explain' mechanism.

Box 4-2
Basel III – global standard with macroprudential rules

The Basel Committee developed the so-called Basel III regulatory package,[120] which contained instruments with a clearly macroprudential objective for the first time, in order to remedy the regulatory deficiencies that played a role in the evolution of the financial crisis. Procyclicality is limited by the counter-cyclical capital buffer, whereas the additional liquidity and capital requirements of the SIFIs[121] serve the mitigation of contagion effects. However, in connection with the crisis it has also been proven that local rules are practically ineffective as a result of the globalisation of money markets. Accordingly, the Basel III regulation has not remained at the level of the Basel member countries or, because of the requirement of common regulation, at the level of the European Union; pursuant to the agreement concluded by the G20 member countries in Seoul at the end of 2010, it will become a global standard from 2013 on.

The counter-cyclical capital buffer will be the first element of the harmonised European set of macroprudential instruments. For the time being it is uncertain whether European member countries will have any other means of macroprudential intervention in addition to the capital buffers. The European Commission published its regulatory proposal[122] not long ago. It lifts the prudential regulation of financial institutions to the EU level, which entails that the currently effective prudential requirements and the ones included in the Basel III package will be applicable for the institutions directly, and they can neither be eased nor tightened at the member country level (maximum harmonisation). If the European Council and Parliament adopt it in an unchanged form, member countries will only be allowed to use the existing instruments for macroprudential purposes if previously the European Commission enables it by changing the regulation. Another possibility is innovation, i.e. the activation of means and mechanisms that are not among the already existing regulated instruments in any form.

In our opinion, the effort of the European Commission aiming at the full harmonisation of regulatory instruments is not expedient. Apparently, due to the differences in consumer behaviour, risk awareness, level of economic development etc. across EU countries, the single market has not been achieved yet. Therefore, risks are not uniform either. Moreover, some of the systemic risks may be related to country-level vulnerability as well. (For example, the scope of countries affected by foreign exchange lending or afflicted by the sovereign debt crisis is limited, and the development of asset price bubbles is also occasional.) Until actual convergence is implemented at this level, the possibility of national-level macroprudential intervention must be a real and acknowledged demand. A completely harmonised EU-level macroprudential policy may have harmful consequences especially in the case of euro area membership, as for these countries giving up the independent monetary policy would also mean giving up the independent macroprudential policy as well, which would reduce the flexibility that is essential for the

[119] Regulation (EU) No 1092/2010 of the European Parliament and of the Council.
[120] http://www.bis.org/publ/bcbs189.htm.
[121] Systemically Important Financial Institutions.
[122] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0453:FIN:EN:PDF.

functioning of the optimum currency area. The harmful effect of the 'activist' interventions that prejudice the single market can be mitigated if the interventions are coordinated by the ESRB, and adequate transparency requirements are attached to them. As final means, the ESRB may, in a recommendation, call upon individual member countries to withdraw unreasonably strict regulations or to tighten regulations that are too lenient.

4.3.3.1 THE IMPORTANCE OF INTERNATIONAL COORDINATION

Macroprudential analysis and intervention, however, cannot be efficient at national level. The financial system of the European Union is integrated; financial institutions conduct their activities – measured in balance sheet total – mainly through enterprises that are present in several member countries simultaneously. The largest financial groups, in turn, are active not only in the European Union, but outside the EU as well. In addition, on the basis of the principle of free movement of services, financial institutions may target clients in other member countries directly as well, without a permit from the supervision.

With this degree of integration, the efficiency of the macroprudential measures of a country is limited. As, stemming from their nature, interventions with a macroprudential purpose entail tightening and limitations, they induce costs for financial institutions, and result in competitive disadvantages compared to competitors in other member countries. And, as described above due to the regulatory perimeter, national rules can be circumvented easily. In the context of foreign exchange lending, which is especially relevant for us, a regulatory attempt in Romania served with a good example: in 2004, the Romanian central bank raised the minimum reserve rate for foreign currency deposits in order to reduce the growth rate of foreign exchange loans financed from these deposits. Many banks, however, circumvented this regulation by putting over the loans extended in Romania from their Romanian affiliate bank directly into the balance sheet of the parent bank (therefore, the regulation did not apply to these loans any longer).[123]

Therefore, in the member countries of the European Union, if macroprudential interventions are justified, the effects expected at the level of the single market always have to be considered. Firstly, in the case of tightenings introduced only for one country it is very easy to circumvent the regulation (regulatory arbitrage), and secondly, in certain cases the stability advantages originating from the tightening may also be enjoyed by service providers of member countries to whom the tightenings do not apply (e.g. the general smoothing effects of the slighter decline expected in the case of releasing the capital buffers) (free riding).

In theory from 2016 on each member country will be able to decide on its own counter-cyclical capital buffer setting based on the guidance to be issued by the ESRB. Practically it means that the capital requirement of the banks of the given country may be increased by 2.5%, which entails a significant competitive disadvantage. Making the steps taken by individual member countries efficient requires coordination at international level. The Basel standard ensures it with the introduction of the **principle of reciprocity.** Pursuant to the regulation, if any member country[124] introduces a counter-cyclical additional capital requirement, all the other member countries must acknowledge and enforce it against any service provider that provides services on the territory of the given country.

Integrated financial markets with a standardised regulation raise the demand for the harmonisation of macroprudential policies as well. Macroprudential cross-border cooperation may be needed not only because of neutral competition, but also in order to avoid contagion effects.[125]

[123] About the reserve policy of the Romanian central bank related to foreign exchange lending see: Draft report on FX lending, ESRB Expert Group on FX lending, (manuscript under publication) (2010); for the reactions of banks see: OTP Bank, Negyedéves tőzsdei gyorsjelentés (Quarterly Stock Exchange Flash Report), 2007 H1 (page 20), https://www.otpbank.hu/static/portal/sw/file/OTP_20072Q_h_final.pdf.

[124] Pursuant to the Basel standard, this will apply not only to member countries within the Union, but also to any other, so-called third, countries that introduce the regulation.

[125] Csajbók and Király (2011).

4.4 Evaluation of the macroprudential institutional system of Hungary

Setting up the macroprudential institutional system in Hungary is also related to the crisis. In Hungary, the responsibility for the maintenance of financial stability is shared by the Supervisory Authority, the Central Bank and the Ministry for National Economy, which performs regulatory function and has budgetary funds at its disposal. Although from 2004 on the three authorities had a formalised agreement coordinating the cooperation, and they even established a joint committee called Financial Stability Committee (FSC), the cooperation basically aimed at a coordinated solution to a possible financial crisis. Following the eruption of the crisis, the Financial Stability Council was established in January 2010 in order to prevent the accumulation of future systemic risks.

The Financial Stability Council consisted of the same institutions that participated in the earlier Financial Stability Committee, although through its powers and means of intervention it allowed macroprudential aspects to appear both in individual institutional supervision and in the regulatory activity. Stemming from its role in the Stability Council, the role of the Central Bank in macroprudential oversight also became stronger and more explicit. The parallel amendment to the MNB Act made the financial stability tasks of the MNB clear; accordingly, the task of the Central Bank is to explore systemic risks, and – in cooperation with other authorities – to facilitate the mitigation and management of these risks. In addition to the risk analysing and warning functions, which the Central Bank had had earlier as well, it became an explicit task of the Central Bank to analyse the modes of risk reduction and to give proposals for intervention if necessary. In order to enable the MNB to perform this task in a more efficient manner, the MNB Act allows the drafting of formalised regulatory proposals on the aforementioned 'act-or-explain' basis.

It is problematic, that by 2011, however, the powers of the most important body responsible for financial stability, the Financial Stability Council has been revoked, and thus it was transformed from a decision-making forum into a consultative one. So while the macroprudential institutional setting is based on a council-mode, this council does not

Table 4-3
Main steps of the changes in the Hungarian macroprudential institutional system

	Financial Stability Committee (2004–2008)	Financial Stability Council (2010)	Financial Stability Council (2011–)
Operational framework			
Frequency of meetings	Every three month	Every month	Every three month
Voting mechanism	No decision-making powers, no decision-making mechanism	Majority voting	The issuing of declarations requires unanimous decision
Transparency	No public minutes	By law, detailed summaries about the meetings are required to be published on the website of the Supervisory Authority	Not required by law. Based on ad hoc decisions, summaries of the meetings are published on the websites of the three institutions.
Instruments			
Banning and limiting activities and services that jeopardise financial stability	–	The prohibitive decree of the Supervisory Authority is discussed by the Financial Stability Council in advance	Only the Government has to be informed about the prohibitive decree of the Supervisory Authority in advance
Proposal for the areas to be supervised by the Supervisory Authority	–	Agreement of the Financial Stability Council is required	–
Proposal for regulatory or supervisory intervention	–	To Government and/or Supervisory Authority on an 'act-or-explain' basis	To Government (no 'act-or-explain' mechanism)

Source: MNB.

have appropriate instruments at its disposal. On the other hand, MNB is responsible for financial stability without any directly applicable macroprudential instruments in contrast to those countries where the central banks is primarily responsible for these types of problems.

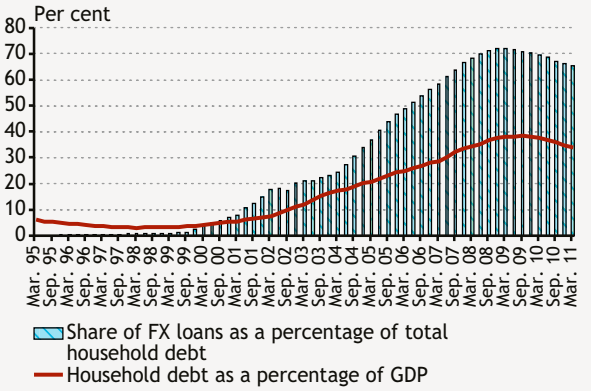
All of this seems to be particularly disadvantageous because the earlier Financial Stability Committee as a merely consultative forum did not prove suitable for preventing in time and in substance the spreading of foreign exchange denominated lending to households, which was the most important macroprudential failure of the period between 2004 and 2008 (see details below). In a paradoxical manner, with the decline in the transparency of the meetings of the Financial Stability Council, with the termination of the formalised powers of the Financial Stability Council to give proposals and with the remaining of the 'act-or-explain'-based proposal right[126] only at the MNB, formally only the MNB remained accountable for a timely raising of the issue of risk mitigating steps. The table below describes the main steps of the changes in the Hungarian macroprudential institutional system along the main elements.

Overall, spheres of responsibilities are not well-defined at present, so it is still uncertain which institution has statutory responsibility for the conduct of macroprudential policy and which institution considers it a core task during its activity. In addition, the allocation of assets is also problematic, as the HFSA has the only currently existing dedicated macroprudential instrument, i.e. the right to suspend products, services and activities for 90 days, whereas basically it is the MNB that has the task of exploring systemic risks. A further problem is that it is also not determined who is responsible for the macroprudential instruments that will be introduced as part of the single European regulation, such as the authority entitled to prescribe, calibrate and determine the timing of the counter-cyclical capital buffer.

Box 4-3
Underlying reasons for the recent failure of the Hungarian macroprudential policy – the spread of foreign exchange lending

From the early 2000s on, a rapid increase in lending to households, mainly in the form of foreign exchange loans, was observed. As a result of this process, three main systemic risks appeared: considerable indebtedness of households, exchange rate risk due to the foreign exchange loans and the maturity imbalance between assets and liabilities of the banking sector. Due to the financial crisis, the risks stemming from the foreign exchange lending to households started to materialise in the autumn of 2008. Household indebtedness added to the external imbalance existing in foreign exchange, and thus increased the vulnerability of the country. Following the bankruptcy of the Lehman Brothers in September 2008, the declining willingness to take risks simultaneously led to the weakening of the forint and a considerable increase in country risk premiums. In order to mitigate financing difficulties, Hungary was compelled to borrow from the IMF. Through the considerable and permanent depreciation as well as shifting banks' higher funding costs into the lending rates, the significant increase in the instalments of households' foreign exchange loans and the shock to household income greatly added to non-performance, thus making the financial situation of the banking sector worse. Due to the narrowing of the opportunities of funding from abroad and the fluctuating liquidity of the foreign exchange swap market, the maturity imbalance existing in the banking system is a source of significant liquidity and funding risks. All this also made the room for manoeuvre of monetary policy considerably narrower.

Chart 4-1
Changes in loans to households



Source: MNB.

Starting from 2004, the MNB called attention to the risks of foreign exchange lending both publicly[127] and in the Financial Stability Committee, which worked as an informal coordination forum of regulatory authorities. As shown in the table below, the regulatory

[126] Article 60/A of Act LVIII of 2001 on the Magyar Nemzeti Bank.
[127] Issues of the *Report on Financial Stability,* 2004–2010.

failure is attributable to two main reasons. Firstly, the incentives of authorities that were entitled to intervene were not strong enough. In addition to the deficiencies of the individual institutional incentives, this is partly attributable to the fact that the risks of foreign exchange lending materialised only in the case of extreme market turmoil that were not expected by decision-makers ('tail event'). Secondly, due to the European integration of the financial system and to the high profitability, no instrument or international enforcement mechanism was available that would have clearly been suitable for the efficient controlling of risks.

In the autumn of 2009, the MNB launched a regulatory initiative to limit lending in foreign currencies.[128] The 361/2009. (XII. 30.) Government Decree prepared on the basis of the proposals and known as 'prudent lending' represented effective limitation on issuing new loans from March and June 2010 on. Finally, the Government banned foreign-exchange based new housing loans practically completely in August 2010. By then, however, the total amount of foreign-exchange mortgage loans outstanding exceeded HUF 5,000 billion (most of them were Swiss franc based), with an average 15–17 years to maturity.

Accordingly, it can be concluded that the Hungarian macroprudential institutional system was not able to manage the accumulating risks in time. As a result of the protraction of the financial and economic crisis, shocks pass through into Hungary in the form of recurring impulses through the foreign exchange exposure.

Table 4-4
Factors of efficient macroprudential intervention in connection with the risks of foreign exchange lending

Incentives	• Expanding consumption based on foreign exchange loans supported economic growth. • At the level of individual loans, due to the existence of collateral, regulators considered the activity a low-risk one. • According to targeted supervisory inspection, lending by banks was prudent. • Due to the ownership background of banking groups, circumventing a possible domestic regulatory step was highly probable. • Due to the high profitability, the applicability of capital requirement based rules was limited. • Due to the lender of last resort function, the MNB was concerned that increasing credit risks stemming from a possible exchange rate depreciation might turn into liquidity risk.
Tools	• Administrative (prohibitive) instruments. • Tightening of prudential regulations. • Means of supervisory communication. • Promotion of financial culture and moral suasion. • Fiscal steps (tax policy, differentiation of support policy.
Institutional setup	• The Financial Stability Committee discusses the problem and regulatory proposals as a consultative forum. It does not have decision-making powers. • Except public communication, the MNB cannot take independent prudential steps. • The HFSA and parent bank supervision have the possibility of individual institution-level bilateral intervention (Pillar 2 – SREP). • Regulatory instrument with the Ministry of Finance.

Source: MNB.

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ANALYSIS OF THE CONVERGENCE PROCESS

October 2011

Print: D-Plus

H–1037 Budapest, Csillaghegyi út 19–21.