

Fritz Breuss

## Ten Years of EMU – Achievements, Weaknesses, Challenges

Ten years after the European Economic and Monetary Union (EMU) had been completed, an assessment of the early years is bound to be an ambivalent one. On the one hand, price stability was fostered by the introduction of the euro, and the new currency soon acquired a global status next to the dollar. Monetary Union stimulated also cross-border trade within the euro area. On the other hand, the expected growth "dividend" has so far failed to materialise. GDP growth in the euro zone lagged behind that of countries outside the single-currency area. Notwithstanding the complicated and asymmetric policy framework governing EMU, the responsible institutions have co-operated timely and smoothly during the international financial market crisis, trying to limit the damage for the financial sector as well as for business activity through a co-ordinated approach. For some countries outside the euro area, the common currency has gained attractiveness during the crisis.

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Ten years ago, on 1 January 1999, the third stage of Economic and Monetary Union (EMU) of the European Union was launched, in the beginning with 11 EU countries out of 15 at the time, and with the euro being first introduced only as a virtual currency. In 2001, Greece joined the Monetary Union and in 2002, the euro became legal tender in the common currency area. After the fifth round of EU enlargement in 2004, the next expansion of the euro area followed in 2007 with Slovenia, Malta and Cyprus in 2008 and Slovakia in 2009. Within the first ten years since its introduction, the Monetary Union has thus been extended to include 16 out of 27 EU countries. Since not all EU countries could participate from the beginning, the EMU project is a classic example of imperfect integration that can be called either "flexible integration", "core Europe", "differentiated integration" or "two-(or multi-) speed Europe". The hurdles to overcome are the strict EMU entry criteria or "convergence criteria".

Given the allocation of responsibilities within the EU, the EMU policy framework is asymmetric: while monetary policy is conducted centrally by the European Central Bank (ECB) for the euro area as a whole, other areas of economic policy and in particular fiscal policy are carried out decentrally by the EU countries although co-ordinated between them by a variety of instruments and extensive procedures. A major instrument in this regard is the Stability and Growth Pact. Compliance with its rules becomes more difficult whenever the euro area economies slide into a cyclical downturn or into a recession like in the wake of the current international financial market crisis.

In a wide sense, EMU may be regarded as yet another example of the "méthode Monnet" (see Breuss, 2007B): like with the foundation of the European Coal and Steel Community (ECSC) in 1952, the introduction of the common currency creates a constraint to harmonise or closely co-ordinate virtually all policy areas within the EU. However, the actual construction plans for EMU and their implementation are rather a reflection of the "méthode Delors", the Delors Plan, whose key elements entered into the Maastricht Treaty, the legal base of EMU. According to the view of international experts (such as, most prominently, De Grauwe, 2009), the viability of EMU will lastly depend on whether the EU can be transformed into a political union. Yet, from that goal the EU is still far away, as witnessed by the breakdown of the ratification of

the 2005 Constitution and the current difficulties in the ratification process of the Lisbon Treaty.

### *From the Werner Plan to the Common Currency – Chronology of 10 years of EMU*

October 1970 Werner Report (based on the Werner Plan of 1969) for the creation of an Economic and Monetary Union (EMU): Instead of a single currency, the bilateral exchange rates were to be fixed irrevocably. Both monetary policy (single central bank) and fiscal policy were to be defined at Community level. The Werner Plan provided for two stages: 1. stage until end-1973 harmonisation of exchange rates, 2. Stage transition to EMU until 1980. The implementation of the Werner Plan finally failed due to the collapse of the fixed exchange rate system of Bretton Woods in 1971.

March 1979 European Monetary System (EMS): After several currency experiments ("snake in the tunnel"), the EMS was introduced as system of quasi-fixed exchange rates with occasional realignment of central parities for the stabilization of exchange rates in the EC. The EMS operated with a basket currency (ECU) and an exchange rate mechanism (ERM) with intervention bands of  $\pm 2.25$  percent. It resisted to the speculative attacks of September 1992 and August 1993 only due to a widening of the bands to  $\pm 15$  percent.

April 1989 Delors Report: the creation of EMU is foreseen in three stages:

- stage I: liberalisation of capital flows (as from 1 July 1990),
- stage II: establishment of a European System of Central Banks (ESCB) with an embryo central bank,
- stage III: independent central bank in the framework of the ESCB. Introduction of a common currency, binding rules for fiscal policy.

November 1993 Maastricht Treaty: all regulations concerning EMU are laid down in the Treaty of the European Community (EC Treaty). They were taken over nearly unchanged in the successor treaties (Amsterdam, Nice) and also in the Lisbon Treaty. EMU consists of an economic union (essentially with the completion of the Internal Market as from 1 January 1993) and the Monetary Union (in force since 1 January 1999). For the introduction of Monetary Union, a detailed timetable until 1999 at the latest with strict entry criteria (Maastricht convergence criteria) was defined. The name of the single currency "euro" as well as the three stages for its introduction were defined at the European Council of Madrid in December 1995. The three stages provided for

- stage I: liberalisation of capital flows (as from 1 July 1990),
- stage II: establishment of the European Monetary Institute (EMI) in Frankfurt as predecessor of the ECB on 1 January 1994,
- stage III: entry into force of EMU on 1 January 1999, after the bilateral exchange rates had been irrevocably fixed (ECU to euro 1:1). Start of operation of ESCB and ECB (centralised monetary policy for the euro area).

In early May 1998, the Heads of State and Government, on the basis of Convergence Reports by the European Commission and the EMI, selected 11 out of 15 EU countries for the launch of EMU. On 1 July 1998, the European Central Bank (ECB) was founded in Frankfurt.

The policy architecture of EMU is asymmetric: monetary policy is conducted centrally for the euro area by the ECB, economic policy (in particular fiscal policy) is managed decentrally by the countries in the euro area, but in a co-ordinated way. The major instrument of co-ordination is the Stability and Growth Pact (SGP) of 1997. It consists of two Council Regulations and a Resolution by the European Council, and strives essentially for a balanced budget over the business cycle. If the budget deficit exceeds 3 percent of GDP in a year (unless caused by exceptional circumstances), an "excessive deficit procedure" is initiated. The SGP was modified in 2005, now allowing for country-specific circumstances and a more flexible interpretation.

January 2001: Greece becomes 12th member of EMU.

January 2002: The euro is introduced as legal tender in the euro area.

January 2007: Slovenia joins EMU.

January 2008: Malta and Cyprus join EMU.

January 2009: Slovakia joins EMU.

Source: Breuss (2006C), chapter 10, 11, 12 as well as European Commission website "welcome to EMU@10! Economic and Monetary Union is 10 years old!" ([http://ec.europa.eu/economy\\_finance/emu10/index\\_de.htm](http://ec.europa.eu/economy_finance/emu10/index_de.htm)).

Achievements of EMU to date are to be found not so much in economic growth (as non-member countries of the euro area like the UK or Sweden attained higher average rates of GDP growth during the last ten years) but rather in the area of price stabilisation and, in the last few months, in shielding the euro area members from currency turbulence during the international financial market crisis. In addition, exchange rate stability stimulates intra-euro-area trade and contributes towards strengthening the competitiveness of the euro area economies and their resistance vis-à-vis the challenges of globalisation (Breuss, 2008B, 2008C).

## The economic policy framework of EMU

After several earlier attempts (Werner Plan 1969, EMS 1979, Delors Report 1989; see box "from the Werner Plan to the common currency – chronology of 10 years of EMU"), the third stage of EMU was launched in 1999 and led to the introduction of the euro as cash and legal tender in 2002. The primary legal base of EMU is the Treaty of Maastricht in which the three stages towards the creation of a Monetary Union are laid down as well as the convergence criteria for EMU entry and the EMU economic policy framework reflecting the treaty-based agreement on the allocation of government responsibilities between the EU and its member states. A specific feature of EMU is the asymmetric assignment of government tasks (Breuss, 2006B, 2006C, European Commission, 2008A, S. 64ff):

- The independent ECB conducts monetary policy in a centralised way for the euro area, with the primary goal of price stability<sup>1</sup>. The ECB itself has defined price stability for the euro area as an annual rate of inflation close to, but below 2 percent. The regulations of the EU Treaty and the unequivocal medium-term scope rule out the use of monetary policy for direct stabilisation of the euro area economy. Only when price stability is ensured can and shall the ECB contribute towards the achievement of the goals of the EU pursuant Art. 2 of the EU Treaty (economic growth, full employment, etc.). Since the goal of price stability is defined for the euro area average, monetary policy cannot react to inflationary conditions in individual member states. While the uniform interest rate for the euro area (a necessity for a common currency) may thus be appropriate for the average of the euro area, it may be too restrictive for slow-growing economies like Germany and possibly too accommodating for fast-growing economies such as (hitherto) Ireland and Spain. The centrally-managed monetary policy can therefore exert a stabilising impact on the euro area as a whole, i.e., in the case of an exogenous shock hitting the entire euro area, but cannot dampen country-specific shocks. The stabilisation of the euro exchange rate is not part of the (treaty-based) tasks of the ECB.
- Economic policy, and in particular fiscal policy remains within the responsibility of the member states, but subject to co-ordination through the mechanisms provided for in the EU Treaty. The national governments shall conduct their fiscal and budgetary policies in such a way as to support the centralised monetary policy in its goal of price stabilisation. Furthermore, fiscal policy shall smooth business cycle variations at the national level (mainly through the operation of automatic stabilizers) while respecting the constraints of the excessive deficit procedure as foreseen in the EU Treaty and further specified in the Stability and Growth Pact (SGP). This derives from the assumption that a stability-oriented fiscal policy at the national level will contribute towards cyclical stabilisation (and greater synchronisation of the business cycle) also on a European scale. This specific role in support of the centralised monetary policy and its quest for price stability broadens the traditional tasks of fiscal policy for the euro area such as cyclical stabilisation, resource allocation and income redistribution. Furthermore, the requirement in the EU Treaty for the co-ordination of national fiscal policies has also a longer-term dimension when it comes to ensuring the sustainability of public finances in the member states. Already at the entry into force of EMU and again in the context of the disruptions caused by the international financial market crisis the French authorities called (most recently at the European summit of 4 October 2008 in Paris) for the implementation of a European economic government – a "gouvernement économique européen" – as a counterweight to the powerful ECB. So far, such calls have systematically been rejected, notably by Germany.

In the face of the repercussions of the international financial market crisis, the European Commission on 26 November 2008 for the first time submitted a proposal for a "European economic recovery programme" (European Commission, 2008D) to the amount of € 200 billion or 1.5 percent of aggregate GDP of EU 27 which the European Council (2008B) adopted on 12 December 2008. Already in October 2008, the European Council (2008A) had welcomed the "concerted action plan of the euro

<sup>1</sup> A review of the ten years since the establishment of the European Central Bank is offered by ECB (2008).

area countries" of 12 October 2008 (*European Commission, 2008B*). This financial stimulus is to be financed from member states' budgets to the tune of € 170 billion (around 1.2 percent of EU GDP) and from EU funds to support immediate action of € 30 billion (about 0.3 percent of GDP). Half of the latter amount is to be raised from loans granted by the EIB, the other half from re-allocation of funds within the EU budget. The stimulus programme is supposed to not only stimulate aggregate demand in the Keynesian tradition, but also have sustainable positive effect in the longer term<sup>2</sup>.

In addition to the European economic recovery programme, all EU countries, after co-ordination within the European Council, set up their own rescue "packages" for banks in distress, consisting of guarantees for toxic assets and direct capital injections, up to ceilings differing from country to country. With a view to the existing legal framework of competition, these rescue packages are subject to the approval by the European Commission. In its guidelines "for government subsidies to address the current banking crisis" of 13 October 2008 (*European Commission, 2008C*), the Commission invokes Art. 87.3 (b) of the EU Treaty whereby such subsidies are allowed if they help to overcome severe disruptions in a member state's economic development. A further guideline of 8 December 2008 on "the recapitalization of banks in order to stimulate the flow of credit to the real economy" (*European Commission, 2008E*) distinguishes between essentially sound banks on the one hand, and banks in distress on the other. Since financial support for the latter carries a greater risk of competitive distortions, the guideline provides for stricter safeguards and a comprehensive restructuring. Such banks may receive fresh capital from the state normally at a higher interest rate than financially sound banks.

To the extent that the governments of EU countries and the USA intervene in order to cushion the potential impact of the financial market crisis and to rescue financial institutions (unlike the *laissez-faire* attitude in 1929), they take over the role of a "lender of last resort" traditionally assigned to the central banks. While the monetary authorities have also supported the financial sector with massive supply of liquidity in autumn 2008 and sharp cuts in interest rates, the rescue of banks has been left to the governments:

- Within the policy framework geared towards macro-economic stabilisation, all aspects of structural adjustment (both on a micro and a meso level) remain within the area of responsibility of the member states and are to be taken care of in such a way as to maximise the productive potential. The member states shall conduct their structural policies such that the flexibility of the Internal Market and the economy's resistance vis-à-vis external shocks is enhanced<sup>3</sup>. The EU Treaty contains no special provisions for the conduct of structural policy, even if the Broad Economic Policy Guidelines (BEPG) call for co-ordination also in this regard. The Lisbon Strategy for Growth and Employment<sup>4</sup> provides for a loose form of structural policy co-ordination between the member states, e.g., via the "open method of co-ordination".

<sup>2</sup> According to Commission President Barroso (*European Commission, 2008D, p. 3*), the European economic recovery programme rests upon two pillars and one principle. The first pillar is a massive boost to purchasing power (€ 200 billion or 1.5 percent of GDP), designed to trigger an immediate demand push while respecting the rules of the Stability and Growth Pact. The second pillar considers the necessity to strengthen the competitiveness of the European economy in the long run along the lines of the Lisbon Strategy also through short-term measures like "intelligent investment" in human capital, energy efficiency, environmentally-friendly technologies, infrastructure and communication systems. The programme is based on the principle of solidarity and social justice (cuts in social contributions, higher funding of the European Fund for adjustment to globalisation and of the European Social Fund). A first assessment (*Saha – von Weizsäcker, 2008, p. 2*) sees the cyclical impulse in 2009 somewhat smaller than proposed by the Commission. Own calculations by the Commission (2008F, p. 7; *Ratto – Roeger – in't Veld, 2008*) claim that the European counter-cyclical stimulus programme should have a strong impact on private consumption and investment (multipliers up to 1).

<sup>3</sup> The reforms of goods and labour markets since the launch of EMU ten years ago are analysed in *European Commission (2008A, pp. 78ff)*.

<sup>4</sup> For the Lisbon Strategy and considerations for a follow-up after 2010 see *Breuss (2008D)*. An assessment of the Lisbon Strategy can be found in *Dreger et al. (2007)*, *Gelauff – Lejour (2006)* and *Ratto – Roeger – in't Veld (2008)*.

- Wage formation remains within the responsibility of the social partners in the EU countries<sup>5</sup>. After the abolition of the exchange rate as instrument of adjustment to external shocks, such adjustments on the labour market take the form of either flexibility / mobility of the workforce or via wage policy. This follows the traditional line of argument for optimal currency areas according to *Mundell (1961)*<sup>6</sup>. Yet, closer co-operation between trade unions at the EU level would be desirable also in this respect.

The introduction of a common currency requires adjustment in several areas: first at the macro-economic policy level, due to the asymmetric policy framework in EMU; second, on markets for goods and services and third, on labour markets and with regard to wage formation (social partners). The creation of EMU has profoundly changed the frame of reference for (economic) policy in Europe.

The logical consequence of the introduction of a common currency is a single monetary policy. Such a policy actually corresponds to the needs of the countries in the euro area only if they broadly share a common business cycle. Although there are signs of a nascent "Europeisation" of the business cycle (but not yet of a genuine "European business cycle"; *Artis – Krolzig – Toro, 2004, Breuss, 2008A, 2009, Giannone – Lenza – Reichlin, 2008*), the convergence of short-term interest rates (to a lower degree than of long-term rates) can only stabilise the fictional "average euro area economy", whereas a single interest rate cannot stabilise the individual national economies. The ECB can therefore smooth the impact only of exogenous shocks affecting the entire euro area, but not of country-specific shocks.

The adjustment to a single interest rate has different implications for the individual countries in the euro area. Short-term nominal interest rates closely converged towards those prevailing in Germany, the largest euro area country accounting for about 30 percent of area GDP. In those countries which had previously exhibited rather high interest rates (Greece, Portugal, Spain, Finland, Ireland and Italy), but also in Slovenia and Slovakia, both newcomers to the euro area, overall economic performance benefited from the (forced) sharp interest rate decline ahead of entry into the euro area (Figure 1, Table 1).

As a result of the national "hard currency" policy conducted, short-term interest rates in Austria and the Benelux countries (notably in the Netherlands) had converged towards German rates already long before the introduction of EMU. In France, rates were somewhat higher than in Germany. Overall, short-term rates in these countries of the "hard currency block" were below the average before euro area entry, yielding rather a need for upward adjustment. In reality, the euro interest rate converged towards the German rate. Short-term interest rates in the euro area are on average by around ¼ percentage point lower than in the EU 15 and by more than ½ percentage point lower than in the EU 27.

A significant negative relationship exists between the extent of the fall in long-term real interest rates in the euro area since 1999 (compared with the previous decade) and the growth of real GDP over the same period ( $R^2 = 0.46$ ). This confirms the presumption that the centralised monetary policy is adequate only for the euro area average, but not for all its member countries. Hence, while some countries benefit from the monetary policy as conducted by the ECB, the stance is too restrictive for others such as Germany and (somewhat less) for Austria.

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### Manifold need for adjustment after introduction of the euro

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### Single monetary policy in the not yet harmonised euro area

<sup>5</sup> A research project conducted by the ECB (Wage Dynamics Network – WDN, [http://www.ecb.eu/home/html/researcher\\_wdn.en.html](http://www.ecb.eu/home/html/researcher_wdn.en.html)) deals with the issue of wage formation in the euro area.

<sup>6</sup> Besides the traditional argument (exogenous OCA theory; *Mundell, 1961*), whereby certain criteria (labour market flexibility) have to be fulfilled before entry into an optimal currency area (OCA), the endogenous OCA theory (*Mundell, 1973, Frankel – Rose, 1998, McKinnon, 2004*) claims that the adjustment takes place only after the creation of a monetary union, e.g., via closer trade integration (for a theoretical foundation of economic and monetary union see *Breuss, 2006C*, pp. 380ff).

Table 1: Monetary and fiscal policy developments since the start of Monetary Union

	Short-term interest rates		Real long-term interest rates		General government financial balances as a percentage of GDP		Gross public debt as a percentage of GDP	
	DA	D	DA	D	DA	D	DA	D
Euro area 16	3.4	.	1.8	.	- 1.8	.	68.6	.
Euro area 12	3.4	- 4.5	2.2	- 2.6	- 1.7	+ 2.4	68.9	+ 3.4
Austria	3.4	- 2.8	2.6	- 1.8	- 1.4	+ 1.9	64.0	+ 2.2
Belgium	3.4	- 3.2	2.0	- 3.4	- 0.3	+ 5.0	97.5	- 29.9
Finland	3.4	- 4.9	2.4	- 3.7	4.0	+ 5.9	40.9	- 0.9
France	3.4	- 3.8	2.6	- 2.8	- 2.7	+ 1.2	61.6	+ 14.4
Germany	3.4	- 2.8	2.9	- 1.5	- 1.9	+ 0.4	63.4	+ 14.2
Greece	4.4	- 14.6	1.2	- 5.3	- 4.3	+ 5.1	98.5	+ 11.1
Ireland	3.4	- 4.9	1.2	- 3.8	0.9	+ 2.4	32.2	- 51.6
Italy	3.4	- 6.7	1.9	- 3.7	- 2.7	+ 5.6	106.7	- 2.0
Luxembourg	3.4	- 3.2	2.0	- 2.1	2.4	+ 0.2	7.2	+ 1.1
The Netherlands	3.4	- 2.7	1.9	- 2.7	- 0.3	+ 2.9	51.4	- 23.6
Portugal	3.4	- 8.3	1.6	- 2.2	- 3.4	+ 1.9	58.2	+ 2.6
Spain	3.4	- 6.9	1.1	- 4.0	- 0.0	+ 4.7	48.0	- 6.0
Slovenia	6.6	.	0.8	.	- 2.0	.	25.8	.
Malta	4.1	.	3.2	.	- 5.1	.	63.4	.
Cyprus	4.8	.	2.8	.	- 2.3	.	62.4	.
Slovakia	6.7	.	0.6	.	- 5.0	.	40.5	.
Denmark	3.6	- 4.1	2.4	- 3.3	2.5	+ 4.4	40.7	- 27.6
Sweden	3.5	- 5.6	3.0	- 1.5	1.6	+ 5.0	50.0	- 11.2
UK	5.1	- 3.8	2.8	- 1.3	- 1.7	+ 2.1	41.2	- 1.8
EU 15	3.7	- 4.4	2.5	- 2.2	- 1.5	+ 2.6	62.9	+ 0.8
EU 27	3.9	.	1.6	.	- 1.7	.	61.5	.
<i>Standard deviation of the member countries of the euro area 12</i>	0.30	- 3.39	0.60	- 0.21	2.44	- 0.65	28.97	- 3.38

Source: Eurostat, European Commission. DA... Ø 1999-2008 in percent, D... differences between Ø 1999-2008 and Ø 1989-1998 in percentage points.

In the course of the international financial market crisis<sup>7</sup>, the ECB, in parallel with the US Federal Reserve or with a lag, cut key interest rates in 2008 massively, but in several steps. The major refinancing rate was lowered from a peak of 4.25 percent in early October 2008 in four steps to 2.0 percent in mid-January 2009 and to 1.5 percent in March 2009. The Fed, for its part, reduced its key interest rate, the Federal Funds Rate, from a top 5.25 percent in September 2007 in altogether 10 steps to 0 to 0.25 percent on 16 December 2008. In other European countries not belonging to the EU (Switzerland) or the euro area (UK), the central bank reacted in a similarly strong way as the Fed to the challenges of the financial and economic crisis. To what extent such aggressive loosening of monetary policy can arrest the slippage into recession is an open question. Model simulations (for an overview see Breuss, 2006C, p. 471) suggest that in "normal" cyclical conditions a cut in key interest rates by 1 percentage point will boost GDP growth by ¼ percentage point in the short run and by up to ½ percentage point in a medium term perspective. Since, however, inter-bank rates (such as the Euribor) were partly pushed above key interest rates by the prevailing distrust between banks, the usual transmission channels are not operating to full extent, (see also OECD, 2009, pp. 67ff).

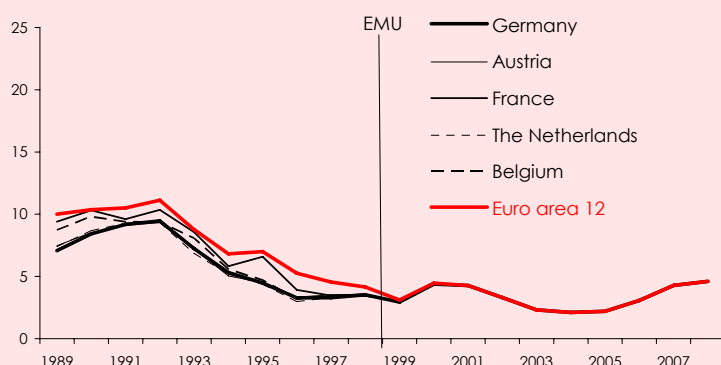
The lack of harmonisation between euro area countries' economic performance as a result of the differential impact of the global financial crisis has but reinforced the heterogeneity of the area. Given the different assessment of the creditworthiness of countries in the euro area, risk premia for government bonds differ widely. Greece, Ireland, Italy, Spain, but also Austria due to the "eastern" risks for investors, pay higher premia on European financial markets than, say, Germany.

<sup>7</sup> An overview of measures taken in order to stabilise financial markets at international level is presented in Deutsche Bundesbank (2008).

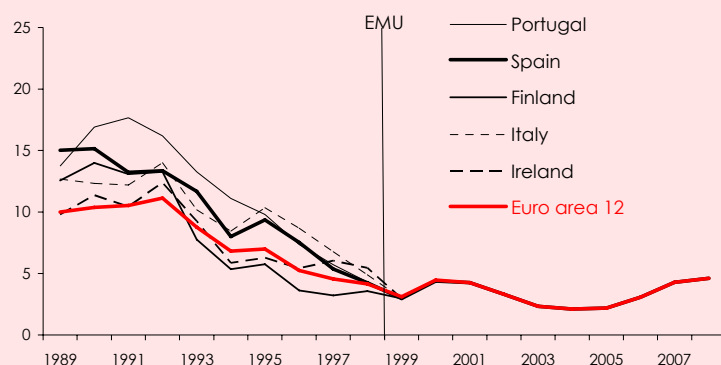
Figure 1: Short-term interest rates – necessary adjustment before entry into Monetary Union

In percent

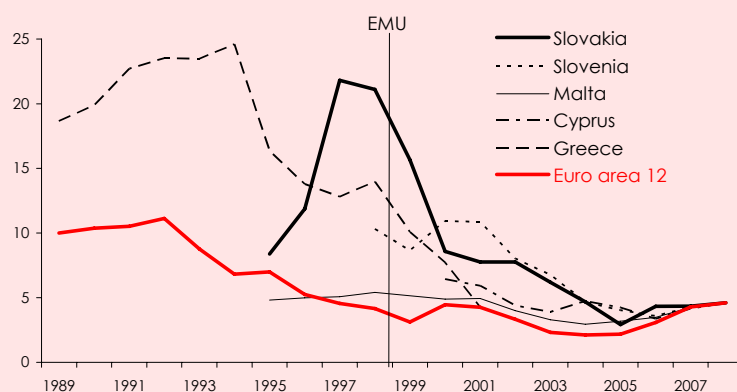
Countries with low adjustment before entry into Monetary Union



Countries with high adjustment before entry into Monetary Union



New member countries with partly high adjustment



Source: Eurostat, European Commission.

Fiscal policy remains a responsibility of the euro area countries, but is co-ordinated between them according to the provisions of the EU Treaty. National fiscal policy is called to support the centralised monetary policy of the ECB such that price stability is ensured at the national level, while at the same time smoothing the business cycle (mainly through the operation of automatic stabilisers). All this shall be carried out within the procedure foreseen in the EU Treaty in the case of the emergence of an excessive budget deficit (EDP), a procedure elaborated more specifically in the Stability and Growth Pact (SGP). What is not clear is whether the co-ordination of fis-

**Fiscal policy – no  
success without  
co-ordination**

cal policy by means of complicated procedures and instruments produces higher benefits than costs (Breuss, 2006B, pp. 41ff)<sup>8</sup>.

Before the launch of EMU, most EU countries undertook efforts to consolidate their public finances. The strengthening of government budgets can therefore be regarded as one of the major successes of the EMU project. In all euro area countries, the budgetary position has been improved significantly in the first ten years of EMU as compared with the previous decade, but least of all in Germany and Luxembourg (Table 1). Whether the drive for budgetary consolidation ahead of the first test of compliance with the convergence criteria in 1998 and the subsequent prudent fiscal stance under the regime of the Stability and Growth Pact had negative rather than positive effects on overall economic performance of the countries concerned is a matter of controversy. Simulations with the European Commission's QUEST model (Breuss – Roeger, 2007, European Commission, 2004B, p. 161, Flores – Giudice – Turriani, 2005, p. 8) suggest that in the early stages fiscal consolidation dampened real GDP growth by 0.2 percent p.a.. However, with consolidation being sustained, the effect turned around and after five years the initial loss of GDP growth was made up.

Two countries, Germany and France, breached during four years in a row (from 2002 to 2005) the SGP. This triggered a debate about the meaningfulness of the SGP<sup>9</sup> on the one hand, and considerations about a reform on the other, in order to improve the practical applicability of the SGP for policy purposes (Breuss, 2007A). The reform of the SGP in 2005 gives somewhat greater flexibility to fiscal policy by allowing more than before for country-specific elements in the overall economic environment. The failure to respect the SGP reference value for the general government deficit (3 percent of GDP) between 2002 and 2005 also complicated the stabilisation of government debt in Germany and France. While in most euro area countries the debt-to-GDP ratio declined over the ten-year period since 1999, it has increased considerably in Germany, France and Greece (Table 1).

In the very context of the severe recession following the international financial market crisis of 2008, the European Commission in its proposal for a "European Economic Recovery Programme" invokes the advantages of the reformed SGP offering greater flexibility in times of cyclical weakness. "Exceptional circumstances, where a financial market crisis coincides with a recession justify a co-ordinated fiscal expansion in the EU. For some member states this implies that the reference value for the deficit of 3 percent of GDP will be exceeded. Member states with an excessive deficit must take corrective action in periods of economic recovery" (European Commission, 2008D, p. 9).

On the basis of the allocation of competences as defined in the EU Treaty, only the co-ordination of fiscal policy is foreseen. Yet, many studies on the effects of policy co-ordination in the euro area draw the conclusion that an all-embracing co-ordination of both monetary and fiscal policy would be optimal. Weyerstrass *et al.* (2006) demonstrate this using simulations with the MSGM global macro-economic model for different co-ordination scenarios. Ratto – Roeger – *in't Veld* (2006) run simulations with a neo-Keynesian dynamic stochastic general-equilibrium model (DSGE model) for the euro area, investigating into the consequences of different kinds of policy shocks for the euro area as a whole<sup>10</sup>. Their results confirm those of Fatás – Mihov (2003) and Badinger (2009A) whereby an aggressive discretionary fiscal policy normally raises overall economic instability to a significant degree. According to Fatás – Mihov (2003), an increase in the volatility of real GDP by 1 percent triggered by discretionary fiscal policy reduces growth of real GDP by more than 0.8 percentage points. Although the specific design of the rules of the SGP may be challenged from a theoretical viewpoint (Kohler, 2007), this result advises strongly in favour of restraint with regard to fiscal action by the euro area countries and of

<sup>8</sup> The attempts made by the European Commission to cut administrative cost and red tape ("better regulation") indicate problem awareness in this regard ([http://ec.europa.eu/enterprise/regulation/better-regulation/index\\_de.htm](http://ec.europa.eu/enterprise/regulation/better-regulation/index_de.htm)).

<sup>9</sup> Kohler (2007) criticises the SGP from a theoretical perspective.

<sup>10</sup> A similar kind of simulations of shocks in a two-country DSGE model (euro area and Austria) can be found in Breuss – Rabitsch (2009).



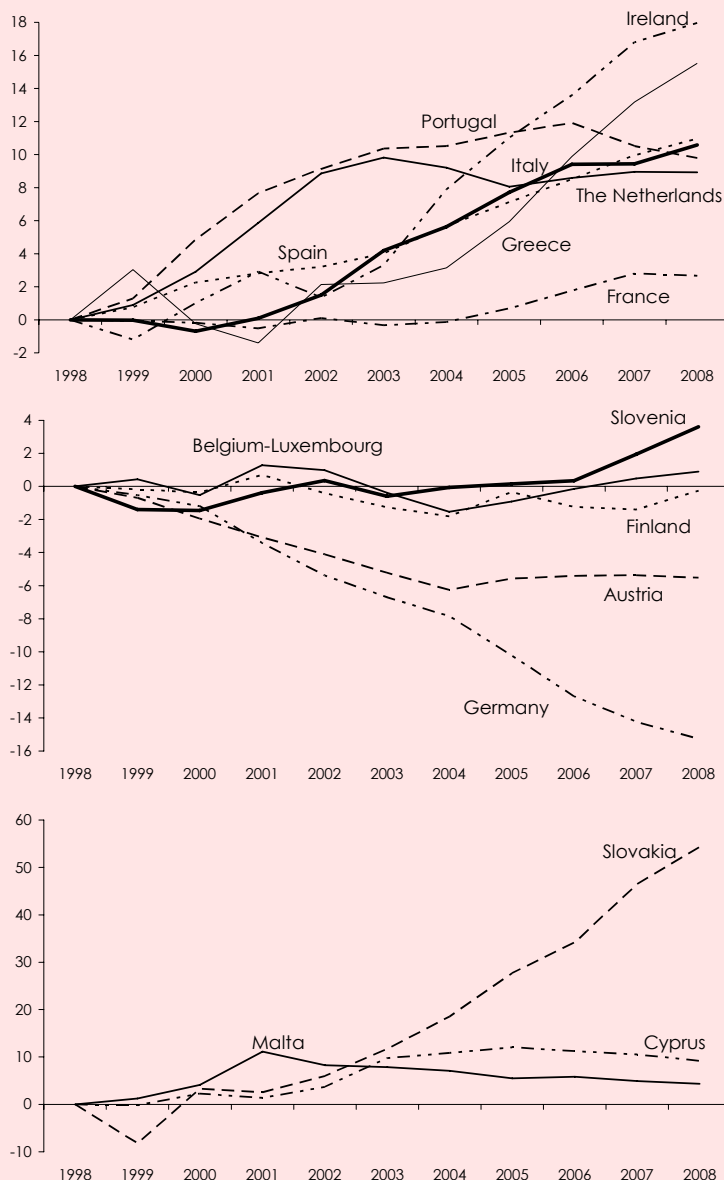
compliance with the rules of the SGP. It appears, however that the European Commission itself, in view of the severe recession expected in the wake of the financial market crisis, disregards for the time being these principles applying in "normal" cyclical conditions (*European Commission, 2008D, p. 9*).

Apart from the necessary adjustment of the policy design in the euro area, economic agents must also adjust their behaviour to the reality of the single currency (market adjustments; *European Commission, 2006*). The debate about the costs of EMU addresses mainly the issue whether the irrevocable freeze of the exchange rates and the single monetary policy for the euro area actually leave member countries enough room for manoeuvre to accommodate external shocks with country-specific effects.

### Differences in competitiveness within the euro area

Figure 2: Competitiveness within the euro area

Real-effective exchange rate<sup>1</sup>, changes from 1998



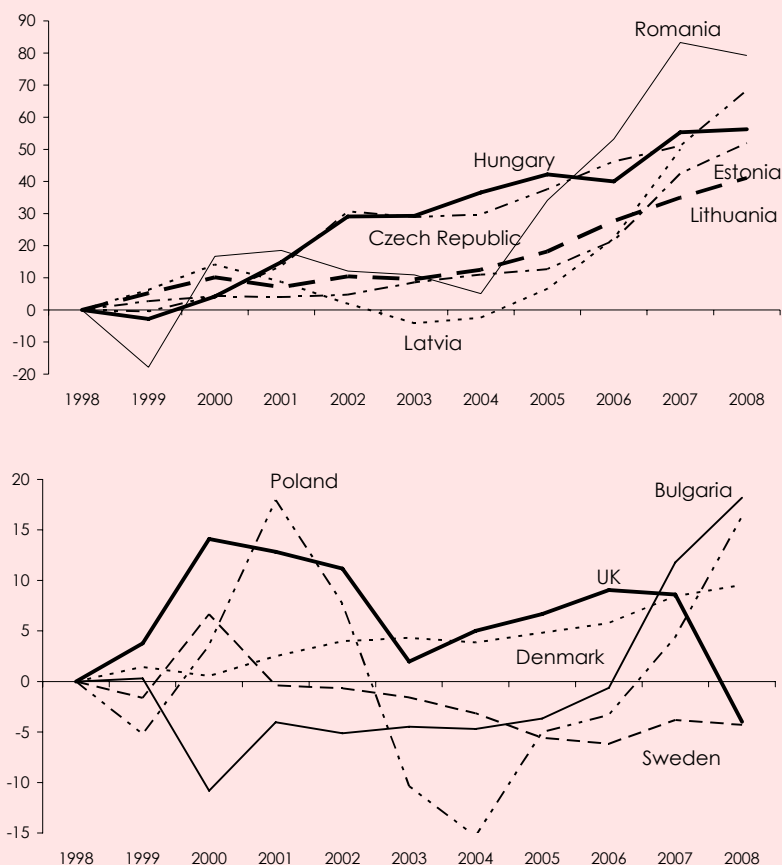
Source: European Commission, 2008; estimates. – <sup>1</sup> Based on unit labour costs, performance relative to 16 trading partners of the euro area.

Before the introduction of the euro, the member states could use the nominal exchange rate to accommodate external shocks. This option was used notably by Italy and Spain as well as other "soft currency countries" in the wake of the creation of

the Internal Market in the early 1990s. These competitive devaluations almost led to a breakdown of the Internal Market project. With the freeze of the exchange rates and the introduction of the common currency, this instrument is no longer at the disposal of the member countries. In the new regime, adjustments have to occur through other channels such as via wage flexibility or higher productivity. The capacity to adjust to the new market conditions in the euro area is now reflected by relative unit labour costs (the real-effective exchange rate).

Figure 3: Competitiveness of non-EMU EU countries vis-à-vis the euro area

Real-effective exchange rates<sup>1</sup>, changes from 1998



Source: European Commission. 2008: estimates. – <sup>1</sup> Based on unit labour costs, performance relative to 16 trading partners of the euro area.

The former "hard currency countries" within the Deutschemerk block (Germany, Austria, Belgium and Luxembourg) have so far managed to increase their competitiveness vis-à-vis the other euro area countries, whereas the competitive position of the former "soft currency countries" weakened (Figure 2, Table 3). This has repercussions on the flow of goods and services in the euro area (Table 5). The development of the current accounts in the last decade follows a similar pattern as that of the trade balances in intra-EU trade: since 1999, Germany and Austria have strengthened their position on world markets significantly. This improvement is shared to broadly equal extent by trade with countries within and outside the euro area. The current account surplus of the Netherlands, while maintaining a high level, has been heading down for some time, that of Finland has declined steadily since 2003. Greece, Portugal and Spain have seen their current account position deteriorating continuously since EMU entry, with Ireland following a similar trend. Also the current accounts of France and Italy show an, albeit less pronounced, tendency towards weakening. The Belgian current account has since 2008 swung from surplus to deficit (OECD, 2008).

Besides the dangers emanating from the competitive positions within the euro area drifting apart (European Commission, 2008A, pp. 55ff), possible devaluations in non-

euro-area countries may still undermine the cohesion and fair competition within the EU Internal Market. The euro exchange rates of the EU-15 countries that are not members of the euro area (Denmark, Sweden and the UK) are broadly stable (Figure 3), hence posing little risk. However, the new EU countries regularly exhibit a strong tendency of real exchange rate appreciation. The latter mirrors the Balassa-Samuelson effect (Breuss, 2006C, pp. 274ff), which will operate as long as their economies keep catching up towards the rich EU countries. In the wake of the financial market crisis the currencies of many of the new EU countries came under considerable pressure.

Overall, the common currency has proved successful in its first decade since the launch of EMU. After an initial period of weakness, leading to a depreciation by 25 percent against the dollar, the euro has appreciated by almost 60 percent since becoming legal tender in 2002. The exchange rate vis-à-vis the yen has followed a similar pattern. It is only after the outbreak of the international financial market crisis in mid-2008 that the euro lost again some 25 percent vis-à-vis the dollar, before heading up most recently (Figure 4).

Figure 4: Exchange rate development vis-à-vis the euro

Changes from January 1999 in percent



Source: ECB.

The introduction of the common currency was expected to offer more advantages than disadvantages (European Commission, 1990, Breuss, 2006C, pp. 431-432). The following advantages were perceived:

- Abolition of transaction costs: this may have caused losses in banks' foreign exchange business.
- Enhanced competition in the financial sector: with the introduction of the common currency, a cross-border financial market developed in the euro area. This positive effect for investors and consumers (facilitating price comparisons in the Internal Market) may have led to a profit squeeze in the banking sector.
- Exchange rate stability: benefited the former "hard currency countries" rather than the "soft currency countries" which had used devaluation as a tool for improving their competitiveness.
- Positive effect on growth by boosting total factor productivity: this effect benefited to a relatively greater extent the previously less efficient economies of the "soft currency countries".
- Adjustment in the policy framework (see above).

On the basis of the identified theoretical advantages of a common currency, model calculations (Breuss, 1997A, 1997B) suggested ex-ante that real GDP growth for the euro area would be boosted by  $\frac{1}{3}$  percentage point per year by its introduction as compared with a scenario without Monetary Union (with growth advantages being somewhat stronger in the "hard" than in the "soft" currency countries).

## Advantages and drawbacks of the common currency

### A euro growth dividend?

Table 2: Overall economic performance within and outside the euro area

		Euro area		Denmark, Sweden, UK		USA	
		Ø 1989-1998	Ø 1999-2008	Ø 1989-1998	Ø 1999-2008	Ø 1989-1998	Ø 1999-2008
GDP, volume	average percentage change, p.a.	+ 2.2	+ 2.1	+ 2.0	+ 2.7	+ 3.0	+ 2.6
GDP per capita, volume	average percentage change, p.a.	+ 1.9	+ 1.6	+ 1.7	+ 2.2	+ 1.8	+ 1.6
GDP per capita in purchasing power standards	USA = 100	73.0	72.0	74.0	76.0	100.0	100.0
Employment	average percentage change, p.a.	+ 0.6	+ 1.3	+ 0.1	+ 0.9	+ 1.5	+ 1.0
Labour productivity	average percentage change, p.a.	+ 1.6	+ 0.8	+ 1.9	+ 1.8	+ 1.5	+ 1.5
Unemployment rates	in percent	9.3	8.3	7.9	5.2	5.8	5.0
Inflation rates	in percent	3.3	2.2	3.4	1.7	3.3	2.8
General government financial balances	as a percentage of GDP	- 4.3	- 1.7	- 3.6	- 0.9	- 3.3	- 2.5
Gross public debt	as a percentage of GDP	68.6	68.6	48.7	43.0	67.8	60.7
Long-term interest rates	in percent	8.1	4.4	8.6	4.9	7.1	4.8
Real long-term interest rates	in percent	4.7	2.4	4.2	3.3	4.3	2.4

Source: European Commission (2008A), p. 19.

Table 3: Overall economic performance since the start of Monetary Union

	Real GDP growth		Inflation rates		Unemployment rates		Real effective exchange rates <sup>1</sup>	
	DA	D	DA	D	DA	D	AG	D
Euro area 16	+ 2.1	- 0.0	2.3	.	8.4	.	+ 0.6	.
Euro area 12	+ 2.1	- 0.1	2.2	- 1.3	8.3	- 1.1	+ 1.1	+ 1.5
Austria	+ 2.4	- 0.3	2.0	- 0.6	4.3	+ 0.5	- 0.3	- 0.4
Belgium	+ 2.2	+ 0.1	2.3	- 0.1	7.8	- 0.6	+ 0.7	- 0.3
Finland	+ 3.3	+ 1.7	1.9	- 0.8	8.5	- 2.6	+ 0.6	+ 3.1
France	+ 2.1	+ 0.1	1.8	- 0.4	8.9	- 1.4	+ 0.7	+ 1.1
Germany	+ 1.5	- 0.5	1.6	- 1.1	8.7	+ 1.4	- 0.8	- 0.9
Greece	+ 4.1	+ 2.1	3.3	- 8.8	10.1	+ 1.6	+ 1.4	- 0.6
Ireland	+ 5.8	- 0.7	3.8	+ 1.3	4.7	- 8.2	+ 2.5	+ 3.7
Italy	+ 1.3	- 0.3	2.4	- 2.2	8.3	- 1.9	+ 1.7	+ 2.9
Luxembourg	+ 4.9	+ 0.0	2.4	+ 0.3	3.5	+ 1.1	+ 0.7	- 0.3
The Netherlands	+ 2.4	- 0.7	2.3	- 0.2	3.4	- 2.3	+ 1.2	+ 1.5
Portugal	+ 1.6	- 1.6	2.9	- 3.9	6.2	+ 0.5	+ 1.4	- 2.3
Spain	+ 3.5	+ 0.8	3.3	- 1.4	10.4	- 5.7	+ 1.5	+ 1.1
Slovenia	+ 4.5	+ 4.2	5.5	.	6.1	.	+ 0.2	.
Malta	+ 2.5	- 2.9	2.5	- 0.3	7.1	.	+ 1.2	.
Cyprus	+ 3.8	- 0.6	2.9	- 1.2	4.3	.	+ 1.3	.
Slovakia	+ 5.2	+ 4.2	6.4	.	16.0	.	+ 4.3	.
Denmark	+ 1.9	- 0.3	2.2	- 0.1	4.5	- 2.6	+ 1.4	+ 1.4
Sweden	+ 3.0	+ 1.5	1.5	- 2.3	6.1	- 0.7	- 0.2	+ 0.6
UK	+ 2.6	+ 0.5	1.8	- 1.8	5.2	- 2.9	- 0.1	- 1.6
EU 15	+ 2.2	+ 0.1	2.1	- 1.5	7.7	- 1.4	+ 1.3	+ 1.2
EU 27	+ 2.3	+ 0.3	2.6	.	8.4	.	+ 1.6	.
Standard deviation of the member countries of the euro area 12	+ 1.41	- 0.06	0.69	- 2.23	2.52	- 1.37	+ 0.89	- 0.73

Source: Eurostat, European Commission. AG ... average percentage changes 1999-2008 p.a., DA ... Ø 1999-2008 in percent, D ... differences between Ø 1999-2008 and Ø 1989-1998 in percentage points. - <sup>1</sup> Based on unit labour costs, performance relative to 23 industrial countries.

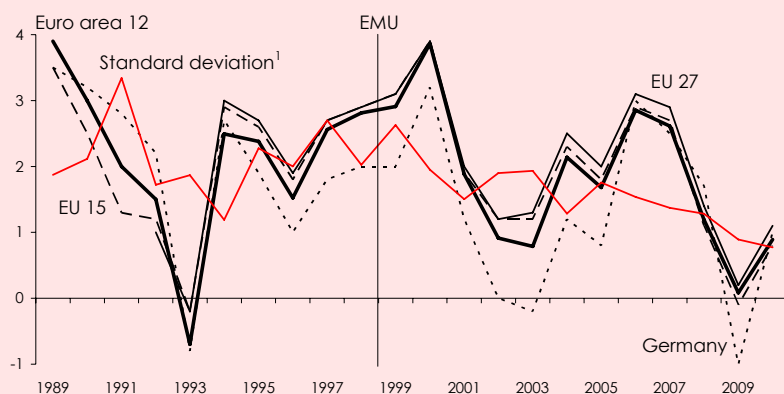
The expected growth "dividend" of the euro has so far failed to materialise. The average growth performance of the euro area has been disappointing, as the EU countries outside the euro area (Denmark, Sweden, UK) recorded a distinctly stronger increase in their GDP and GDP per capita (Table 2). However, the mediocre performance of the euro area on average since 1999 masks substantial differences between individual countries. Overall, real GDP growth of the euro area (12 member countries) since 1999 was 0.1 percentage point p.a. lower than in the EU 15. In the ten years before the start of EMU, the pace was identical in both areas (Table 3; European Commission, 2004A).

The lack of dynamism in the euro area since 1999 is largely due to sluggishness in Germany (for the reasons see Breuss, 2006A). A major reason for the latter were the high costs of German re-unification: for a short period after re-unification in the early 1990s, the German economy grew more strongly than the EU 15, giving also the euro

area a (statistical) growth advantage over the EU 15 (Figure 5). With the costs of reunification mounting, and possibly also due to negative effects of EMU participation (too restrictive monetary and fiscal policies), GDP growth in Germany remained well below the country's growth potential. Arguments for how to raise Germany's growth potential can be found in *European Commission (2007)*.

Figure 5: Real GDP growth

In percent



Source: European Commission. – <sup>1</sup> Standard deviation of the member countries vis-à-vis the euro area 12.

While, like Germany, half of the euro area countries recorded slower economic growth in the first ten years of EMU than before, activity gained considerable momentum in some others, notably in Finland, Greece and Spain. France and Luxembourg showed little difference between the two periods (Table 3). Among the newly acceding euro countries (since 2007), Slovakia and Slovenia recorded markedly stronger average growth after 1999 than in the ten years before, largely as a result of catching up during the transformation process these countries are undergoing. In Malta and Cyprus, economic growth decelerated from the earlier period.

Against the background of such subdued economic growth, there is a tendency for a "European business cycle" to emerge (see *Breuss, 2009*). One indicator in this respect is the decreasing volatility of GDP growth as measured by the standard deviation of the growth rates for the original 12 euro area countries (Figure 5, Table 3).

Overall economic growth is normally reflected also by developments on the labour market. Unemployment declined somewhat more in the EU 15 than in the euro area of the original 12 countries. One reason is the rising unemployment rate in countries of weaker growth since the introduction of the euro (Germany and Austria); another the adverse labour market effects in countries with structural problems (Greece, Luxembourg and Portugal; Table 3). In all other euro area countries, the unemployment rate declined, in some of them even massively.

An interesting (psychological) phenomenon in the context of euro introduction is the popular notion of an implicit rekindling of inflation. However, headline inflation has actually decelerated in 7 out of 12 euro area countries since the start of EMU (Table 3). Overall, the decline in inflation rates was nevertheless less pronounced in the euro area 12 than in EU 15 (–1.3 against –1.5 percentage points). While some goods of daily consumption (food, restaurant meals etc) became more expensive – partly due to lack of competition in the sector –, prices of durable consumer goods fell markedly on the back of stronger international competition. The discrepancy between perceived and actual inflation (in the euro area overall: *Breuss, 2006C, p. 445, European Commission, 2008A, p. 32*) in the euro-area countries (*Fluch – Stix, 2005*), but not in the EU countries outside EMU (*Aucremanne – Collin – Dhyne, 2005*) is a clear sign of a psychologically-motivated perception.

**Has the price level become more stable?**

## Has Austria Benefited from the Introduction of the Common Currency?

### Empirical Facts

Over the period 1999-2008, the Austrian economy performed better on nearly all macro-economic indicators than the average for the euro area or the EU 15 (Table 4). Where Austria scored below-average was the growth of real wages per employee, but not of real GDP per capita. Employment growth also lagged behind, while Austria's long-term real interest rates exceeded the euro-area average by 0.4 percentage points per year since 1999 – one of the negative aspects of the centralised monetary policy which turned out to be too restrictive for Austria (like for Germany).

Among the advantages of the introduction of the common currency for Austria is the achievement of a high degree of price stability, contrary to a widespread popular perception. Although the commodity price boom of 2007-08 drove also headline inflation strongly upward, above the 2 percent ceiling of price stability as defined by the ECB, the appreciation of the euro against the dollar implied a price reduction of almost 30 percent of dollar-denominated commodities for the euro area. Since the onset of the financial market crisis with its recessive tendencies, inflation has slackened markedly. Over the ten-year period since 1999, Austria's rate of inflation was 0.2 percentage points below the euro-area average.

Among the major advantages of the single currency for Austria is that it shields the economy from the dangers of globalisation (e.g., dampening of price jump for dollar-denominated commodities; stability in times of international financial crisis – Iceland!) as well as the trade-creating effect, not so much in intra-euro-area trade as in trade with destinations outside. The removal of the possibility of euro-area partners to devalue their currencies came as a benefit to the former hard-currency countries (Germany and also Austria) insofar as their unit labour cost position (real exchange rate) and therefore their price competitiveness vis-à-vis the trading partners in the euro area improved substantially (for Germany by a cumulated 15 index points, for Austria by 6 index points). Austria's trade with the euro area (share in total external trade) lost somewhat against extra-euro-area trade, although less so than was the case for the euro-area countries on average. Austria managed to strengthen its competitive position (as measured by the trade balance) in the exchange with countries outside the euro area (but also with the EU 27) to an important extent between 1998 and 2007, whereas that position weakened in the euro-area 16 (Table 4).

Besides raising overall demand in the new EU countries in eastern Europe, the common currency contributed importantly towards simplifying Austria's trade outside the euro area. As the euro became the key denomination currency, the cost of trade diminished both within and outside the euro area. This is also one of the claims of the "New New Trade Theory" (Melitz, 2003, Helpman, 2006, Baldwin, 2006). In addition, Austria's competitive position (as measured by unit labour cost) vis-à-vis trading partners in the euro area has strongly improved since the introduction of the euro, i.e., because real wages rose somewhat less, but productivity markedly more strongly than in the other euro-area countries.

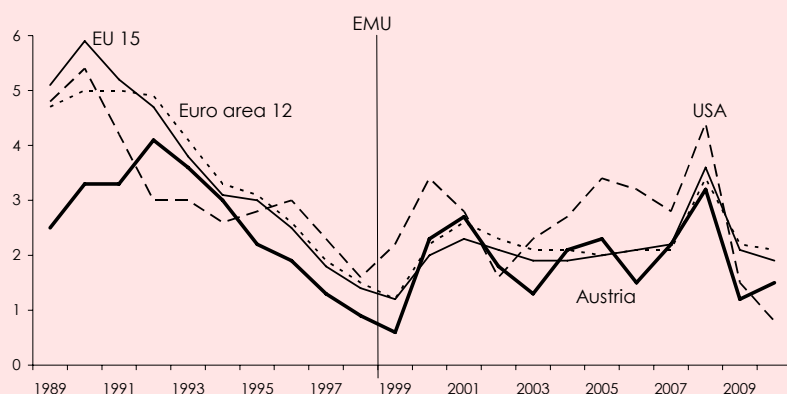
The downward trend of inflation in the last decade is, however, not only the result of the introduction of the common currency and thereby confined to the euro area, but it has been (until the commodity and oil price boom 2007-08) a worldwide phenomenon and possible a positive side-effect of globalisation and the implicit heightened competitive pressure more generally (Badinger, 2009B)<sup>11</sup>. In parallel with the general moderation of inflation, the volatility of inflation rates in the euro area has been reduced, i.e., their dispersion has become much smaller. This has contributed towards the "Europeisation" of the business cycle (Table 3).

Already before 1999, a clear trend towards lower inflation has been observed, not only for the countries to subsequently form the euro area, but on a global scale (e.g., in the USA). Whereas average annual inflation over the period from 1989 until 1998 was 3.3 percent both in the euro area and the USA, the rate dropped significantly lower in the euro area since the introduction of the common currency, to 2.2 percent as compared with 2.8 percent in the USA. The rebound in inflation to almost 3½ percent in the euro area and 4½ percent in the USA, triggered by the international commodity and oil price boom of 2007 and 2008, should clearly reverse in 2009 and 2010 with the global economic and demand recession in the wake of the financial market crisis, taking the inflation rate back towards the target of 2 percent as defined by the ECB (Figure 6).

<sup>11</sup> For further investigation into this phenomenon, the ECB has established a dedicated project ("Inflation Persistence Network – IPN", [http://www.ecb.eu/home/html/researcher\\_ipn.en.html](http://www.ecb.eu/home/html/researcher_ipn.en.html)).

Figure 6: Inflation performance

In percent



Source: European Commission.

Table 4: Major economic indicators

	Austria	Ø 1989-1998		Ø 1999-2008			Differences between the periods		
		Euro area 12	EU 15	Austria	Euro area 12	EU 15	Austria	Euro area 12	EU 15
Average percentage changes p.a.									
GDP, volume	+ 2.7	+ 2.1	+ 2.1	+ 2.4	+ 2.1	+ 2.2	- 0.3	- 0.1	+ 0.1
GDP per capita, volume	+ 2.2	+ 1.9	+ 1.8	+ 1.9	+ 1.6	+ 1.7	- 0.3	- 0.3	- 0.1
Real wages per employee	+ 1.5	+ 1.1	+ 1.1	+ 0.4	+ 0.5	+ 0.9	- 1.1	- 0.6	- 0.2
Employment	+ 0.5	+ 0.6	+ 0.5	+ 1.0	+ 1.3	+ 1.2	+ 0.5	+ 0.7	+ 0.7
Factor productivity (TFP)	+ 1.1	+ 1.1	+ 1.2	+ 0.9	+ 0.5	+ 0.7	- 0.2	- 0.6	- 0.5
Labour productivity (GDP per employment <sup>1</sup> )	+ 2.0	+ 2.0	+ 1.9	+ 1.4	+ 1.1	+ 1.2	- 0.6	- 0.9	- 0.7
Real effective exchange rates	+ 0.1	- 0.4	+ 0.1	- 0.3	+ 1.1	+ 1.3	- 0.4	+ 1.5	+ 1.2
Changes 1998-2007 in percentage points									
Trade balances as a percentage of GDP									
Intra-Euro area 16				- 2.5	- 0.8	- 1.4			
Extra-Euro area 16				+ 5.2	- 0.2	- 0.5			
Intra-EU 27				- 0.4	- 0.8	- 1.4			
Extra-EU 27				+ 3.1	- 0.7	- 0.8			
In percent									
Inflation rates	2.6	3.5	3.7	2.0	2.2	2.1	- 0.6	- 1.3	- 1.5
Unemployment rates	3.8	9.4	9.1	4.3	8.3	7.7	+ 0.5	- 1.17	- 1.4
Real long-term interest rates	4.4	4.8	4.7	2.6	2.2	2.5	- 1.8	- 2.6	- 2.2
Intra-Euro area trade <sup>2</sup>	63.9	52.7	52.1	62.4	50.8	50.3	- 1.5	- 2.0	- 1.8
As a percentage of GDP									
s									
General government financial									
balances	- 3.4	- 4.2	- 4.2	- 1.4	- 1.7	- 1.5	+ 1.9	+ 2.4	+ 2.6
Gross public debt	61.7	65.5	62.1	64.0	68.9	62.9	+ 2.2	+ 3.4	+ 0.8
Current balances	- 1.2	0.2		1.4	0.3		+ 2.6	+ 0.1	

Source: Eurostat, European Commission, OECD, Economic Outlook, 2008, (84). - <sup>1</sup> Full-time equivalents. - <sup>2</sup> Exports and imports as a percentage of total trade.

### Model Simulations of the Effects of the Introduction of the Common Currency

Before the start of EMU, WIFO in a comprehensive study had analysed the likely effects of the introduction of the common currency (Baumgartner *et al.*, 1997). In that context, also the macro-economic consequences had been estimated with the help of model simulations (Breuss, 1997A, p. 62, 1997B). Austria would thereby benefit from EMU participation in the form of an increase in real GDP by 2.2 percent cumulated over 5 years or 0.4 percent per year (EU +1.7 percent and 0.3 percent, respectively). Main driver behind the growth "dividend" would be an increase in total factor productivity (accounting for 1.6 percentage points), along with some increase in competition in the financial sector and greater exchange rate stability (explaining nearly 0.3 percentage points each). The impact of the abolition of transaction cost when changing schilling into other currencies would be negligible given offsetting losses in the banking business.

An updated simulation exercise using the same model as in 1997 (Oxford Economic Forecasting global macro-economic mode) for the assessment of the effects of 10 years of EMU participation (1999-2008) focusing on the main influence factors reveals the following:

- *Fiscal policy:* EMU entry obliged Austria (as all other entry candidates) to consolidate public finances in accordance with the convergence criteria and to cut the general government deficit to below 3 percent of GDP. Had the deficit ratio, without such constraint, been higher by 1 percentage point, the consolidation via immediate EMU participation would have shaved ½ percentage point off GDP growth for 4 years in a row, but for the period 1999-2008 had a positive impact on income growth of cumulated up to 0.8 percentage points. On average for the last ten years, fiscal consolidation raised annual GDP growth by 0.1 percentage point (compared with a scenario without EMU).
- *Exchange rate effect:* Before EMU entry, the Austrian schilling appreciated steadily and markedly against both the ECU and in real terms *vis-à-vis* the trading partners, implying a weakening competitive position. With Monetary Union entering into force, this effect was removed and Austria has gained competitiveness. On the cautious assumption that the schilling, without EMU participation, would have appreciated against the ECU and thereby also against the dollar by 1 percent, the result is a slightly positive GDP effect initially (cumulated +0.3 percentage points) turning negative after 2004 (1999-2008 cumulated -0.4 percentage points). Overall, the exchange rate effect was virtually neutral (-0.04 percentage point per year). Nevertheless, the appreciation effect assumed here may have been too small.
- *Productivity effect:* Austria's advance in productivity since 1999 was stronger than the average for the euro area. This holds for labour productivity as well as for total factor productivity (TFP). It is assumed here that the introduction of the single currency raised Austria's TFP by 1/3 percent p.a. above the average, resulting in a boost to real GDP growth by a cumulated 2.7 percentage points (+0.3 percentage points p.a.) since 1999. The productivity effect is thus, like in the ex-ante WIFO study, the strongest single growth effect of EMU implementation.
- *Total effect:* Over the ten years since 1999 Austria recorded GDP growth of cumulated 26 percent (2.4 percent per year). The three euro effects simulated yield a cumulated GDP growth effect of 3.1 percentage points (0.3 percentage points p.a.), thereby accounting for 12 percent of overall GDP growth since the beginning of EMU.

These simulations can, however, but approximate the complex effects of euro introduction. As a dampening impact, the negative repercussions of the centralised monetary policy of the ECB ought to be taken into account: as a consequence, the real interest rate since 1999 was higher by almost 0.4 percentage points than the euro-area average, albeit hardly above the EU-15 average and lower than in Germany (0.7 percentage points above the euro area). Yet, the trend in long-term real interest rates is in line with the Fisher equation (whereby the real interest rate is in the longer term independent of monetary influences) consistent with the boost to GDP growth and the moderation of inflation.

#### Austria's reaction to shocks since the introduction of the euro

Participation in EMU has significantly changed the reaction of the Austrian economy to shocks (Breuss – Rabitsch, 2009): Austria reacts more strongly to demand shocks (investment or government expenditure) than the other euro-area countries which are to a larger extent driven by supply shocks (labour). The reaction to a TFP shock is stronger in Austria than in the other euro-area countries. Compared with the pre-EMU period, the ties between the Austrian business cycle and that of the other euro-area countries have become closer. External shocks now account for a much larger part of Austria's business cycle variations than before 1999.

The trade-creating effect of euro introduction proved to be distinctly smaller than the trade effect of EU enlargement (Figure 7). The share of intra-EU-27 trade in GDP increased in the second half of the 1990s (particularly strongly since 1998). This is due to the lively expansion of trade between the EU 15 and the East-central European countries since the fall of communism until their accession to the EU in 2004. The share of intra-EU-15 trade in GDP also increased until 2000, as a consequence of the stepwise implementation of the Internal Market "acquis" and the trade liberalisation on the basis of the Europe Agreements (Ilzkovitz *et al.*, 2007, p. 30). Since 2000, the trade effects of the enlargement process and notably the intra-EU-15 trade integration appear to have levelled off. Since 2005, the share of trade in GDP has recov-

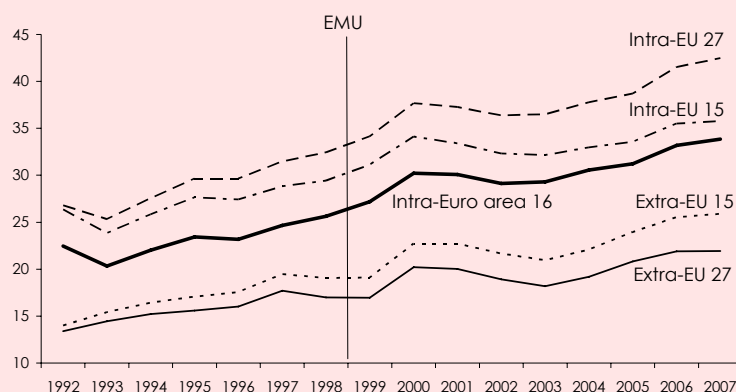
**Has intra-euro-area trade been stimulated?**



ered from the stagnation in 2002-03. This pick-up was more visible in intra-EU-27 trade than in intra-EU-15 trade (Figure 7).

Figure 7: Foreign trade of the EU

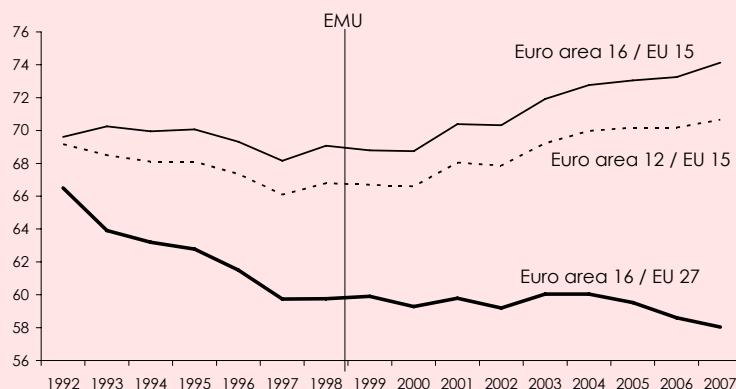
Exports plus imports, as a percentage of GDP



Source: IMF.

Figure 8: Foreign trade within the euro area

Average of exports and imports in relation to intra-EU trade



Source: IMF.

The period of weakening trade integration co-incident with the introduction of the euro. It is maybe too early for a final assessment of the trade-creating effect of euro introduction. In the academic literature there is widespread agreement that the completion of EMU had a positive impact on trade integration. Most panel-econometric estimates with gravitation equations yield an increase of intra-euro-area trade attributable to euro introduction between 5 percent and 15 percent, and the long-term effect may be even larger<sup>12</sup>.

<sup>12</sup> An overview of such studies offers Baldwin (2006); for WIFO estimates see box "WIFO calculations on trade increases as a result of completion of EMU.

Frankel (2008) wants to find out why most estimates of trade effects of the euro (increase of intra-euro-area trade by 10 percent to 15 percent) are so much lower than those obtained by Rose (2000), who (measured by many small currency unions worldwide) expected a doubling or tripling. This "Rose effect" has been criticized from many sides on econometric and other grounds; Frankel (2008, p. 15) also concedes that none of the three factors explored (lags: observation period since euro introduction too short; size: country size in the euro area bigger than in Rose's estimates; endogeneity) can explain the gap.

*WIFO Calculations on Trade Increase Induced by the Completion of EMU*

Econometric estimates carried out so far of the trade effects attributable to the euro are within a range from 5 percent to 15 percent (for a survey of the literature see Baldwin, 2006, and Frankel, 2008). All studies in this regard use the gravitation equation approach for the estimation of bilateral trade flows. WIFO has submitted estimates for a sample of 32 countries (16-euro-area countries, other EU 27 and the non-EU countries Norway, Switzerland, Japan, USA, Turkey) and the period 1994-2007. First, a traditional gravitation equation was estimated where bilateral exports depend on GDP or population of the exporting and the importing country, on the distance between the trading partners (transport cost) and, apart from dummy variables for the common language and border, in particular on two integration variables: EU membership and participation in EMU. In a second step, a theoretically more sophisticated gravitation equation (Egger, 2000) was estimated, where bilateral exports are determined by the following variables: the distance in the relative factor endowment (capital versus labour) between the trading partners (the larger the difference, the larger is inter-industrial trade), the sum of both countries' GDP (a measure for the total trade volume), a similarity index (the more similar the relative size of two economies, the larger will be intra-industrial trade) and by the other variables included in the traditional approach (distance, language, common border, EU and euro-area dummies). Estimations were carried out cross-section per year and for sub-periods, and as panel over the entire period and for sub-periods.

*Results of cross-section estimates*

In the traditional approach, the EU dummy variable is significant for the pre-EMU period (1994-1998). Thus, bilateral trade could have been raised by 18 percent (early in the period even by up to 25 percent) as a consequence of EU accession. In the EMU period (1999-2007), the EU dummy variable becomes insignificant. The euro dummy variable is significant for the first two years (only). The trade creation effects correspond to those of the pre-EMU period both for the entire EMU period and for its initial stage.

In the theoretically more sophisticated approach, the impact of EU accession and of EMU participation on trade volumes is much smaller, at +10 percent on average for both periods. At the beginning of the EMU period, the effects are similar for both approaches (trade around +25 percent, respectively).

*Results of panel estimates*

Here, both approaches yield similar, weakly significant results with regard to the influence of EU accession and EMU participation. Whereas EU accession produces a trade effect of +8 percent only in the estimation over both periods, only insignificant values are obtained from the estimation for the sub-periods (both in the model with fixed and with random effects). However, all variations suggest for the completion of EMU an implicit trade-creating effect of about 10 percent.

*Do small countries benefit above-average from the completion of EMU?*

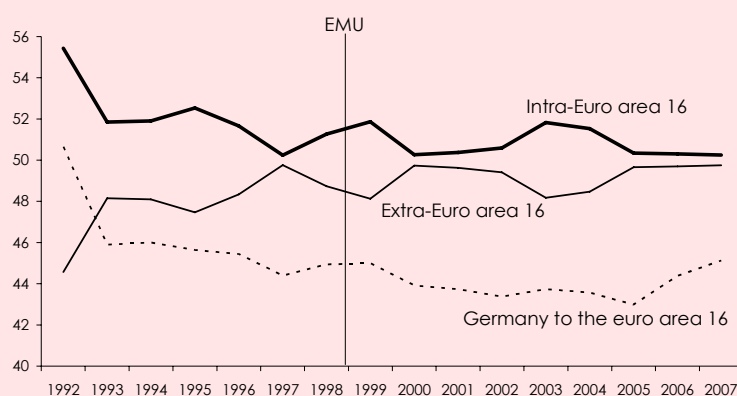
As Badinger – Breuss (2009) show, the introduction of the common currency offers an additional, albeit limited, advantage for smaller countries which apparently managed to raise their export share for the euro area (compared with the baseline scenario without EMU) by 3 to 9 percentage points more than the larger countries.

Intra-euro-area trade grew more strongly in the last ten years than the intra-EU-15 trade. This underlines the importance of the common currency as an instrument for the deepening of trade integration. The trade-creation effect of EMU introduction was nevertheless weaker than that of EU enlargement, as witnessed by the declining share of intra-euro-area trade in intra-EU-27 trade (Figure 8).

In a longer-term perspective (since 1992), the share of extra-euro-area trade in total trade rose steadily, while that of intra-euro-area trade declined until the introduction of the euro, stagnating or edging up only slightly thereafter (Figure 9). Germany's trade share with the euro area diminished steadily until 2005, despite EMU, and is tentatively heading up since (European Commission, 2008A, p. 35).

Figure 9: Foreign trade in the euro area 16

Average of exports and imports as percent of total trade



Source: IMF.

Only three of the original euro-area participants (Belgium, France and Portugal) managed to increase their share of intra-euro-area trade since 1999 compared with the previous ten-year period (Table 5). In Finland and Ireland, this share edged down by less than 1 percentage point, in Austria and Spain somewhat more. In Luxembourg (-9.6 percentage points), Greece (-10.7 percentage points), Italy (-3.8 percentage points) and the Netherlands (-5.9 percentage points), intra-euro-area trade lost substantially in importance. Among the countries which lately joined the euro area, Cyprus and Slovakia succeeded in raising their intra-euro-area trade share. While the latter stagnated in Slovenia and fell markedly in Malta. In the three countries outside the euro area (Denmark, Sweden and the UK), the decline was only small.

The trade balance (as a percentage of GDP) improved particularly in Germany (both in intra- and extra-EU-27 trade) and in Austria (only in extra-EU-27 trade). Among the new euro-area members, the trade balance developed most favourably in Slovenia, Malta and Slovakia (Table 5).

While during the last few years the volume of intra- and extra-EU trade (and of extra-euro-area trade) expanded on a broad base, the growth rate (or the allocation among trading partners and regions) of extra-EU-27 and extra-euro-area trade was above the average. Many studies also show that the creation of EMU benefited extra-euro-area trade to almost the same extent as intra-euro-area trade (Baldwin, 2006), possibly because the introduction of the common currency lowers the fixed costs of entry into foreign markets and increases the number of firms engaged in exports (see the theory of Melitz, 2003, Helpman, 2006). Exports to another euro-area country can therefore constitute a first step towards exports to third countries. This trade hypothesis of fixed costs is to some extent confirmed empirically, as the trade effect proved strongest in industry sectors with imperfect competition and rising returns to scale (OECD, 2007, p. 32).

According to the OECD (2007, p. 32), the effect on intra-service trade was disappointing. Its share of GDP is only 3 percent on euro-area average and is dominated by tourism whose comparative advantages are explained by location factors rather than by political intervention. While overall trade in services barely expanded in the last few years, the extra-euro-area component gained strongly. Thus, the still existing barriers to trade in services within the Internal Market, need to be removed. The EU Services Directive which will enter into force only in 2010 is a first step in this direction (Breuss – Fink – Griller, 2008).

Tourism is benefiting from EMU, and likely to do so also in the future. According to model simulations carried out ex ante (Smeral – Weber, 2000, pp. 996ff), the positive effects should be largest for the hard-currency countries Germany (tourism exports +1.6 percent, tourism imports -3.2 percent) and Austria (+2.1 percent and -2.9 per-

cent, respectively), but significant also for Greece (tourism exports +1.7 percent, tourism imports  $\pm 0$  percent). The other EU countries (the former "soft currency" countries) would thereby lose in tourism service exports while gaining in imports due to their weakening price competitiveness that can no longer be corrected by currency devaluation. Hence, the tourism services balance of the former "hard-currency" countries improves whereas that of the former "soft currency" countries deteriorates.

Table 5: Foreign trade by countries

	Exports plus imports Intra-trade in Euro area 16			Trade balances as a percentage of GDP with					
	Ø 1990-1998	Ø 1999-2007	Differences between the periods Percentage points	Euro area 16	Extra-Euro area 16	EU 27	Extra-EU 27	EU 27	Extra-EU 27
				1998-2007					2007
As a percentage of the total trade	Changes in percentage points			Percent					
Euro area 16	52.7	50.8	- 1.9	- 0.8	- 0.2	- 0.8	- 0.7	+ 0.7	- 1.1
Austria	63.9	62.4	- 1.5	- 2.5	+ 5.2	- 0.4	+ 3.1	- 2.9	+ 3.0
Belgium	60.7	61.7	+ 0.9	- 1.9	- 0.6	- 1.9	- 1.5	+ 4.1	- 4.0
Luxembourg	82.8	73.2	- 9.6	+ 1.1	- 6.7	+ 1.1	- 9.7	- 10.1	- 9.2
Finland	34.9	34.0	- 0.9	- 3.5	- 1.4	- 6.2	+ 1.3	- 0.5	+ 3.9
France	51.4	53.6	+ 2.2	- 3.4	+ 0.0	- 3.6	+ 0.2	- 2.7	+ 0.2
Germany	46.9	44.0	- 2.9	+ 1.1	+ 3.4	+ 2.2	+ 2.3	+ 5.0	+ 3.0
Greece	56.7	46.1	- 10.7	- 0.0	- 3.4	+ 0.6	- 4.0	- 9.2	- 7.7
Ireland	31.6	31.5	- 0.1	- 11.4	+ 3.0	- 15.3	+ 6.9	+ 8.0	+ 6.9
Italy	52.4	48.7	- 3.8	- 0.7	- 2.1	- 0.4	- 2.4	+ 0.4	- 1.0
The Netherlands	57.8	51.9	- 5.9	+ 9.3	- 4.2	+ 13.7	- 8.6	+ 23.9	- 16.3
Portugal	64.8	67.1	+ 2.3	- 0.5	- 0.8	- 0.9	- 0.4	- 8.3	- 3.7
Spain	58.5	57.5	- 1.0	- 2.4	- 2.9	- 2.5	- 2.8	- 4.3	- 4.8
Slovenia	61.5	61.4	- 0.0	- 4.5	+ 5.9	+ 0.5	+ 0.9	- 5.3	+ 1.8
Malta	58.4	44.5	- 13.9	+ 15.3	+ 14.4	+ 18.9	+ 10.8	- 24.0	+ 4.4
Cyprus	30.5	37.8	+ 7.3	- 6.7	+ 0.1	- 7.5	+ 0.9	- 24.1	- 10.0
Slovakia	35.0	51.3	+ 16.4	+ 10.9	+ 2.7	+ 13.0	+ 0.6	+ 7.7	- 10.5
Denmark	47.9	46.6	- 1.3	- 0.8	+ 0.8	+ 0.0	- 0.1	- 0.3	+ 1.4
Sweden	47.2	44.4	- 2.9	- 1.6	- 1.0	- 2.5	- 0.1	- 0.9	+ 4.8
UK	50.1	49.3	- 0.7	- 1.9	- 1.8	- 2.5	- 1.2	- 3.0	- 3.6

Source: IMF.

In an ex-post tourism study, *Gil-Pareja – Llorca-Vivero – Martínez-Serrano (2007)* investigate, in a similar way as the gravitation equation studies, into merchandise trade within the euro area, using a panel approach for the period 1995-2002. The study concludes that the introduction of the euro had a positive impact on tourism flows (number of guests' arrivals) between the 12-euro-area countries. The completion of Monetary Union is claimed to have led to an average increase of about 6 percent. Greece (+23 percent), Italy (+18 percent), the Netherlands (+13 percent) as well as Ireland, Finland and Spain (+11 percent each) are cited as the main beneficiaries. Austria (+6 percent), Germany (+8 percent) and Portugal (+2 percent) would have benefited to a much smaller extent, while insignificant or even negative effects are reported for France and Belgium-Luxembourg. These results are partly in contradiction with ex-ante expectations, due to differences either in the estimation method or the definition of tourism flows.

The integration of financial markets<sup>13</sup> in the euro area has greatly increased since the introduction of the common currency (*Giofré, 2008, European Commission, 2008A, S. 94, ECB, 2008, pp. 101ff*), although progress in the different segments of the financial sector has been uneven (*OECD, 2007, p. 32*). The interbank markets (which have been fundamentally disturbed by the loss of confidence between banks as a consequence of the financial market crisis) and those for small private customers were – at least up to the financial crisis – nearly fully integrated. Markets where small retail investors play an important role are still fragmented, often also because national investor and consumer protection regulations are difficult to harmonise (*OECD, 2007, pp. 32-33*). The turbulences relating to the international financial mar-

<sup>13</sup> For further information see the homepage "financial services" (sub-group of Internal Market for services) of the European Commission: [http://ec.europa.eu/internal\\_market/top\\_layer/index\\_24\\_de.htm](http://ec.europa.eu/internal_market/top_layer/index_24_de.htm).

ket crisis are now raising additional issues about transparency, control of financial products and liabilities. Such requirements are, however, not confined to the financial sector of the euro area<sup>14</sup>.

The economic power of the euro area is reflected by its share in world GDP of around 22 percent<sup>15</sup>. The euro is used as legal tender not only in the countries of the euro area (as well as in Andorra, San Marino and the Vatican), but also in the French territories overseas (French Guyana, Guadeloupe, Martinique, Réunion, Mayotte, Saint-Pierre and Miquelon) and in some Balkan states (Montenegro and Kosovo). In addition, the currencies of the CFA-Franc zone (Coopération Financière en Afrique Centrale, 16 Central-African countries), which formerly were linked to the French Franc, are tied to the euro since 1999. In this way, the strength of the euro has a stabilising effect also on many countries outside the euro area (*European Commission, 2008A, p. 226, Breuss, 2006C, pp. 424ff*).

Besides the dollar as the world's leading currency, the euro has increasingly strengthened its position in the last ten years. On the one hand, it has offered investors the possibility to diversify their portfolios, and it plays an increasing role for financial investors and as reserve currency, on the other.

- The share of debt issued in euro increased from 22 percent in 1999 to 32 percent in 2007. It nevertheless remains below the corresponding share of the dollar of 44 percent (*European Commission, 2008A, p. 118*). While the foreign exchange market remains dominated by the dollar – in 2007, 43.1 percent of all transactions were carried out in dollar and only 16.5 percent in euro – the share of the euro had increased significantly from 10.1 percent in 1999 as the weight of the dollar (43.6 percent) edged down somewhat (*European Commission, 2008A, p. 119*). The denomination in euro (over 50 percent) in exports and imports of goods outside the euro area exceeds that in dollar (over 30 percent). The euro is used to even greater extent in trade with the accession candidates, at over 60 percent of exports and imports (*European Commission, 2008A, p. 120*).
- The share of the euro in world currency reserves rose from 18 percent in 1999 to 25 percent at the end of 2007, while that of the dollar declined from a peak of 72 percent in 2001 to 65 percent at end-2007. According to a simulation experiment conducted by *Breuss – Roeger – in't Veld, 2009* with European Commission's QUEST model, the overall economic effects of a shift from dollar towards euro (notably in Asian countries) up to an equal share of 45 percent of world currency reserves each would be less striking in the euro area and the USA than originally expected. In the euro area, real GDP after 15 years could be higher by up to ½ percentage point than in the baseline scenario, depending on the assumption for the potential of substitution between domestic and foreign financial assets, in the USA by up to ¼ percentage point lower. The euro would appreciate against the dollar by 8½ percent up to the year five, thereafter the appreciation effect would narrow to 2½ percent until year fifteen (*Breuss – Roeger – in't Veld, 2009*).

The assessment of 10 years of EMU is ambivalent. On the one hand, the introduction of the common currency has contributed towards price stability and the euro has acquired a global status next to the dollar. Monetary Union has probably also promoted cross-border trade within the euro area by removing the exchange rate uncertainties which until 1999 had even jeopardised the viability of the Internal Market. In the very times of the international financial market crisis, the euro has demonstrated its strength and attractiveness. On the other hand, the expected growth "dividend" has so far failed to materialise, as GDP growth in the euro area was slower than in the countries outside the area.

The political architecture of EMU implies a cumbersome amount of fiscal policy coordination. Some quarters voice criticism about an allegedly isolated monetary

## International role of the euro

## Conclusions

<sup>14</sup> See in this context the reactions of the EU to the financial market crisis on the homepage of the President of the European Commission: [http://ec.europa.eu/commission\\_barroso/president/focus/credit\\_crunch/index\\_de.htm](http://ec.europa.eu/commission_barroso/president/focus/credit_crunch/index_de.htm).

<sup>15</sup> For the international role of the euro and its influence on trade and capital flows see also *ECB (2008)*, pp. 89ff.

policy of the ECB which was independent of and uncoordinated with economic policy conducted by the EU countries. In the same vein, there are time and again – notably by France of late – calls for the installation of a "European economic government" as a counterweight to the ECB. However, the handling of the latest financial market crisis has shown that in the event the adjustment between monetary and fiscal policy works well and that the co-ordination instruments at the disposal of EMU are sufficient. This should prove wrong the criticism advanced against the current governance of EMU (e.g., by De Grauwe, 2009), according to which the euro area would fall apart if a political union would fail to evolve.

Among the challenges of EMU going forward are the acceptance of new members in the euro area, the drifting-apart of competitiveness among member countries, the delay in the emergence of a genuine "European business cycle" and a closer co-ordination and mutual adjustment between monetary and fiscal policy not only in times of crisis. Indeed, in the current global financial crisis the lack of a European business cycle has led to widening risk spreads for newly issued government bonds. Euro-area countries of lower credit rating have to offer markedly higher risk premia than countries of higher financial market standing.

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### *Ten Years of EMU – Achievements, Weaknesses, Challenges – Summary*

The assessment of ten years of EMU remains ambivalent. On the one hand the euro has contributed to price stabilisation and established itself as the world's second reserve currency besides the dollar. Its introduction has also benefited intra euro area trade. On the other hand the expected growth "dividend" has not yet materialised. Economic growth has been more restrained in the euro area than in countries that are not part of the euro currency area. Despite the complicated and asymmetrical economic policy design of EMU the institutions have cooperated well and swiftly during the international financial crisis and have tried to cushion the damage to the financial sector and economic growth by coordinating their efforts. For some countries outside the euro area the common currency has gained attractiveness during the crisis. Nevertheless, EMU is facing major challenges. On the one hand the euro area is to be enlarged to include a maximum of the 27 EU countries. On the other hand the significant divergence of euro area countries' competitiveness raises doubts about the cohesion of EMU. To improve the effectiveness of a common monetary policy further progress towards a common European business cycle is essential.