

Ten years of monetary union in retrospect

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Introduction

Ten years ago, on 1 January 1999, stage three of Economic and Monetary Union (EMU) was launched in Europe. Initially, eleven countries joined, namely Belgium, the Netherlands, Luxembourg, Germany, France, Austria, Spain, Italy, Portugal, Ireland and Finland. On that date they successfully introduced a new common currency: the euro. A new central bank was also set up, the ECB, which together with the national central banks of the participating countries forms the Eurosystem. Together they took on the task of formulating and implementing the single monetary policy of the euro area, the main objective of which, according to the Maastricht Treaty, is to maintain price stability. Since then, Greece, Slovenia, Malta and Cyprus have also become members of the monetary union, and Slovakia will join on 1 January 2009. From that date, around 330 million Europeans will use one and the same currency.

The expectations were extremely ambitious. The single monetary policy was to bring price stability for the countries which adopted the euro, whereas in previous decades those countries had encountered high inflation and unstable exchange rates, albeit in varying degrees. Fiscal policy was also aimed at macroeconomic stability: the principles had been laid down in 1997 in the Stability and Growth Pact. The introduction of the euro would also encourage the process of economic integration in Europe and in some ways it would be the culmination of the single market established in 1993. The lower transaction costs and the elimination of uncertainty over exchange

rates would help to promote trade between the Member States. Combined with greater price transparency expected to result from the single currency, that would also lead to increased competition on the product markets, making them more efficient. The euro would also play a key role in the integration of the financial markets, which had remained highly fragmented precisely because of the existence of separate national currencies. Finally, the euro could be the catalyst for structural reforms on the labour and product markets, particularly since the efficiency of those markets is a major factor in the smooth operation of monetary union. In the end, these various elements were to promote economic growth, employment and the standard of living in Europe, as well as increasing convergence and cohesion between the Member States.

But not everyone endorsed these ambitious – perhaps even over-ambitious – expectations. There were also many eurosceptics, who argued that the countries adopting the euro failed, or struggled, to satisfy the criteria for an optimum currency union (Mundell, 1961). Under those criteria, it is not in fact sufficient for countries to be closely integrated with one another in order to benefit from a monetary union. There must also be adequate adjustment mechanisms, such as efficient markets, a sufficiently mobile labour force or the existence of transfers between countries, enabling them to absorb the repercussions of asymmetric shocks. In the opinion of the eurosceptics, the convergence criteria laid down by the Maastricht Treaty were too one-sided in their focus on nominal convergence (low inflation, participation in the EMS without devaluation and low long-term interest rates) and sound

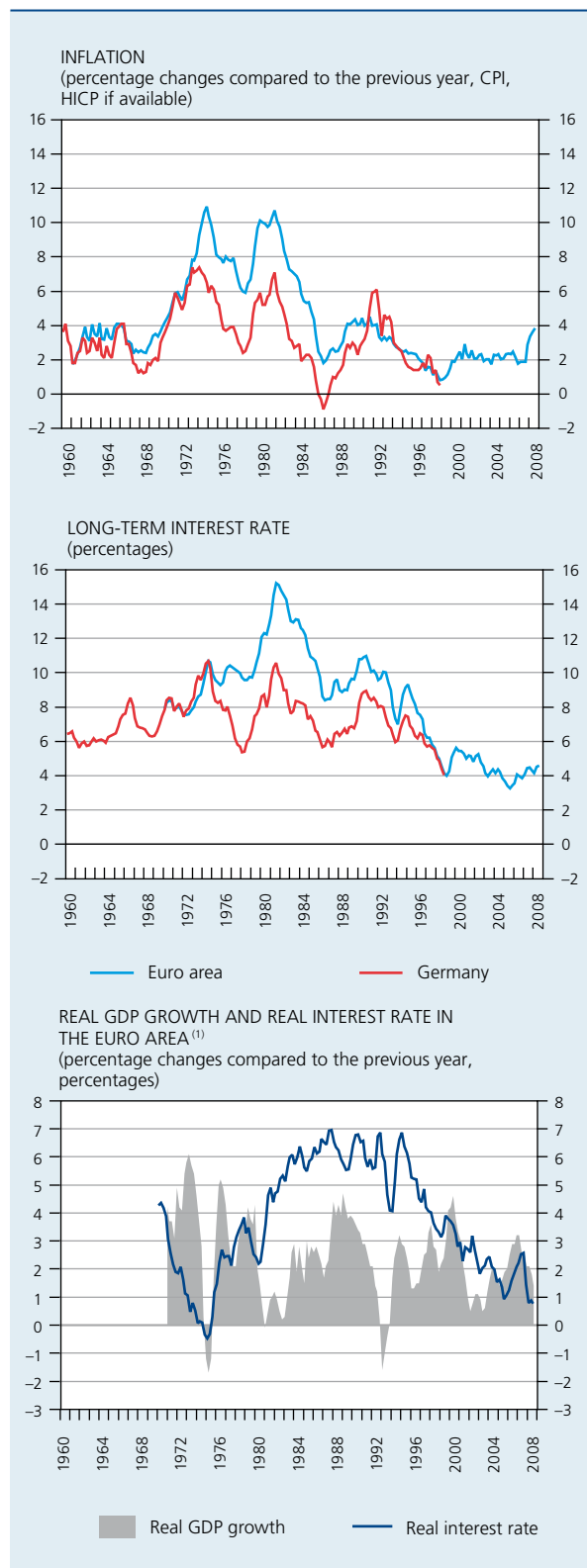
public finances (the limits of 3 and 60 p.c. respectively for the budget deficit and the public debt, which will be discussed below). According to these critics, the euro would inhibit the economic development of the countries which adopted it, and would ultimately lead to higher unemployment⁽¹⁾. According to some of them, the euro was therefore destined to be short-lived. Partly on the basis of similar arguments, several EU Member States at that time (Denmark, the United Kingdom and Sweden) decided not to introduce the euro, even though some of them satisfied the criteria for joining. The United Kingdom and Denmark still have the option of not adopting the euro, while all the new Member States which joined the EU at the time of its 2005 enlargement are expected to introduce the single currency sooner or later.

This article looks back over ten years of monetary union and examines to what extent the introduction of the euro fulfilled the most ambitious expectations. It takes a brief look at several facets: for an exhaustive and detailed account, the article refers to in-depth studies conducted recently on the occasion of the tenth anniversary of the euro⁽²⁾. The rest of the article is structured as follows. Sections 1 and 2 deal respectively with monetary and fiscal policy. Section 3 assesses the euro's international role, and in particular whether it has genuinely helped to strengthen trade, price convergence and financial integration. Section 4 considers developments concerning economic activity, employment and the standard of living in the euro area. Section 5 addresses the problem of the differences between countries and analyses the operation of the adjustment mechanisms in the monetary union. Finally, section 6 lists a number of challenges for the future.

1. Monetary policy: low inflation and success in anchoring inflation expectations

The first ten years of monetary union featured a historically very high level of price stability in the euro area. Between January 1999 and October 2008, inflation in the euro averaged 2.2 p.c. per annum, well below the levels seen in the preceding four decades. Inflation had been considerably higher, especially in the 1970s and 1980s. This is a good result, to say the least, even compared to the figures for Germany, which was the country with the greatest monetary stability during the four decades prior to monetary union.

CHART 1 INFLATION AND LONG-TERM INTEREST RATES IN GERMANY AND IN THE EURO AREA



Sources: OECD, Thomson Financial Datastream.

(1) Difference between long-term nominal interest rate and annual inflation rate.

(1) Cf. for example the article by Paul Krugman published in *The Economist*, 31 August 1996.

(2) Cf. for example ECB (2008a) and EC (2008).

By providing price stability, monetary policy helps to create the conditions for sustainable economic growth. Indeed, price stability ensures that not only long-term nominal interest rates but also real interest rates are low. If inflation expectations are firmly anchored, monetary policy can in fact be less restrictive, *ceteris paribus*, than if it needs to regain control over inflation expectations. If uncertainty over future inflation has dissipated, investors are also more readily disposed to lend financial resources for longer periods, and that reduces the inflation risk premium contained in long-term interest rates. In the 1970s and 1980s the opposite had happened: rising inflation had exerted a disproportionate influence on long-term interest rates, so that they increased in real terms: on average, the increase was greater in the countries which eventually formed the euro area than in Germany, precisely because German monetary policy was more credible. Moreover, it was not until 1998 that long-term interest rates in the euro area converged almost entirely towards German rates, whereas inflation itself had already previously fallen to a level comparable to that in Germany. Therefore, since 1999, real interest rates in the euro area, in accordance with what growth models suggest, have again tended to hover in the region of real growth, as had been the case in the early 1970s.

Price stability also benefits the real economy in that it reduces the resources necessary for adjusting prices and wages. This price adjustment process in fact entails administrative expenses connected not only with the actual adjustment but also with the collection of all the information essential for calculating the new prices. Owing to these costs, the process is not continuous but tends to display some inertia, and is often unsynchronised, so that inflation also leads in the short term to changes in prices and wages in real terms⁽¹⁾. The signals given by more fundamental changes in relative prices are therefore blurred, distorting the allocation of resources. Inflation may also lead to the application of simple price and wage indexation rules, since those rules can attenuate, at least in part, the frictions mentioned above. Nonetheless, being excessively rudimentary such indexation rules have the disadvantage of being themselves a source of price and wage distortion in some circumstances, and hence a source of macroeconomic instability. In principle, price stability makes the use of such mechanisms less attractive.

(1) The inertia and unsynchronised character of price adjustments in the euro area was demonstrated, in particular, by the research findings of the Eurosystem's Inflation Persistence Network (IPN), summarised in regard to price setting by Álvarez et al (2006) and by Dhyne et al. (2006).

Box 1 – The single monetary policy during the financial crisis

This box describes how the single monetary policy reacted to the challenges presented by the banking crisis both in supplying the money market with liquidity and in determining the appropriate monetary policy stance. More particularly, it shows that without the introduction of the euro even a fairly symmetrical shock such as the financial crisis would have had a more divergent impact in the various Member States on variables closely linked to monetary policy, such as money market liquidity, interest rates and exchange rates. Without the euro, the banking crisis would therefore have been more difficult to manage and would have caused greater macroeconomic volatility in the various Member States than it has at present.

Since the financial turbulence erupted in August 2007, the collapse of confidence between commercial banks has hampered the smooth operation of the interbank market. Banks with surplus liquidity are no longer prepared to lend to those facing a liquidity deficit. As the tension mounted, the Eurosystem was therefore forced to adapt the system of liquidity provision to banks and increasingly assume the role of intermediation normally performed by the interbank market. Initially, it was sufficient to be flexible in applying the existent principles of liquidity provision in euro. At the beginning of the reserve maintenance periods, in particular, a policy of abundant allotment was therefore pursued in the weekly main refinancing operations, more fine-tuning operations were conducted according to market conditions, and the average refinancing term was extended⁽¹⁾.

As the crisis grew worse in September and October 2008, the Eurosystem did more to perform this role of intermediary: partly by supplying even more liquidity to meet the banks' growing demand for reserves, and partly

(1) For more details on this subject, see Aucremanne et al. (2007) and NBB (2008).



by accepting more deposits from the banks. To that end, on 8 October 2008 the ECB Governing Council decided that the weekly main refinancing operations would be conducted at a fixed rate, whereas the central key rate had hitherto served as the minimum bid rate, and that the bids would be fully allotted at that rate. The corridor formed by the rates on the standing facilities was also reduced from 200 to 100 basis points. These measures reduce both the uncertainty for the banks and the intermediation costs, and will remain in force for as long as necessary, and in any case at least until the end of the first reserve maintenance period in 2009. On 15 October 2008 it was also decided to apply the same fixed rate, namely the rate of the main refinancing operations, and to continue to fully allot the bids until the end of the first quarter of 2009 in the longer term refinancing operations (i.e. 1 month, 3 month and 6 month), and to extend considerably the list of eligible assets for use as collateral in the Eurosystem credit operations.

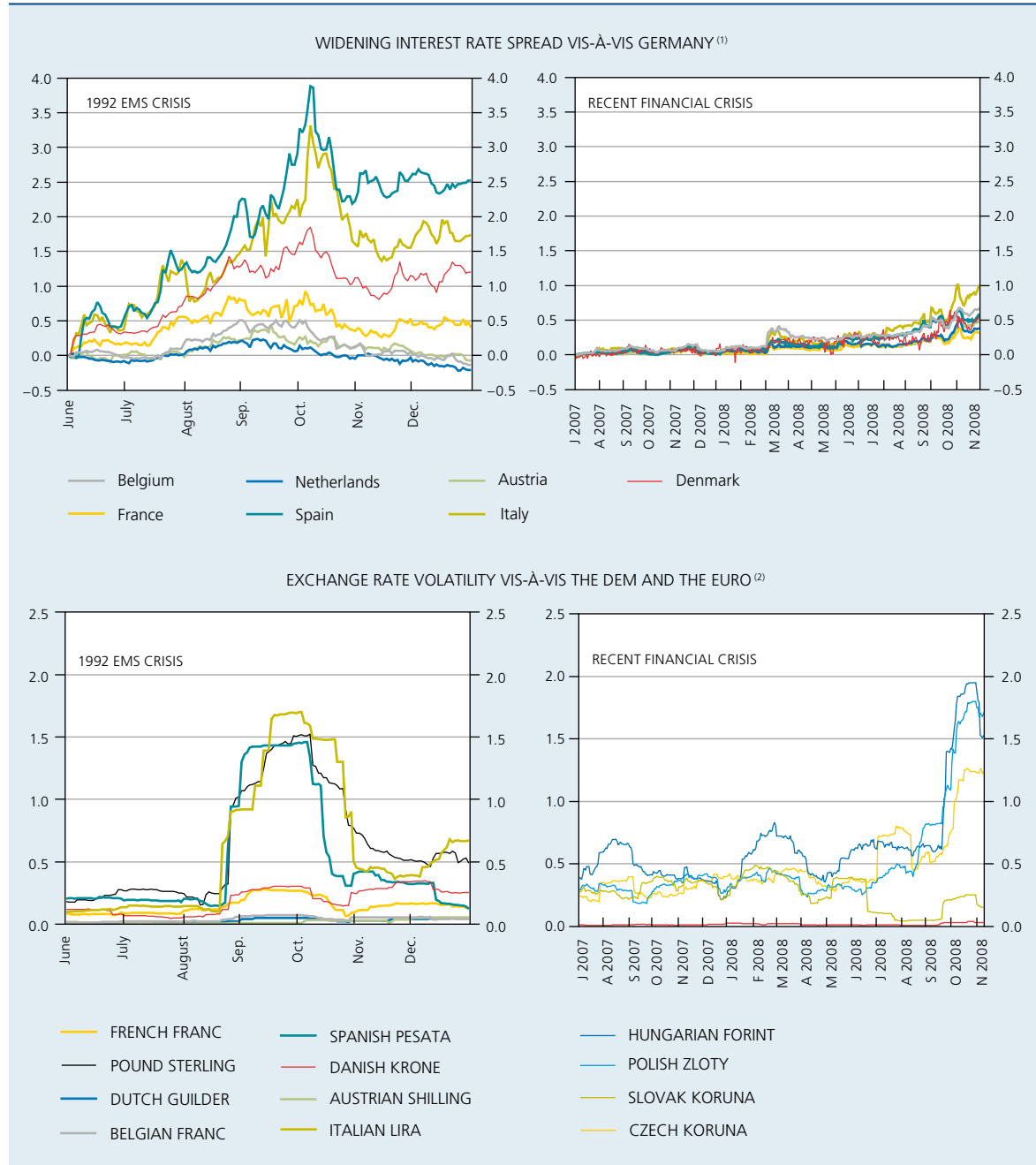
In addition, as part of a coordinated move by five central banks, liquidity in currencies other than the euro was granted against collateral classed as eligible assets by the Eurosystem. That had already been done in the case of the US dollar since 12 December 2007. Meanwhile, both the volume and the maturity of loans granted in US dollar have increased. Since 13 October 2008, these injections of liquidity have also been effected at a fixed rate and the bids have been met in full. Since 20 October 2008, the Eurosystem has also supplied liquidity in Swiss franc. Finally, a number of central banks in the Eurosystem, including the National Bank of Belgium, supplied emergency liquidity assistance to certain banks in both euro and US dollar.

Regarding the determination of the monetary policy stance, a distinction should also be made between the initial phase of the financial turbulence and the worsening of the crisis in September and October 2008. At first, the upside risks to price stability caused by the rising cost of commodities, the risk of second-round effects and the derailment of inflation expectations predominated, especially since at that time there was little sign that the financial turbulence would have a major impact on the real economy. That situation prompted the ECB Governing Council to raise its key rate by 25 basis points to 4.25 p.c. on 3 July 2008. When the crisis deepened in September 2008 it became clear that the financial turbulence would have severe repercussions on the real economy. The upside risks to price stability therefore began to subside, partly as a result of the slump in commodity prices but also because the economic prospects for the euro area were rapidly deteriorating. At the same time, inflation expectations were also revised downwards. In this context, the key rate was cut on 8 October and 6 November, by 50 basis points on each occasion. It should also be noted that the 8 October reduction in the key rate was a joint move coordinated with other central banks. On 4 December, the ECB Governing Council decided to cut its key rate by a further 75 basis points.

By acting so firmly and – in contrast to what would have happened before 1999 – so uniformly for all euro area banks, the Eurosystem effectively limited the direct effects of the banking crisis and avoided worse. In addition, the easing of monetary policy in October and November applies to all euro area Member States, implying that everywhere the crisis is prevented from spreading to the real economy. In the past, the countries where the credibility of monetary policy was weakest had always come under greater pressure in the event of a severe deterioration in economic and/or financial conditions. That was even the case where, in principle, a symmetrical effect would seem more probable. Thus, when the German mark appreciated against the US dollar, that always exerted downward pressure on the bilateral exchange rates of other EMS participants in relation to the German mark and upward pressure on the yield spread with respect to Germany. At the time of the EMS crisis in 1992, when the German mark had also appreciated strongly against the US dollar, there had been very significant movements of this type, particularly in the case of Spain and Italy. Conversely, the Netherlands and Austria, whose monetary policy had in practice long been linked to that of Germany, were hardly affected, and the same applied to Belgium and France. During the summer of 1993, the EMS again came under pressure, with consequences for the Belgian franc and the French franc. However, the chart depicts the 1992 EMS crisis because that provides a particularly good illustration, being larger in scale than the 1993 crisis.



LONG-TERM INTEREST RATES AND EXCHANGE RATES DURING PERIODS OF FINANCIAL TURBULENCE



Sources : Thomson Financial Datastream, NBB.

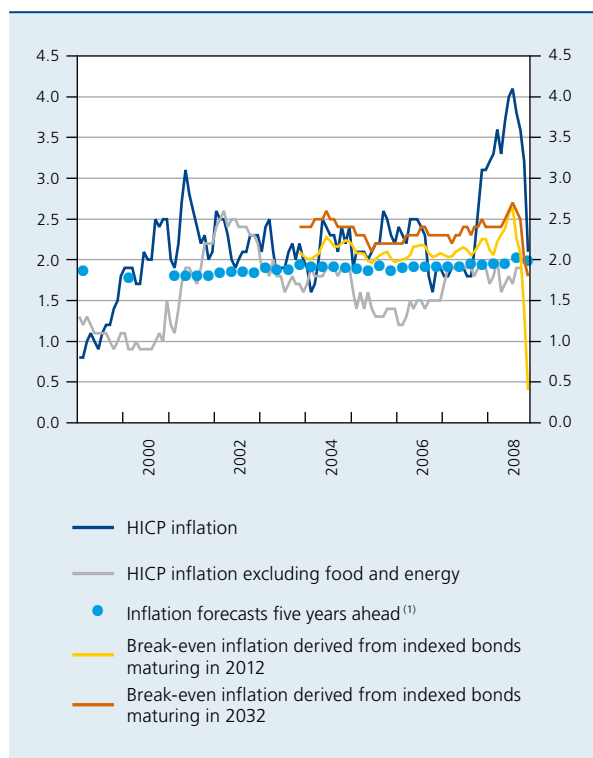
(1) Change since, respectively, 1 June 1992 and 1 July 2007 in the spread between the benchmark government bond yield of the various countries considered and the yield on the German Bund ; percentage points.

(2) Standard deviation of day-to-day exchange rate fluctuations over a thirty-day period.

Given the existence of the single currency, neither the euro's strong appreciation - until recently - against the US dollar nor the credit crisis have affected the bilateral exchange rates of the various countries in the monetary union. However, the recent worsening of the financial crisis has again increased the spread in long-term interest rates in relation to Germany. Yet in view of the size of the shock which the financial system now faces, that increase can be called fairly small, e.g. in comparison with the 1992 EMS crisis. Of course, that is due to the disappearance of the exchange rate premium and the positive effect of monetary union on the default risk premium, so that the current long-term interest rate spreads are attributable largely to differences in liquidity premiums. Without the euro, it is also very likely that the pressure would have affected not only high inflation countries but also countries – often small Member States – with a relatively large financial sector, such as the Netherlands, Ireland, Belgium and Luxembourg. Conversely, for the new EU Member States, the recent worsening of the credit crisis has had a considerable impact on exchange rates and on the long-term interest rate spread in relation to the euro. This situation is relatively similar to what used to happen to countries in the euro area. Thus, the Hungarian forint, the Polish zloty and the Czech koruna recently became far more volatile, one possible reason being, of course, the underlying fundamentals of those economies. Finally, it seems that in view of Slovakia's imminent accession to the euro area, the Slovak koruna was barely affected.

This implies that the existence of the monetary union prevented the effects of the credit crisis from being further accentuated by the additional tension which that crisis would have caused in the various Member States if the euro had not been introduced.

CHART 2 INFLATION AND INFLATION EXPECTATIONS IN THE EURO AREA
(percentage changes compared to the previous year)



Sources: ECB, EC, Thomson Financial Datastream.
(1) ECB Survey of Professional Forecasters.

It should also be pointed out that, during the period of monetary union, inflation has on average slightly exceeded the upper limit of 2 p.c. in the definition of price stability. In fact, the ECB Governing Council defined price stability as a rise in the HICP of the euro area of less than but close to 2 p.c. in the medium term. Such an upward deviation was recorded mainly in 2008, owing to the strong surge in the prices of crude oil and other commodities such as food. However, in recent months inflation has subsided, dropping to 2.1 p.c. in November 2008. Since such price increases, which are largely of external origin, are difficult to foresee and, moreover, have an almost immediate impact on inflation, it is difficult for monetary policy to counteract them. If it nevertheless attempted to do so, that would cause unwelcome variability in the monetary policy instrument, namely short-term interest rates, and in domestic activity. It is precisely in order to permit a more gradual response by monetary policy that the definition of price stability is explicitly geared to the medium term. This makes it possible to accommodate the first-round effects of fluctuations in commodity prices, at least so long as the medium-term outlook for price stability is unimpaired. Inflation also exceeded the upper limit of 2 p.c. on other occasions as a result of large increases in oil prices, or when adverse weather conditions or livestock diseases had a serious impact on food prices, or when increases in indirect taxation or essentially administrative price rises caused inflation to accelerate.

In this connection, one could point out that the HICP excluding energy and food has remained below 2 p.c. on average. However, this alternative inflation yardstick takes asymmetric account of the effects of globalisation. Thus, it disregards the upward impetus of the energy and food components of the HICP while incorporating the downward pressure exerted by cheaper imports from low-cost countries. The fact that the globalisation process is accompanied by two effects working in opposite directions indicates that it mainly causes changes in relative prices, rather than determining the fundamental trend in inflation. Of course, such relative price changes may have a short-term effect on inflation, and the apparent impact may vary over time, depending on which of the two forces is dominant at a particular moment. While monetary policy may accommodate such first round effects, it does shape the subsequent pattern of inflation by adjusting demand to the supply in the economy and by anchoring inflation expectations at a level compatible with price stability.

The ECB Governing Council has always stressed the forward-looking nature of monetary policy and the importance of firmly anchored inflation expectations. Whenever there was a danger of inflation expectations being derailed, as in the first half of 2008, the Governing Council was extra vigilant and, when it saw the need, also made use of the monetary policy instrument to anchor those expectations. As a result, inflation expectations have been remarkably stable in the past ten years, both on the basis of expectations measured by surveys of professional forecasters or those derived from financial instruments, even though inflation itself exceeded the upper limit of 2 p.c.

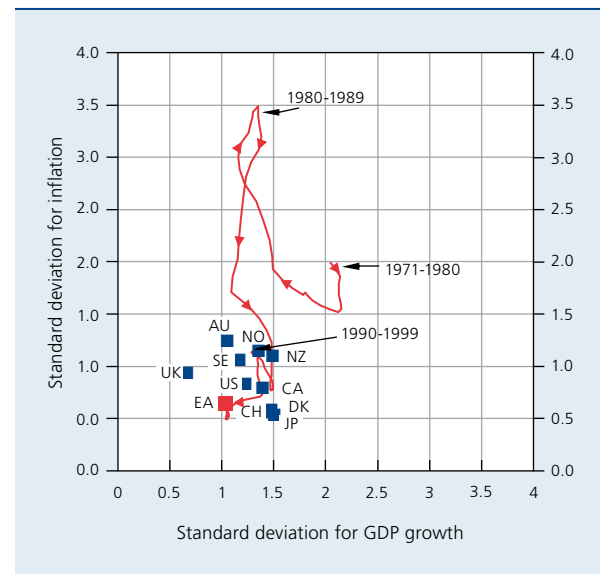
It is equally important to stabilise inflation expectations when there are signs of an excessive fall. In May 2003, the Governing Council clarified the definition of price stability by adding “less than *but close to* 2 p.c.”, thus introducing a safety margin, particularly in case of a risk of deflation. More recently, the attenuation of the upside risks to price stability following the strong contraction in demand triggered by the credit crisis caused the ECB Governing Council to cut its key rate on 8 October and 6 November 2008, by 50 basis points on each occasion. Furthermore, the key rate was slashed again by 75 basis points on 4 December, bringing it to 2.50 p.c.

(1) The clear preference among investors for liquid assets has depressed nominal bond yields whereas it has driven up the yields on indexed bonds. On balance, the divergent movement in liquidity premiums on each of these segments drives down break-even inflation, which is independent of actual inflation expectations. Under normal circumstances, the impact of liquidity premiums on break-even inflation is small and is dominated by an upward effect attributable to the inflation risk premium. The existence of such a positive premium, which may also vary over time, implies that price stability is not immediately threatened when break-even inflation edges above 2 p.c. That premium also explains why break-even inflation tends to be higher in the long term than in the short term.

CHART 3

MACROECONOMIC VOLATILITY

(standard deviation in percentage points for the period 1998-2007 and for a series of moving 40-quarter periods for the euro area)



Sources: Fagan, Henry and Mestre (2005); OECD; Thomson Financial Datastream.

(cf. also box 1). Declining inflation expectations are doubtless a factor here. Yet it must be said that, in the present circumstances, the fall in break-even inflation derived from indexed bonds considerably overestimates the actual decline in inflation expectations⁽¹⁾.

One might ask whether the high level of price stability was achieved at the cost of major fluctuations in economic activity. That does not appear to have been the case, as the standard deviation of both inflation and real growth was very low during the period 1998-2007, pointing to a widespread decline in macroeconomic volatility. That volatility was noticeably greater in the euro area in the 1970s, 1980s and 1990s than in the years of EMU. In theory, such a decline in volatility may be due to more effective conduct of monetary policy, lower variance in the shocks affecting the economy, or a combination of the two. These two elements cause an inward shift in the ‘efficiency frontier’, i.e. the curve which – given the size of the shocks and the structure of the economy – represents the optimum macroeconomic performance. It is clear that the curve shifts inwards in case of minor shocks. In switching from a totally discretionary policy, where the monetary authority always retains a free hand, to a policy whereby the monetary authority is required to respect its set targets, monetary policy gains better control of inflation expectations. The latter thus become an additional stabilising factor, which is totally non-existent under a

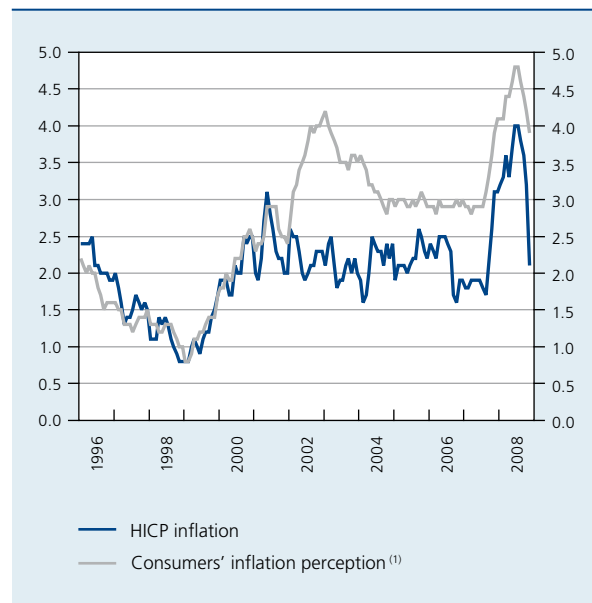
purely discretionary policy (cf. for example Clarida, Gali and Gertler, 1999).

The fact that monetary policy in the euro area is based on a clear strategy, namely a quantitative definition of price stability and an analytical framework in which the risks to price stability are systematically subjected to economic and monetary analysis, works in the same direction. Such a framework means that the monetary policy stance can be revised according to the shocks affecting the economy, but it also means that the revised stance must always conform to the set strategy. In addition, it implies that the transparency and communication in regard to the strategy pursued and the resulting Eurosystem decisions are vital. That is not only because it is appropriate in a democracy for an independent institution to be accountable. By steering expectations, transparency and communication also promote the effectiveness of monetary policy. It is therefore no surprise that the Governing Council decisions have always been explained in detail, which has in turn helped the financial markets to anticipate those decisions better.

The fact that a similar decline in macroeconomic volatility has been seen in other advanced economies may indicate that monetary policy is not necessarily the source of this phenomenon. Nonetheless, that does not entirely call into question the role of monetary policy since the conduct of monetary policy has probably changed in those countries, too (cf. for example Ahmed, Levin and Wilson (2004) on sources of macroeconomic stability in the US). Thus, a number of countries have introduced a strategy of inflation targeting, which also imposes a clear objective for the central banks. Moreover, between 1998 and 2007 the macroeconomic situation was actually slightly more stable in the euro area than in most other economies. The shocks accompanying the turbulence currently hitting the financial markets are an important test for monetary policy, particularly in regard to its ability to ensure macroeconomic stability in less favourable circumstances.

There is a serious downside to the euro's success in regard to price stability. Since the banknotes and coins were introduced in January 2002, the euro has often been associated with higher prices, and perceived inflation as measured by the EC's consumer survey has deviated substantially from actual inflation. It is not that the switch to the euro had no effect in pushing up prices, but all the studies on the subject show that those price rises were confined to certain sectors and that, ultimately, the effect on the general price level was relatively small since, according to the European statistical institute (Eurostat, 2003), it is most likely between 0.12 and 0.29 percentage points. Such a deviation between inflation and inflation

CHART 4 INFLATION IN THE EURO AREA: REALITY AND PERCEPTION
(percentage changes compared to the previous year)



Source: EC.

(1) Balance of replies to the EC survey, converted to an inflation indicator comparable to the HICP according to the standardisation procedure described in Aucremanne, Collin and Stragier (2007).

perceptions was not found at the time in the EU countries which had not adopted the euro, namely Denmark, the United Kingdom and Sweden. Moreover, this perception gap has proved very persistent in the euro area, but since mid 2007 perceived inflation has again tended to move in line with actual inflation. The surge in inflation recorded in the second half of 2007 and the first half of 2008 did not in fact have any disproportionate impact on perceived inflation, and the recent fall in inflation is also faithfully reflected. Finally, there are few signs that these inflation distortions have had any significant effect on private consumption, wage setting or inflation expectations which, as mentioned earlier, have remained firmly anchored since January 2002.

2. Fiscal policy

Sound public finances are one of the conditions required for price stability and sustainable economic growth. On that basis, agreements have been concluded at EU level in order to guarantee sound public finances.

The Treaty establishing the European Community included reference values for the budget balance and the public debt. They were clarified and quantified by the Maastricht

Treaty, ratified in 1992. In principle, the budget deficit must not exceed 3 p.c. of GDP while the public debt must not exceed 60 p.c. of GDP, except in cases where the debt ratio is falling sufficiently to approach that reference value at a satisfactory pace. Only Member States meeting these criteria were allowed to join the monetary union.

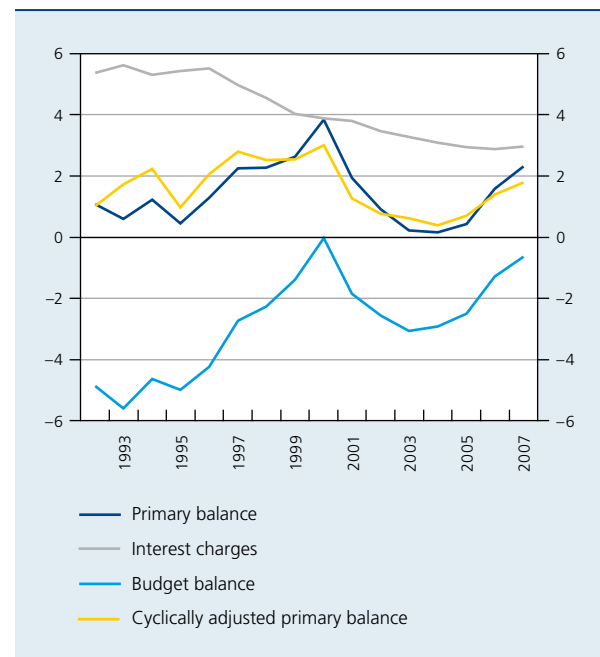
Under the excessive public deficit procedure, the Treaty also introduced a mechanism for correcting deviations from these reference values, to ensure the continuation of budget discipline after the monetary union was formed. Rules on fiscal discipline and the accompanying preventive and corrective procedures were supplemented and clarified by the Stability and Growth Pact adopted in 1997. Thus, Member States were to endeavour to achieve budgets which were more or less in balance or showing a small surplus in the medium term. Since the reform of the Stability and Growth Pact in 2005, there have been different national medium-term budget targets to take account of the diversity of situations in the Member States. Such fiscal positions should enable the Member States to accumulate margins to cope with normal fluctuations in business activity via the operation of the automatic stabilisers.

2.1. Budgetary developments before and during Stage 3 of EMU

The budget balance and public debt criteria which Member States must respect in order to qualify for membership of the monetary union have undeniably helped to improve the situation of public finances. That improvement was evidently achieved mainly in the run-up to EMU Stage 3. During that preparatory phase, the candidate countries had to make a substantial effort to consolidate their finances in order to satisfy the set criteria. For the Member States which joined the monetary union in 1999, the convergence criteria were assessed on the basis of the 1997 figures.

In the early 1990s, almost all the eleven Member States forming part of the first wave of countries joining EMU had a budget deficit in excess of the reference value of 3 p.c. of GDP, whereas in 1997 that was no longer the case in any of those countries. In the years which followed the launch of the euro, the budget position of the euro area initially continued to improve, and a balanced budget was recorded in 2000. That was achieved thanks to the favourable economic situation at the end of the previous decade and the exceptionally large proceeds generated by the sale of UMTS licences in various countries (0.6 p.c. of GDP in 2000, for the euro area). During the ensuing period of weak economic activity, the budget balance

CHART 5 BUDGETARY DEVELOPMENTS IN THE EURO AREA ⁽¹⁾
BEFORE AND DURING EMU STAGE 3
(percentages of GDP)



Source: EC.

(1) Before 1995 excluding Cyprus, Spain, Malta and Slovenia; before 1998 excluding Cyprus and Malta; from 1998 on the basis of the 15 Member States currently belonging to the euro area.

deteriorated to a deficit of 3 p.c. of GDP in 2003. There followed a new period of consolidation during which the budget deficit was gradually reduced, falling to 0.6 p.c. of GDP in 2007.

The improvement in the euro area's budget balance since the early 1990s is very largely attributable to the steady reduction in interest rates and the accompanying decline in interest charges. In the early 1990s, interest expenses still represented around 6 p.c. of GDP, whereas since 2005 they have stood at around 3 p.c. of GDP.

During the years preceding EMU Stage 3, the positive effect of the decline in interest expenses on public finances was considerably augmented by the strong growth of the primary balance. The cyclically adjusted primary balance of the euro area – the profile of which provides a good indicator of the fiscal policy stance – increased by 2.5 p.c. of GDP during the period 1992-1998. Thus, almost all countries belonging to the first wave of membership recorded an improvement. Failure to respect the Maastricht criteria would in fact have precluded them from joining the monetary union. The efforts to consolidate public finances were essentially based on measures designed to boost revenues.

Since the launch of EMU Stage 3, fiscal policy has been eased considerably. In 1999 and 2000, the cyclically adjusted primary balance of the euro area continued to grow, but then followed a U-shape: the relaxation recorded in the period 2001-2004 gave way to renewed consolidation of fiscal policy. However, in 2007 the cyclically adjusted primary balance was still slightly below its 1999 level.

2.2 Application of the Stability and Growth Pact

Since the Stability and Growth Pact came into force ten years ago, a number of countries have achieved a budget position which is more or less in balance or in surplus. Conversely, other countries have failed to do so. Thus, the targets laid down in the annual stability programmes of those countries have not generally been met, notably because they were based on over-optimistic macroeconomic assumptions, but also owing to the lack of consolidation efforts, the necessary political will often being absent.

The result was that, during the cyclical slowdown at the beginning of this millennium and in the ensuing years, the budget deficits of many euro area countries (Germany, France, Greece, Italy, Netherlands and Portugal) persistently exceeded the budget target of 3 p.c. of GDP. The Ecofin Council therefore decided to initiate the excessive deficit procedure against those countries. It proved impossible to reach agreement on the practical application of the correction mechanism intended to encourage more budget discipline. The Stability and Growth pact – considered by some to be an excessively tight straitjacket – therefore came under criticism, so that it was reformed in 2005. This reform made the rules on budget discipline more flexible since the budgetary effort can be geared more closely to the general macroeconomic situation – but it also made them more complex and significantly expanded the scope for interpretation by the Ecofin Council.

During the years which followed the reform of the Stability and Growth Pact, all the Member States recording an excessive deficit succeeded in reducing their budget deficit below 3 p.c. of GDP. However, that improvement was achieved in an economic boom period. It was mainly public revenues that increased considerably – notably as a result of the collection of exceptional revenues. Some countries, however, made insufficient use of these “good years” to achieve structural improvements in their fiscal policy. Thus, many Member States which have not yet attained their medium-term budget target failed to respect their commitment under the reformed pact to achieve an annual improvement in their structural balance of 0.5 p.c. of GDP. Consequently, some of those

countries are still dangerously close to the budget limit of 3 p.c., which is restricting their room for manoeuvre and preventing the use of the “automatic stabilisers” in less favourable economic circumstances.

However, in the context of the current financial crisis it would be desirable to have such room for manoeuvre in the budget. In that connection, the Ecofin Council decided, on 7 October 2008, that the application of the Stability and Growth Pact should also reflect the current exceptional circumstances, namely those caused by the present crisis. Nevertheless, leaving aside the impact of the crisis, it is important that the Member States continue to aim at structurally sound public finances.

It cannot be said that the application of the Stability and Growth Pact has been entirely satisfactory in the past ten years. The original aim, namely that all Member States should achieve budget positions which were structurally in balance or in surplus, was not attained either by the euro area as a whole or by many of its member countries. The long-term sustainability of public finances has therefore still not been achieved, in view of the impact of population ageing.

2.3 Medium- and long-term fiscal challenges

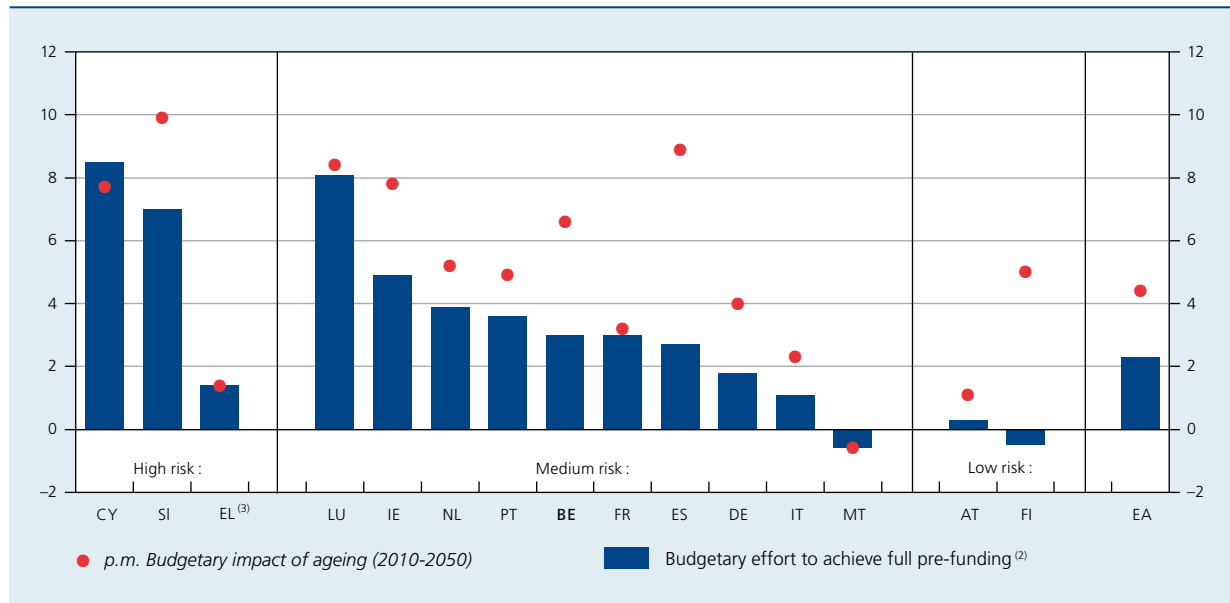
According to the latest estimates by the European Commission and the EU's Economic Policy Committee, as a result of demographic changes in the decades ahead, age-related public spending in 2050 is likely to be 4.4 p.c. of GDP above its 2010 level. In the context of ageing it is therefore important to ensure the sustainability of public finances.

The European Commission calculates a number of indicators to assess the sustainability of public finances. For instance, the S2 sustainability indicator measures the permanent adjustment to the primary balance necessary to bring it to a level where the intertemporal budgetary constraint⁽¹⁾ can be respected. In other words, if that adjustment to budgetary policy is made today, no further adjustments will be required at a later date when the full impact of the budgetary cost of ageing is felt. Where a budgetary effort of this type is made, the costs relating to population ageing are therefore fully pre-funded.

In 2007, according to the S2 indicator, the sustainability deficit came to 2.3 p.c. of GDP in the euro area, though this average masks substantial differences between Member States. The European Commission divided the EU

(1) The intertemporal budgetary constraint stipulates that the discounted value of future primary balances must correspond to the current value of the public debt.

CHART 6 SUSTAINABILITY OF PUBLIC FINANCES IN THE CONTEXT OF AGEING ⁽¹⁾
(percentages of GDP)



Source: EC.

(1) The risk category breakdown was proposed by the European Commission and confirmed by the Ecofin Council.

(2) On the basis of the S2 sustainability indicator, which measures the permanent adjustment to the primary balance necessary to bring it to a level where the intertemporal budgetary constraint can be respected without recourse to further adjustments at a later date (i.e. the public debt corresponds to the discounted value of the future primary balances).

(3) For Greece, the sustainability indicator is based on the budgetary cost of ageing excluding pensions and expenditures relating to the elderly, which implies that this indicator underestimates the sustainability deficit.

Member States into three risk categories (high, medium and low risk). This breakdown was confirmed by the Ecofin Council. It shows that Cyprus, Greece and Slovenia face the highest sustainability risk. Conversely, only two countries – Finland and Austria – have a low sustainability risk. The other euro area countries, including Belgium, present a medium sustainability risk.

In order to meet the challenge of population ageing, it is necessary to devise a coherent strategy. Achieving sound public finances, which means a steady reduction in the public debt, is crucial here. Increased participation in the labour market, higher productivity and the reform of the pension and health systems are also vital elements of this strategy.

3. The role of the euro as an international currency and a driver of economic integration

3.1 The international role of the euro

The Eurosystem does not directly encourage the international use of the euro, as it considers that use of the

euro beyond the borders of EMU should be the result of a market mechanism. Nevertheless, a report on the subject is produced annually (cf. for example ECB, 2008b). In fact, the international use of the euro can be regarded as an indicator of success and credibility, and it may also have implications for the economies of the euro area itself, in addition to the – relatively limited – impact of the seigniorage income (Bini Smaghi, 2008). Thus, monetary analysis should always take account of the euro's international role, as portfolio adjustments may blur the signals given by movements in monetary aggregates in regard to risks to price stability.

The latest report on the euro's international role highlights three key trends. First, since the creation of EMU, the euro has gained in importance on the international markets, though some stagnation has been evident in recent years. Thus, between 2001 and 2005, there was steady growth in the use of the euro for invoicing trade with countries outside the euro area. In 2006, the proportion of exports denominated in euro actually exceeded 50 p.c. for most countries, while for imports the situation was less clear-cut. In 2007, the euro represented around 25 p.c. of global foreign exchange reserves, against less than 20 p.c. in 1999, with a larger share in the reserves

of industrialised countries than developing countries. The share of the euro in the stock of international debt securities (i.e. debt securities issued in a currency other than that of the borrower) was around 32 p.c. in 2007, compared to only 20 p.c. in 1999. Secondly, the euro's international success is also based on euro area residents, since they own a large proportion of the assets issued outside the monetary union but denominated in euro. Finally, the euro's role is geographically concentrated around the euro area. Thus, in 2005 the euro accounted for some 57 p.c. of the foreign exchange reserves of countries bordering the euro area, a percentage in stark contrast to the global average mentioned above.

3.2 Trade integration and price convergence

The advent of the euro as a single currency significantly reduced the costs of cross-border trade in the monetary union. The euro eliminated the costs of converting national currencies and the costs of hedging exchange rate risks as exchange rate volatility and the associated uncertainty have disappeared. All other things being equal, the reduction in transaction costs associated with international trade has a positive effect on trade volumes. However, membership of a monetary union has a greater impact than one would expect from just those two factors, as illustrated by the groundbreaking article by Rose (2000). This author suggests that two countries belonging to a monetary union conduct up to three times as much trade as two countries which do not share a common currency. Although the effects which Rose estimated were considered rather large by subsequent studies, it is clear that the creation of a monetary union does indeed tend to boost the volume of trade within it. In fact, by joining a monetary union, each national authority enters into a long-term commitment which may encourage firms to focus more on the international market.

The many studies analysing the euro's impact on international trade present widely varying results, since they are based on very different data and econometric techniques. However, a consensus is emerging on the fact that the introduction of the euro has probably stimulated trade within EMU, by as much as 10 p.c. according to some estimates. According to Berger and Nitsch (2008), the advent of the euro did not have any significant impact on bilateral trade in the euro area, as trade integration in Europe is a gradual process which has been going on for several decades. Factors other than the simple introduction of the euro, such as the gradual liberalisation of the markets in goods and services in the single market, have also encouraged trade

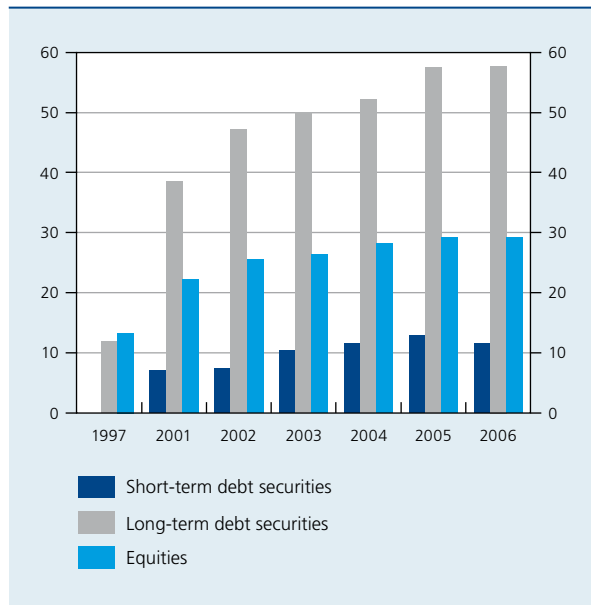
integration so that it is difficult to identify an unambiguous "euro" effect.

More recently, research (cf. for example Muùls and Pisu, 2007) has focused mainly on *how* the euro has influenced trade rather than *what percentage* of additional trade has been generated. The studies reveal that the euro has mainly helped to reduce the fixed costs of exporting, making exports worthwhile for smaller, less productive firms as well. This widens the range of products offered rather than their volume, thus enhancing welfare for consumers who appreciate a wider choice of products.

Increased trade integration has brought strong price convergence in the euro area, but according to most studies that was essentially achieved before the advent of the euro (cf. for example Rogers, 2007), namely around 1993. For both tradable and non-tradable goods, price dispersion is lower in the euro area than in the EU. Conversely, price dispersion in the euro area is fairly similar to that in the United States as regards tradable goods, while it is lower for non-tradable goods. The early price convergence indicates that, as in the case of trade integration, other developments such as the harmonisation of tax systems and smaller differences in the conduct of monetary policy in the future monetary union countries had already promoted price convergence even before the introduction of the euro.

3.3 Financial integration

The monetary union cannot be considered a lasting success until all the national financial markets have become highly integrated. While a highly integrated financial system helps to improve the efficiency of payments in the monetary union and stimulates competition in financial services, it also offers macroeconomic advantages. In fact, it permits the more effective and coherent transmission of the single monetary policy, so that the latter has fewer asymmetric effects in the EMU Member States. Moreover, monetary union residents are able to spread the risks more judiciously, and are able to allocate their savings surpluses and deficits more efficiently. In fact, in a monetary union with a high degree of financial integration, consumption patterns do not need to be adapted in response to idiosyncratic shocks, since the impact of those shocks can be neutralised via the international financial markets (risk sharing). Although in principle cross-border financial integration tends to enhance welfare and is therefore desirable, it also embodies a danger in that it amplifies the risks of financial contagion. The turbulence which has recently exposed a number of banks, and therefore indirectly many consumers, to the

CHART 7 CROSS-BORDER HOLDINGS OF SECURITIES IN THE EURO AREA ⁽¹⁾

Source: ECB.

(1) Percentage share of cross-border holdings of securities issued by euro area residents in the total portfolio.

problems facing foreign players or subsidiaries is a highly topical example.

The extent to which euro area nationals hold assets issued in other euro area countries has risen steadily since the creation of monetary union. This diversification applies particularly to long-term debt securities: in 2006, over half of the securities portfolio held by EMU nationals consisted of assets issued in other EMU Member States, whereas the figure was only 13 p.c. in 1997. Since the advent of monetary union, the geographical allocation of equities has also become more diversified, even though it is still far more limited than in the case of long-term debt securities. In contrast, in the case of short-term debt securities, investors are more inclined towards the national market.

The current state of financial integration in the euro area varies greatly according to the market segment concerned. Moreover, the markets most closely linked to monetary policy and endowed with the least fragmented infrastructure are more closely integrated.

The money market therefore exhibits a very high degree of integration, facilitated in particular by Eurosystem initiatives such as the establishment of an interbank payments settlement system (TARGET) and a system permitting the

cross-border use of collateral in the open market operations conducted by the Eurosystem (CCBM). The small interest rate differentials on the unsecured interbank market between Member States bear witness to the high degree of integration on this market, although there is still room for progress in other money market segments such as that for short-term debt securities. However, since the financial turbulence erupted in August 2007, spreads between money market rates in the various EMU member countries have steadily increased. Since the financial crisis deepened in September and October 2008, the interbank market has become more or less paralysed. That is due more to a change in risk perception on the part of the banks in each Member State, rather than a reversal of the process of money market integration. Moreover, similar developments have occurred on other money markets, including those of the United States and the United Kingdom.

Yield differentials on the government bonds of various Member States have widened significantly in recent months, owing to differences in liquidity premiums and, to a lesser extent, risk premiums. The widening of these spreads is not symptomatic of a setback in the process of integration, and the government bond market remains particularly highly integrated. Nevertheless, in the case of the corporate bond market the integration process is hampered by the coexistence of multiple clearing and settlement infrastructures. The absence of a common framework for the settlement of transactions is also felt on the equity market where, despite modest progress in the integration process, the existence of different clearing and settlement systems causes a significant increase in the price of cross-border transactions. The implementation of TARGET2-Securities, which aims to create a common platform for the settlement of transactions, is therefore essential for the continuing integration of the bond and equity markets.

In contrast to wholesale and capital market related banking, the retail market is highly fragmented. It is national players that dominate the local markets, so that competition is relatively limited and the interest rates charged vary greatly from one country to another even though the products concerned are comparable. Thus, the dispersion of interest rates on consumer credit has increased considerably since 2003, and the standard deviation is now around 135 basis points. While the dispersion is much smaller in the case of mortgage lending rates, the standard deviation in this case was still 30 basis points following some slight convergence since 2003. Part of the reason for these divergences is that the underlying products are not totally homogenous, but this also indicates that the retail market is still highly fragmented.

Although the creation of the Single Euro Payments Area (SEPA) in 2008 removed a major obstacle for banks engaged in cross-border activities, there are still other impediments along the road to retail market integration. In view of the differences in the current legislation – particularly regarding the mortgage lending market, which is especially important for retail banks – the banks find it more difficult to offer financial services beyond their national borders. Nonetheless, the present financial crisis may act as a catalyst, encouraging standardisation of the rules governing the retail market. For example, harmonisation of the system of deposit guarantees in EMU could remove this barrier to competition and thus stimulate international activities.

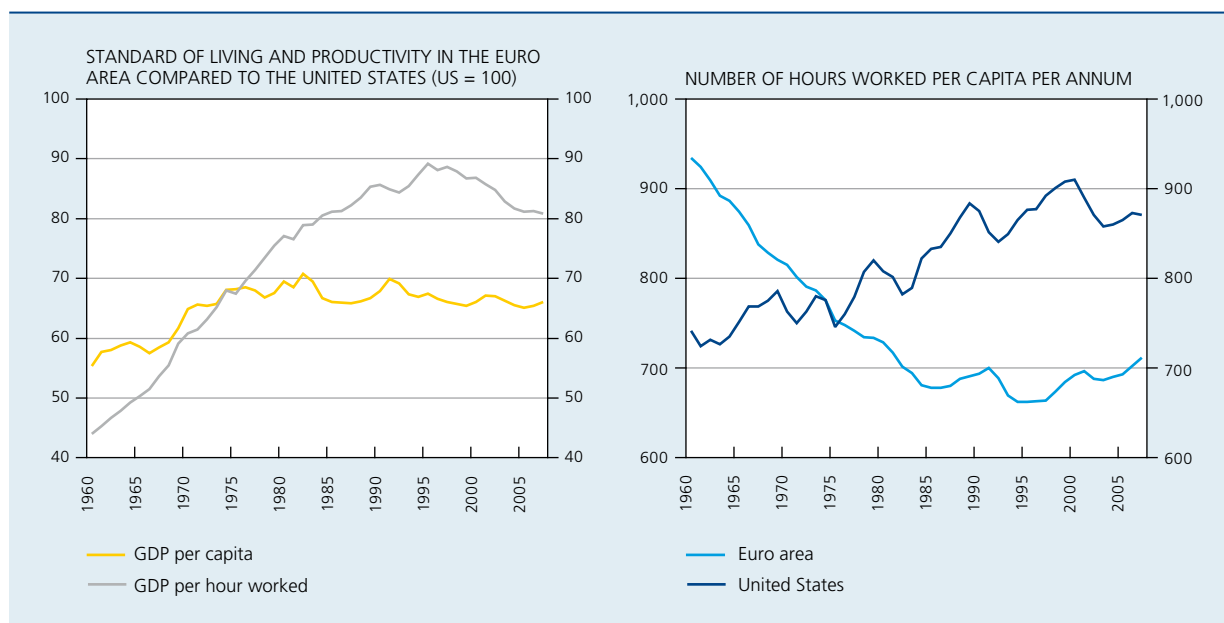
Furthermore, proximity to the customers plays a key role on the retail market, so that cross-border mergers and acquisitions are an important way of achieving a high degree of integration. Owing to differences in legislation, however, the banks have more difficulty in conducting such operations, and competition on the European market therefore remains limited. In addition, the national authorities sometimes display some reticence, generally tacit, regarding such operations. At the same time, the formation of cross-border banking groups requires harmonisation of banking sector supervision, preferably on a European scale, a need which is heightened further by the turbulence currently afflicting the financial markets.

4. Flagging potential growth curbs the rise in the standard of living

The standard of living in the euro area is significantly lower than in the United States or the Scandinavian countries. There has been little change in that situation since the start of monetary union. Thus, in the euro area GDP per capita adjusted for purchasing power variations is around 35 p.c. below that in the United States. In relation to the Scandinavian countries the difference is 20 p.c. However, the difference is far less marked in regard to productivity in terms of GDP per hour worked. A strong tendency to catch up in fact reduced the productivity gap in relation to the United States to just over 10 p.c. in 1995. However, since 1995 productivity has risen less fast in the euro area than in the United States.

The large differential in terms of GDP per capita and productivity in the euro area makes it clear that the number of hours worked per capita has been a key factor influencing the European standard of living. In the euro area, that number has in fact declined steadily, even though the trend was reversed in 1995. In contrast, in the United States the number of hours worked per capita had continued to rise until recently. This difference could indicate a greater structural preference for leisure in Europe (Blanchard, 2004). That opinion appears to be corroborated to some extent by the continuing decline in the number of hours worked per employee in Europe, while

CHART 8 STANDARD OF LIVING, PRODUCTIVITY AND NUMBER OF HOURS WORKED, PER HEAD PER ANNUM



Sources : The Conference Board and Groningen Growth and Development Centre, Total Economy Database (September 2008).

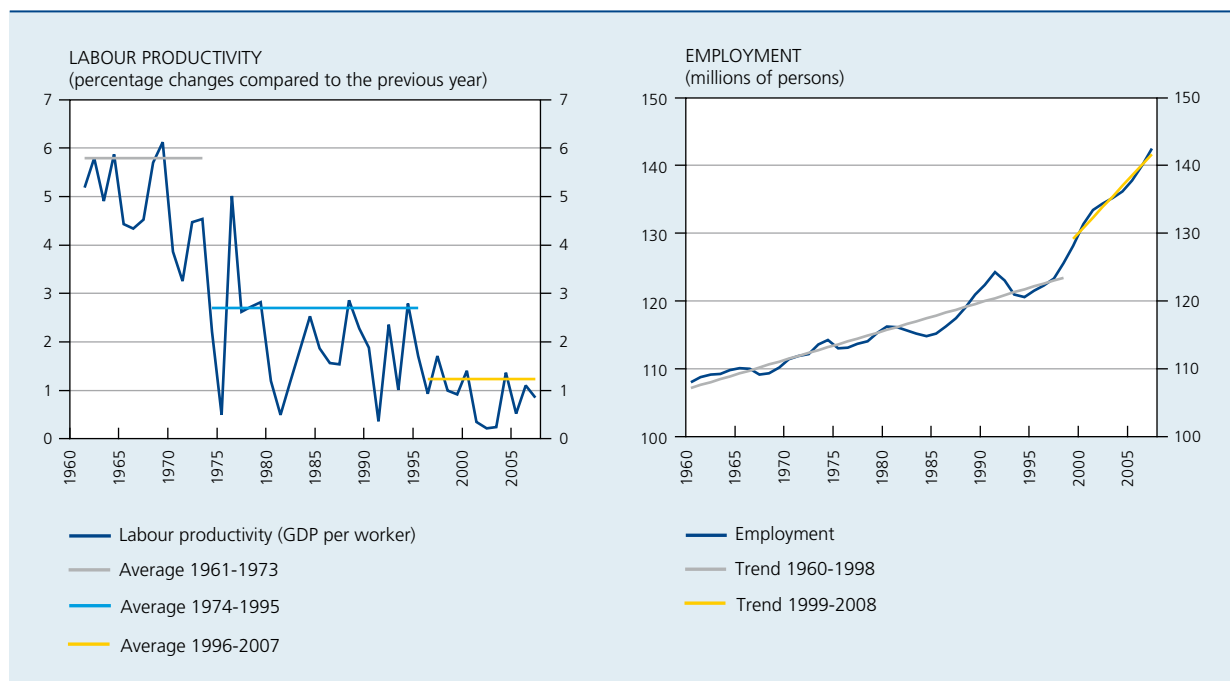
that was no longer the case in the United States after 1980. However, it should be noted that the reduction in the number of hours worked is due not only to working time but also to the number of workers in the population. The question is also whether the greater preference for leisure is genuinely structural, i.e. firmly embedded in European habits. The lower propensity to work may also be due to various factors, such as the heavy burden of fiscal and parafiscal levies on labour, or institutional characteristics of the organisation of labour, which depress both the supply of labour (because extra work is insufficiently rewarded) and demand for labour (because the production factor labour is expensive).

However, the number of hours worked per capita has increased in the euro area since the second half of the 1990s. The effect of the particularly dynamic job creation, certainly during the period of monetary union, far exceeded that of the further decline in working time. Over 15 million jobs have been created in the euro area since the start of monetary union, thanks in particular to structural labour market reforms and wage moderation. This demonstrates that a monetary policy geared to price stability does not hamper job creation. This success in job creation may have weaker productivity growth as its corollary. Thus, during the period 1997-2007 productivity per worker increased by an average of 1.2 p.c. That

is not only below the figure recorded previously, but is also lower when compared to the productivity growth in the United States, which came to 2.1 p.c. over the same period. *Ceteris paribus*, the increased mobilisation of previously inactive workers, most of whom are low skilled, exerts downward pressure on average productivity. However, studies also reveal that the relative slowing of productivity is due almost exclusively to the sectors producing ICT, and particularly to those using ICT, especially trade and financial services (Van Ark *et al.*, 2003). In the euro area, extensive and efficient use of ICT may have been impeded by structural rigidities, such as a rather inflexible labour market and obstacles hampering market access. That is why new measures are needed to strengthen competition and improve market efficiency. That applies particularly to the service sector. Such measures would also foster the continued deepening of the single market.

In 2000, in order to reinforce the EU's productive potential, the European Council launched the Lisbon strategy which emphasises the need for structural reforms in Europe. Relunched in 2005 following an in-depth assessment, this strategy focuses on two elements vital to a sustainable rise in the standard of living, namely labour market participation and productivity growth. That is why a series of specific targets were set, to be attained by 2010.

CHART 9 LABOUR PRODUCTIVITY AND EMPLOYMENT IN THE EURO AREA



Sources: The Conference Board and Groningen Growth and Development Centre, Total Economy Database (September 2008).

Thus, the employment rate (defined in relation to the population of working age) is to be increased to 70 p.c. Although, as indicated earlier, the employment rate has risen strongly since the advent of monetary union, the shortfall in relation to the target is still around 4 percentage points. A target was also defined for expenditure on research and development, namely 3 p.c. of GDP. In fact, that expenditure is currently below 2 p.c. of GDP in the euro area, and the gap has not diminished in recent years. It is considerably higher not only in the United States but also in Sweden and Finland, where the 2006 figures came to 3.73 and 3.45 p.c. of GDP respectively.

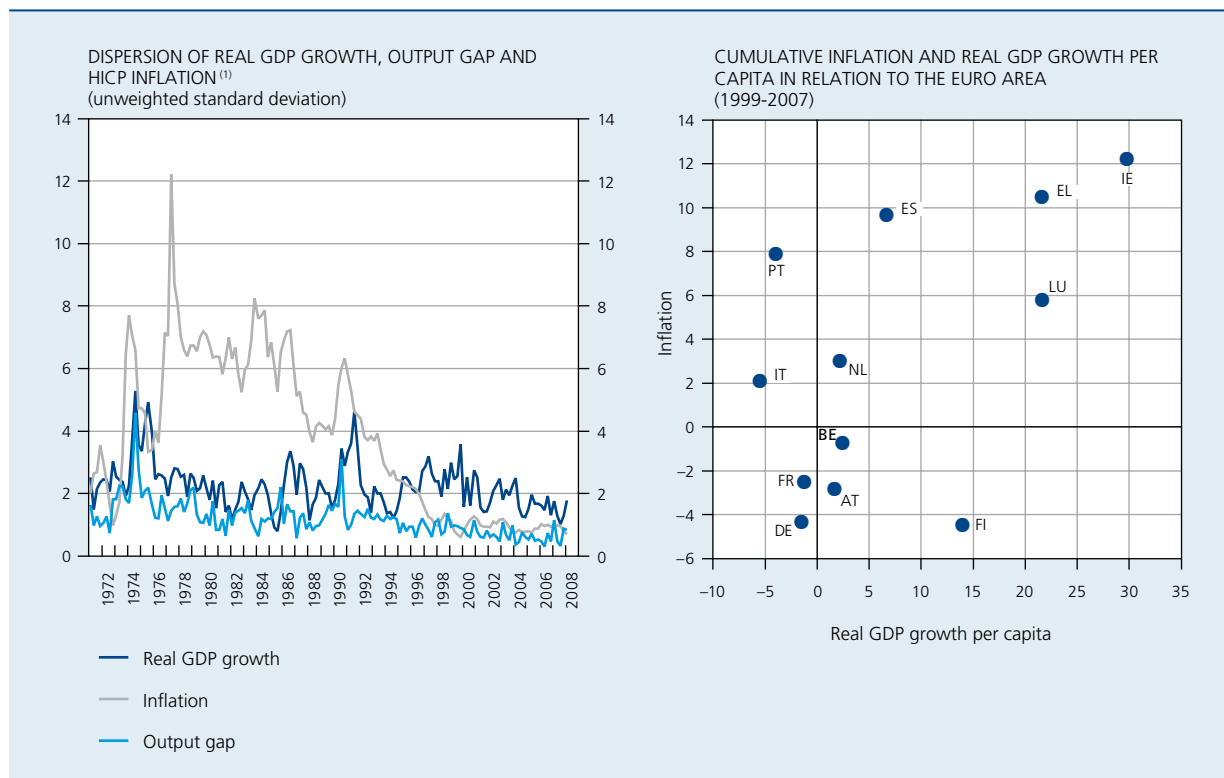
Overall, the progress achieved in terms of structural reforms over the past ten years has been inadequate, despite the undeniable improvement in labour market participation and employment. As a result, the euro area's growth potential has not been strong enough. Further efforts are therefore needed to achieve the set targets by 2010. That could alleviate the budgetary challenges connected with population ageing. Moreover, reforms aimed at increasing the flexibility of prices and wages could promote greater efficiency in the adjustment mechanisms operating in a monetary union (cf. the next section). The

current downturn in the business cycle certainly does not downgrade the priority of this reform programme, and must not be used as an excuse for not getting on with it.

5. The euro area countries, united but different

The divergences in economic development between the EMU Member States were the focus of much attention from the start. Some people believe that the 'one size fits all' monetary policy cannot be right for all EMU Member States if there are wide divergences between them. Those Member States can no longer use their own monetary and exchange rate policies to correct undesirable economic developments. The statement that this deprives them of an effective monetary policy instrument is clearly only true if the exchange rate is not in itself a source of undesirable volatility. However, box 1 demonstrates that this was sometimes the case in the past, especially in a crisis situation. It therefore seems that the single monetary policy is an advantage rather than a handicap in the current, unusually severe financial crisis.

CHART 10 GROWTH AND INFLATION DIFFERENTIALS IN THE EURO AREA



Sources : OECD, Thomson Financial Datastream.
(1) Output gap based on the Hodrick-Prescott filter.

Since 1999, inflation and growth differentials between euro area countries have been relatively small by historical standards. That is particularly true of inflation differentials, indicating the extent to which monetary union has led to nominal convergence. During monetary union, the inflation dispersion has not declined further, but studies have shown that inflation differentials in the euro area are comparable in size to those seen between the various regions of the United States (Angeloni and Ehrmann, 2005). The profile of the growth differentials is less clear. The dispersion of the output gap has tended to diminish since the 1970s, indicating that the differences in position in the business cycle have moderated and that the cycle tends to be increasingly synchronised between the various countries, making it easier, in principle, to conduct monetary policy. Nonetheless, the growth differentials are substantial, although some decrease has been seen in recent years. Discrepancies in trend or potential growth, which may be due to structural factors, therefore seem to be considerable. That tallies with the finding that some countries persistently record inflation or economic growth above or below the average. This is reflected, in particular, by the high cumulative inflation and growth differentials of the period 1999-2007. Growth and inflation in Spain, Ireland and Greece persistently exceeded the figures recorded in the euro area as a whole, whereas the opposite applied in Germany. The Italian and Portuguese economies suffered from an adverse combination of above average inflation but below average growth. Belgium was close to the average for the euro area in terms of both inflation and growth during the period 1999-2007 (cf. also box 2).

However, growth and inflation differentials in a monetary union are not necessarily a problem. Thus, several euro area countries initially had low per capita GDP, so that they were in a catching up or real convergence phase. This applied to Greece, Ireland, Spain and Portugal. It is therefore normal and even desirable to see that marked differences – which go with the process of real convergence – in productivity growth between the tradable goods sector and the non-tradable goods sector, generate considerable positive inflation differentials in those countries. In principle, the opposite applies to Germany and to other countries with high per capita GDP, such as Belgium. The size of this type of growth and inflation differentials should diminish as real convergence progresses, but the differentials could increase again if the new EU Member States adopt the euro before they have attained a sufficiently high degree of real convergence. This ‘Balassa-Samuelson’ effect only accounts for part of the persistent differentials in the euro area, mainly because the variations in the productivity trends are not proportionate to the inflation

differentials recorded. For example, Portugal ceased to record strong growth during the period 1999-2007, but still had high inflation.

It is hard to prevent the existence of some divergences, since euro area Member States are bound to encounter asymmetric shocks, and mutual shocks may have more or less asymmetric effects in certain cases, depending on the structural characteristics of the Member States, e.g. in terms of dependence on oil, the degree of openness or the geographical structure of foreign trade. All these factors can cause growth and inflation differentials which are more cyclical in character. In principle, they should have diminished in scale, taking account of the greater synchronisation of the economic cycles of the euro area Member States. Nonetheless, those cyclical differences have played a role, e.g. in the case of Germany, the Netherlands, Spain and Ireland. However, it is not always easy to distinguish between the cyclical element and the part relating to real convergence, since the two present the same apparent characteristics, with growth and inflation differentials moving in the same direction. It also seems that these divergences have been amplified by factors specific to the initial years of monetary union. Thus, Germany appears to have joined the monetary union with a serious handicap in terms of competitiveness, while the Netherlands was in the opposite situation. In countries such as Spain and Ireland, demand was strongly stimulated in the initial years of monetary union, because the effect of interest rate convergence mentioned earlier was more marked there. In fact, the disappearance of risk premiums and the decline in long-term interest rates not only stimulate potential growth via the fall in the cost of capital, but also exert a sustained and almost immediate effect on domestic demand, more particularly on the property market.

In principle, such divergences should not persist if the adjustment mechanisms act quickly. Moreover, inflation differentials may in some cases reflect the operation of an adjustment mechanism. In fact, in a monetary union, inflation differentials lead to comparable variations in the real effective exchange rate in relation to the other Member States. Overheating of the economy is therefore counteracted by a loss of competitiveness, while low inflation should improve the competitiveness of countries whose performance is more modest. This balancing mechanism will be all the more efficient if there is wage and price flexibility in the countries belonging to the monetary union, since that permits a relatively faster adjustment between countries. In the short term, increased wage and price flexibility may augment the inflation differentials but help to reduce the growth differentials and the persistence of the inflation differentials. The findings of the

Eurosystem Inflation Persistence Network (IPN) indicate that prices are adjusted less frequently in the euro area than in the United States (cf. in particular Dhyne *et al.*, 2006 and Álvarez *et al.*, 2006), bearing witness to a high degree of price rigidity in the euro area. The findings of the Eurosystem Wage Dynamics Network suggest a high degree of wage rigidity, though the research by this network is still on-going. This all goes to show the sluggishness of the adjustment mechanisms and the need to strive for appropriate wage and price setting, taking due account of the underlying fundamentals.

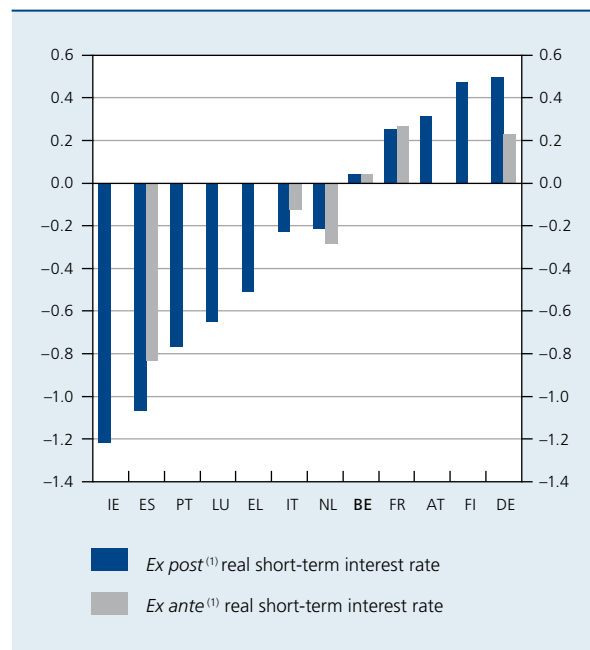
The competitiveness channel outlined above may also be thwarted by the real interest rate channel, which operates in the opposite direction. The latter channel refers to the fact that, in the case of a single nominal interest rate, the real interest rate is lower (higher) in countries with strong growth (weak growth) as a result of the higher (lower) inflation. It tends to generate some persistence in the differentials and to restrain convergence. Although the real interest rate channel may dominate the competitiveness channel in the short term, after a time the latter should, in principle, prevail. Indeed, an inflation differential of a given size may have a persistent effect on the real interest rate, but that is unlikely to increase over time. Conversely, the same inflation differential has a cumulative impact on competitiveness so that the competitiveness channel is strengthened over time.

Fiscal policy may also reduce the divergences in the euro area. In that regard compliance with the Stability and Growth Pact may play a role, because as the sustainability of public finances becomes more secure, scope becomes available for the operation of the automatic stabilisers. Finally, the risk-sharing mechanism described above may also attenuate the impact of the divergences. In principle, that reduces the need to rely on the efficiency of the other adjustment mechanisms or the intervention of the national authorities. Recent empirical data show a considerable increase in risk-sharing (Giannone and Reichlin, 2006), illustrating the importance of financial market integration in the euro area.

The operation of the real interest rate channel and the competitiveness channel is described below.

It was mainly in Spain and Ireland that the real interest rate channel played a significant role, at least when measured as the *ex post* real short-term interest rate. In addition, it is in these countries that the real interest rate showed the sharpest fall at the start of monetary union. These factors contributed to the sustained rise in asset prices, the direct consequence being that wealth effects

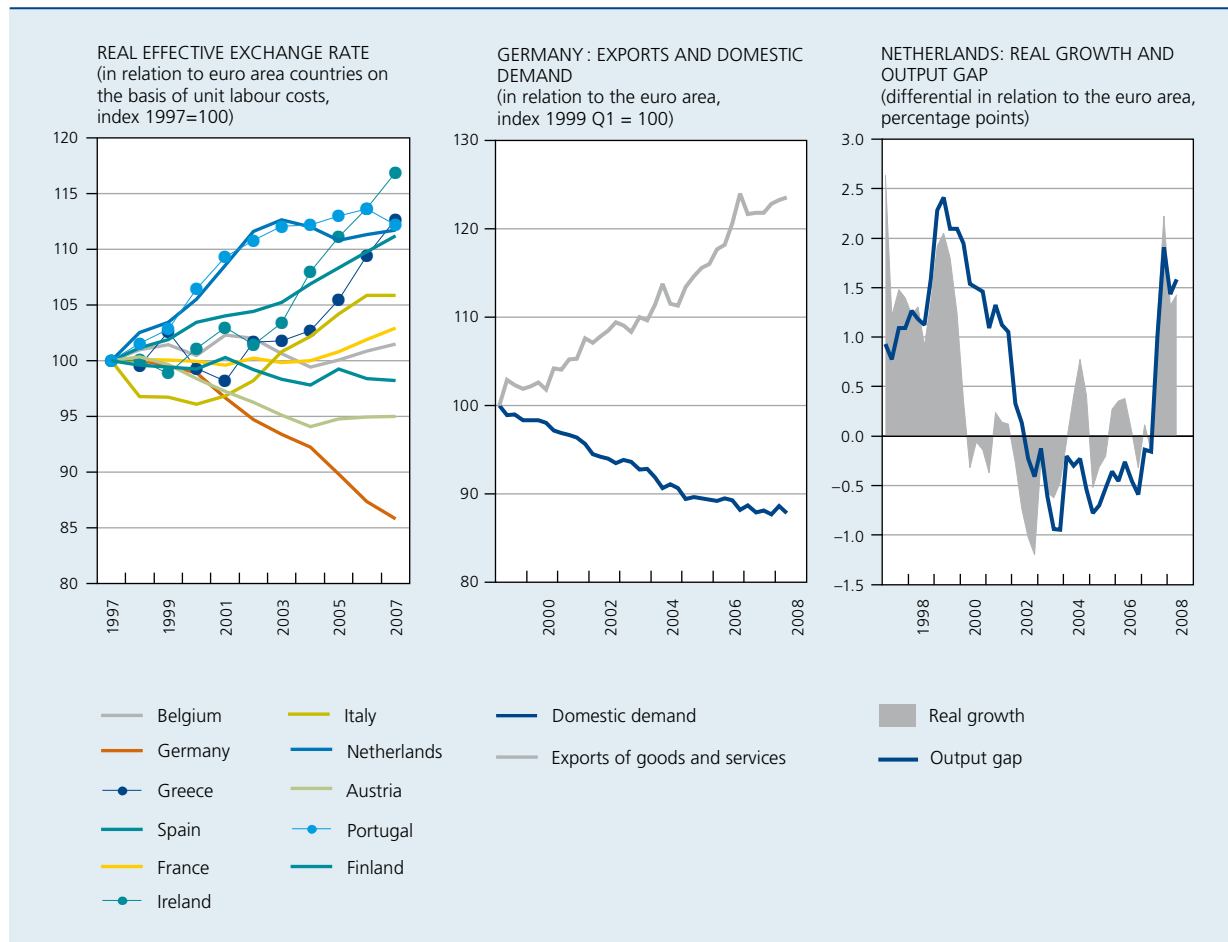
CHART 11 REAL SHORT-TERM INTEREST RATE
(average differential in relation to the euro area during the period 1999-2007, percentage points)



Sources: Consensus Economics, OECD.
(1) The *ex post* and *ex ante* real interest rates were calculated as the difference between the short-term interest rate and observed inflation and expected inflation, respectively.

further reinforced the expansionary effect of interest rates. The growth and inflation differentials seen in these two countries are therefore not due solely to a catching-up process. Moreover, the overheating which was a feature of these two economies in the past is today creating a greater downside risk, as the easing of property prices entails additional risks for both the financial sector and the real economy.

However, the importance of the real interest rate channel needs to be qualified. To measure the impact of inflation differentials on investment and consumption decisions, it is necessary to take account of the *ex ante* real interest rate since that is what determines the intertemporal behaviour of the economic agents. In the euro area, the differences between *ex ante* real interest rates are less than between *ex post* rates, at least in countries for which they could be estimated. Furthermore, it is not easy, *a priori*, to know whether the appropriate inflation figure to use is the one for the country in question or that for the euro area as a whole, because national inflation is less relevant for economic agents engaging in international activities than it is for consumers. The real interest rate channel could therefore become less important as a result of greater economic integration.

CHART 12 REAL EFFECTIVE EXCHANGE RATE AND RELATIVE GROWTH PERFORMANCE IN GERMANY AND THE NETHERLANDS


Sources: EC, OECD, Thomson Financial Datastream.

The competitiveness channel is the main adjustment mechanism giving rise to convergence. Its operation can be illustrated by two examples, namely Germany and the Netherlands.

Germany was at a competitive disadvantage when joining the monetary union in the wake of reunification. That disadvantage severely depressed economic activity in Germany, and the country had to contend with weaker growth, especially from 2001. Competitiveness was restored by wage moderation, which in turn brought inflation down below the level in the euro area as a whole. The resulting increased competitiveness was reflected in sustained export growth, but dampened domestic demand. The latter may also have been curbed by the real interest rate channel, while the excellent export performance achieved in recent years was enhanced by the fact that global demand is relatively concentrated on products which predominate in German manufacturing, such as investment goods and cars. From 2007, domestic demand

in Germany moved more or less in parallel with that in the euro area. The very marked wage moderation in Germany also came to an end recently. These two factors tend to show that the adjustment process is reaching its end, although admittedly it has taken several years.

Well before 1999, the Netherlands formed a *de facto* monetary union with its main trading partner, Germany, and therefore ceased to use the exchange rate as an adjustment mechanism. *A priori*, there appeared to be few risks in participating in EMU. However, the Netherlands experienced a strong economic boom in the late 1990s, which was further reinforced by a wealth effect due to the soaring equity and property markets. The resulting labour market scarcity drove up wages and prices, generating a much larger rise in unit labour costs than in the main trading partners, and hence a loss of competitiveness. This factor therefore triggered the correction. From 2002-2003, the Dutch economy cooled rapidly and for several years it actually underperformed the euro area.

However, the differences in the pattern of inflation and unit labour costs are not always due to this balancing mechanism. They are sometimes themselves the source of the divergences. Thus, they are a problem if they are due to an unsuitable national policy, structural inefficiencies or defective adjustment mechanisms. Policy-makers recently paid particular attention to the divergent trends in unit labour costs. The reason for their concern lay in the negative effect of a deterioration in competitiveness on the general economic situation, and the potential impact on inflation of an excessively rapid increase in wages. The movement in labour costs may cause problems, especially in countries where pay increases are not linked sufficiently to productivity gains, and where the current account balance records a growing deficit. In the context of the strong surge in inflation in the second half of 2007 and the first half of 2008, the ECB Governing Council repeated on several occasions that the second-round

effects resulting from the increased price of energy and food must be avoided at all costs, in setting both prices and wages. In that regard, it was said that the indexation mechanisms heighten the risk of triggering a price-wage spiral, and may cause a loss of competitiveness and a decline in employment. On the other hand, responsible wage developments which do not compromise the smooth operation of the monetary union should be based on productivity developments and the competitive position, while taking account of the still high level of unemployment in the euro area.

6. The challenges ahead

Ten years after its introduction in Europe, the single currency can be considered a huge success. Price stability, and more generally macroeconomic stability and increased

Box 2 – Belgium in the monetary union

The transition to, and Belgium's participation in, EMU may generally be considered a success. Belgium had already formed a *de facto* monetary union with Germany since 1990, when it was decided to peg the Belgian franc to the German mark. Following the EMS crisis in mid 1993, the fixed exchange rate policy has rarely come under stress and interest rates have gradually converged, so that the transition to monetary union entailed no real upheaval. In Belgium, the macroeconomic framework was adapted in anticipation of membership of the monetary union, in particular by the 1996 law on employment promotion and the safeguarding of competitiveness, which aims to align the movement in private sector wages with that in the three main trading partners. Belgium also made efforts in consolidating its public finances, although it must be said that, as in the euro area in general, insufficient use was made of the favourable phases in the business cycle to achieve structural improvement. Also, Belgium is a particularly integrated economy, having regard to its high degree of openness and the geographical structure of its foreign trade, over 70 p.c. of its trade being with euro area countries.

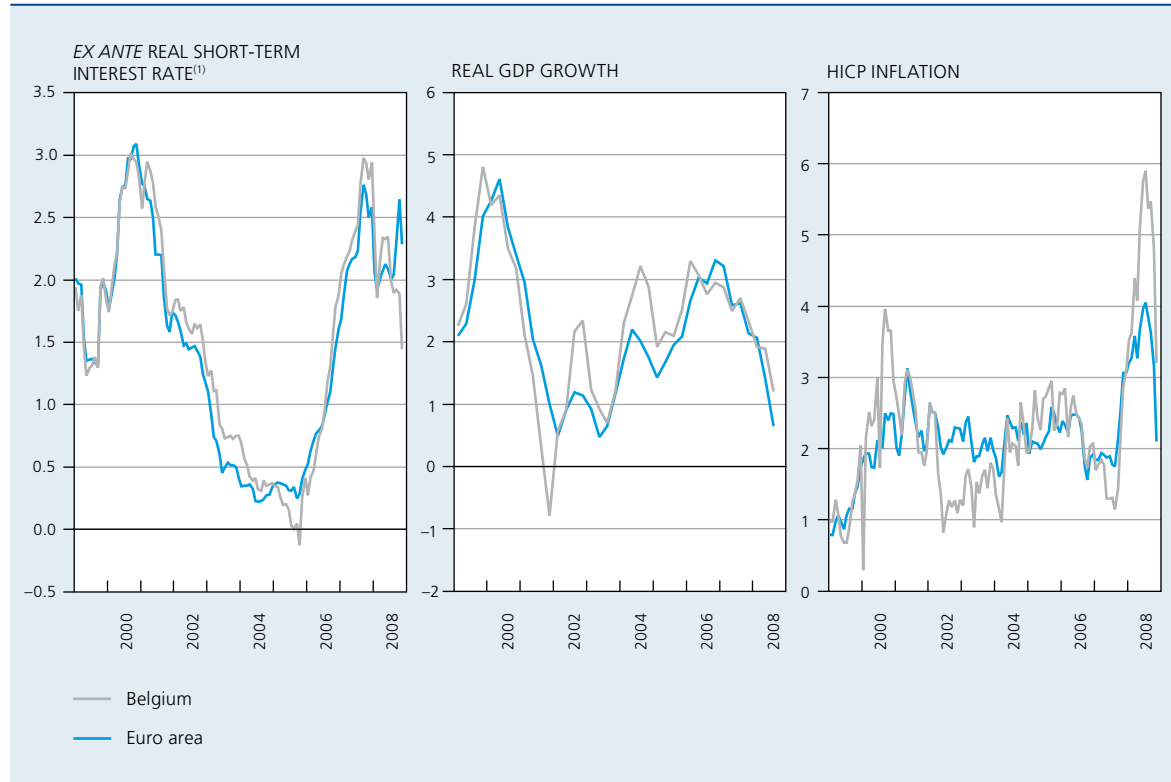
During the period 1999-2007, real short-term interest rates in Belgium generally followed the pattern for the euro area as a whole, since inflation differentials were narrow and short-lived. Of all the EMU countries, Belgium is the one with the smallest real interest rate differential in relation to the euro area as a whole, indicating that the real interest rate channel was certainly not a source of divergences. What is more, since Belgium is closely integrated with the euro area countries, the business cycle is very similar to that of the euro area. From this angle, too, the single monetary policy can be considered appropriate to Belgium. Finally, the competitiveness of the Belgian economy measured on the basis of the real effective exchange rate deflated by unit labour costs is still relatively well preserved in relation to the euro area as a whole, with the exception of Germany, a major trading partner for Belgium. In that regard, it must be said that the 1996 law gives priority to the relative movement in labour costs in relation to the three main neighbouring countries.

However, the large positive inflation differential seen in 2008 (averaging 1.2 percentage points over the first ten months of the year) indicates a need for vigilance. Up to now, this difference has been due mainly to the movement in prices of energy and food. It therefore raises a series of questions concerning, in the first place, price formation and competition in those two sectors, although a range of objective factors could be invoked to explain why inflation in Belgium is so sensitive to fluctuations in crude oil prices, particularly the lower excise duty on



REAL SHORT-TERM INTEREST RATES, ECONOMIC GROWTH AND INFLATION

(percentage changes compared to the previous year, unless otherwise stated)



Sources: EC, Thomson Financial Datastream.

(1) Three-month interbank rate minus expected inflation, percentages.

petroleum products and the higher proportion of such products in Belgian household consumption expenditure. Creating efficient and competitive product markets in the energy sector, too, therefore presents a considerable challenge for the national policy makers. At the same time, even if it was not triggered by indexation, the surge in inflation illustrates the potential risks inherent in this mechanism. In fact, if the movement in real wages cannot quickly neutralise the whole of the undeniable upward influence which indexation exerts on wage setting in the current circumstances, the higher rate of inflation will become more permanent, representing an additional threat to business competitiveness and ultimately weighing on economic activity and employment. After the summer, the movement in prices of non-energy industrial goods and services also made a positive contribution to the inflation differential in relation to the euro area, clearly underlining the risk of a more persistent acceleration in inflation.

integration are just a few examples of an impressive array of achievements. Even during the period of turbulence which the financial markets are currently undergoing, the benefits of the single monetary policy have been obvious. The provision of liquidity by the Eurosystem enabled the financial system to continue to function even when confronted by the most serious crisis since the 1930s. Moreover, in contrast to the period preceding monetary

union, these injections of liquidity were conducted in the same way for all euro area banks. In the absence of a single currency and a single monetary policy, a crisis on this scale would undoubtedly have engendered greater macroeconomic volatility owing to the combined effects of the wide divergence of interest rates and strong exchange rate fluctuations, as was systematically the case in the past in periods of crisis. All the same, the results for these

ten years of monetary union are not entirely positive, and there are still some serious challenges to address.

Tackling the financial crisis remains a major challenge for monetary policy in the short term. Since the crisis arose in the banking sector, the monetary policy transmission mechanism is not currently operating as it would under more normal circumstances. With the downside risks to economic growth, the inflationary risks have also greatly diminished. In this context, sufficient scope developed for the Governing Council to cut the ECB's key interest rate in October, November and December 2008. In any case, it remains crucial that inflation expectations remain compatible with price stability, i.e. below but also close to 2 p.c. in the medium term.

Regarding fiscal policy, since the creation of monetary union insufficient use has been made of favourable phases in the business cycle to secure sustainable consolidation of public finances, despite the considerable progress made during the preparatory phase preceding EMU. It seems appropriate to allow the automatic stabilisers to operate during the current downturn in the economic cycle. However, the consolidation of public finances remains a structural priority, in view of the long-term challenges ahead, such as population ageing.

In the past ten years, the potential growth of the euro area has been mediocre, and that has depressed the standard of living. A new impetus is therefore required in regard to structural reforms on the product and labour markets, to permit full implementation of the Lisbon strategy for growth and jobs. By eventually improving the economy's growth potential, these reforms will enhance prosperity and augment the capacity to tackle the budgetary challenges. In addition, more flexible markets will make the whole of the euro area more resilient to shocks and increase the efficiency of the adjustment mechanisms in EMU while reducing unwelcome divergences in terms of movements in wages, prices and competitiveness.

The Treaty on European Union provides that all EU Member States – except for those with an opt-out – will

eventually join EMU on condition that they meet the convergence criteria. In view of the varying stages of real convergence in the new Member States, that could increase the heterogeneity of the euro area. Up to now, the successive enlargements of EMU have shown that participation does not present an insurmountable obstacle for countries with a lower standard of living, but the success of the euro's adoption by the new Member States will also depend to a large extent on the efficiency of their respective adjustment mechanisms. What is more, enlargement will also complicate the decision-making process in the Eurosystem.

Finally, the current financial crisis is evidence of the challenges which will have to be met in order to preserve financial stability. Many of those challenges are international in character. In regard to European unification, it is apparent that, because of financial integration, the surveillance of the systemic risks in particular now extends beyond national borders. There is therefore a need to reinforce the European dimension and to aim at a more integrated approach to both regulation and surveillance.

It is also important to ensure that financial integration, which is not yet very far advanced in the retail banking sector, is not relegated to the back burner by the current crisis. In the first ten years of EMU, notable progress has been achieved here, particularly as a result of the consolidation of financial institutions and infrastructures on a European scale. That progress has been accompanied by economies of scale and has helped to offer households and businesses a wide range of financing and investment opportunities, thus augmenting the economy's growth potential. Moreover, there can be no doubt that the increased integration has fostered the more coherent transmission of monetary policy. Since financial integration is beneficial, it is important to distinguish it from the excessive risk-taking behaviour seen on the financial markets, the primary cause of the current financial crisis, and to conduct a policy favourable to financial integration while setting proper limits on excessive risk-taking.

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