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FUTURE CHALLENGES FOR THE ECB

HERMANN REMSPERGER*

With the launch of European monetary union, a new era began for Europe last year. On 1 January, 1999, the euro became the monetary standard for eleven of the fifteen member states of the European Union, and thus for a financial and economic area which, in terms of its economic performance, is second only to the United States of America. On the same date, responsibility for the single monetary policy was transferred to the Governing Council of the European Central Bank, which has decided the appropriate level of official interest rates in the euro area ever since.

The Governing Council has been responsible for European monetary policy for only a year. Hence it is still much too early to pass a mature verdict on the success of the secular project of European monetary union. Looking back on the first year, however, it can be said that the Eurosystem has already passed quite a number of significant tests: cross-border payments and money market management are operating almost smoothly, the new range of monetary policy instruments has proved its worth, and interest-rate policy measures have manifestly been geared to maintaining the high degree of price stability that has already been reached. The members of the Governing Council have demonstrated that their attention is focused on the euro area as a whole and not on individual countries.

Even if the Eurosystem has already successfully addressed quite a number of problems, today and in the years ahead it still has to meet a lot of challenges. At the top of the agenda is grappling with the criticism of the monetary policy strategy it is pursuing and with the charge of a lack of trans-

parency. In the present article, I shall ask whether such charges are warranted, and what the European Central Bank can do to clear up any remaining uncertainties and problems of understanding. In this connection, I should like to address both, the debate about the objectives of monetary policy and the discussion on the strategy adopted to achieve those objectives. Although my remarks will focus mainly on the strategic challenges, I should also like to take this opportunity of outlining, in the final section of my article, the logistical and institutional challenges with which the Eurosystem will likewise have to contend in the next few years.

The objectives of monetary policy

In most industrialised countries it is generally recognised, in the light of the experience gained during the seventies and early eighties, that safeguarding price stability is the best contribution which monetary policy can make to long-run macroeconomic welfare. The Maastricht Treaty spells out that objective with exemplary clarity for the European System of Central Banks. The assignment of responsibilities is likewise suitably unambiguous: in pursuing their primary objective, the monetary decision-makers are independent of instructions from national governments or comparable EU authorities.

Despite these unequivocal stipulations, the Maastricht Treaty leaves unresolved a number of issues which have increased in significance, given the high level of price stability achieved in recent years. For instance, in the last few years there has been a lively discussion as to whether the optimal level of inflation should be set at zero or at slightly above zero. Moreover, the controversy on the contribution that monetary policy can and should make to fostering growth and employment in an environment of fairly low inflation rates has flared up time and again.

The optimal rate of inflation

The Treaty of Maastricht does not give a precise definition of what is to be understood by price sta-

The Eurosystem has already passed several tests

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bility. In order to fill this gap, the ECB Governing Council published a quantitative definition of price stability in the autumn of 1998. According to that definition, price stability is to be equated with a year-on-year *increase* of less than 2% in the harmonised consumer price index for the entire euro area with price stability to be maintained over the medium term. Since this definition of price stability rules out both a decline in consumer prices and an increase of more than 2%, it can be interpreted as a target corridor of between just over zero and under 2%. This objective has been criticised as being too ambitious by some observers. Other critics would have preferred a point target to a corridor.

One reason for setting the floor somewhat above the zero level is the supposed overstating of the actual inflation rate by the measured rate. Most of the empirical studies which address this problem come to the conclusion that official price indices are apt to slightly overstate the “true” inflation rate (as measured by a cost-of-living index).¹

Whether there are other reasons for setting a positive optimal inflation rate, besides the problem of measurement errors, is open to debate. Some well-known US economists have claimed that downwardly rigid nominal wages may give rise to a permanent trade-off between inflation and unemployment in the event of inflation rates near zero.² However, the assumption underlying this argument, that labour-market players are subject to money illusion, is contrary to experience – at least in Germany. Instead, it is likely that nominal wage reductions are easier to push through under conditions of price stability than in an inflationary environment. Moreover, improvements in productivity, even at times of constant nominal wages, make room for reductions in unit labour costs. The reference to an empirically verifiable connection between disinflation and an increase in unemployment in a number of European countries likewise fails to convince.³ It is unlikely that opposition to nominal wage cuts might have played a major role here, if only because inflation rates have not been very close to zero for a long while in any country during the periods under consideration.

1 On this point see Hoffmann, J.: Problems of Inflation Measurement in Germany, discussion paper 1/98 of the Economic Research Group of the Deutsche Bundesbank, 1998.

2 See Akerlof, Dickens and Perry (1996): The macroeconomics of low inflation, Brookings Papers on Economic Activity, No.1, pp. 1–76, and Krugman (1996): Stable prices and fast growth: just say no, The Economist, August 31, pp. 19–21.

3 See IMF: World Economic Outlook – Prospects and Policy Issues, autumn 1999, p. 124.

A further argument is that only a positive inflation target would enable the central bank to stimulate aggregate demand by setting negative real interest rates. Since the level of nominal interest rates has its floor at zero, that is also where the limit for the real interest-rate level is, given an expected inflation rate of zero. Thus, it is feared, monetary policy would lose all scope for exerting influence in the event of a profound and sustained recession. Against this argument, it may be objected, firstly, that a forward-looking policy that responds in good time to prospective distortions should normally be able to generate sufficiently expansionary effects by means of low positive real interest rates.⁴ Secondly, the empirical evidence suggests that money demand is not infinitely elastic when the interest-rate level is zero. Hence, even when central bank rates reach zero, a central bank still has the option of stimulating demand and output by enlarging the monetary base.⁵

The role played by output stabilisation

The priority commitment of the Eurosystem to the final goal of price stability is generally accepted. But there is far less agreement about the extent to which the objective of output stabilisation should be included in the monetary decision-making process as a “secondary target” if the prime objective of price stability is not at risk. In principle, an anticyclical monetary policy is not inconsistent with the preservation of price stability in the medium run. In practice, however, the stabilisation options of central banks are quite limited. This is because, in the first place, our knowledge about the transmission mechanisms of monetary stimuli vis-à-vis real activity continues to be very sketchy. Furthermore, uncertainties of diagnosis are especially large in the real sector of the economy.

If the disturbance of macroeconomic equilibrium is due to an unexpected increase or decrease in aggregate demand, then there is no trade-off anyway between output stabilisation and safeguarding price stability. If, however, the cause is a supply-side shock, the central bank theoretically has a choice between a swift stabilisation of inflation at

4 In recent years there have been quite a number of simulation studies on the question of how great the likelihood is that the zero limit will be reached. An overview of such literature is provided by Johnson et al. (1999): Monetary Policy and Price Stability, Board of Governors of the Federal Reserve System, International Finance Discussion Papers, No. 641.

5 See King (1999): Challenges for monetary policy: new and old, Bank of England Quarterly Bulletin, November 1999, p.408 and the studies cited there.

Should output stabilisation be a secondary target of monetary policy?

the price of higher output variability, on the one hand, and a reduction of output fluctuations at the cost of higher inflation variability, on the other. An optimisation of this trade-off which seems feasible in theoretical models founders in the real world on uncertainty about the transmission mechanisms and about the reactions of the market players affected by monetary policy.

Simple stabilisation rules, such as the well-known Taylor rule, may at first sight create the impression of greater robustness. However, their use likewise presupposes that the “true” level of output relative to trend is known at the time of the policy decision.⁶ As a more recent study by Orphanides (1998) shows, the relatively good performance of these rules with regard to output stabilisation turns out to be an illusion if the unreliability of real-time GDP data and potential estimates is taken into account.⁷

Hence there are good reasons why the Governing Council of the ECB opted for a monetary strategy that underlines the responsibility of monetary policy for medium-term price movements. However, the unambiguous orientation towards the preservation of price stability does not mean that interest-rate decisions in the euro area are taken in total disregard of real economic activity. Price prospects in the euro area are influenced to some extent by trends in business activity. If those trends, together with other indicators – above all the money stock – suggest that price prospects are changing, action must be taken. Viewed in these terms, references to the overall economic situation by no means call into question the Eurosystem’s orientation towards the objective of price stability. Instead, they form a building block in the second pillar of its monetary policy strategy.

Moreover, with the orientation towards the growth of the production potential in the derivation of the reference value for monetary growth, the first pillar of the Eurosystem’s monetary policy strategy also includes a “quasi-automatic” anticyclical component: if the actual increase in GDP falls short of trend growth, ample money will tend to be supplied. If, by contrast, actual economic growth exceeds the medium-term growth potential, then the expansion of the money stock will tend to be tight.

⁶ On this point, see the article “Taylor interest rate and Monetary Conditions Index” in: Deutsche Bundesbank, Monthly Report, April 1999.

⁷ See Orphanides (1998): Monetary Policy Evaluation with Noisy Information, Working Paper, Board of Governors of the Federal Reserve System, October.

Monetary policy and the “new economy”

However, the growth of the production potential is not easy to ascertain. This is shown not least by the vigorous debate on whether the pronounced expansion of the US economy since 1991 marks the start of a new era distinguished by consistently faster growth at lower rates of inflation. Against the background of the sharp increases in productivity since the mid-nineties, accompanied by diminishing rates of inflation, the advocates of the “new economy” approach assume that faster, non-inflationary growth is to be expected in future as well. This idea is substantiated, in particular, by reference to the price-curbing effects of global competition and to the strong growth potential of new, computer-aided technologies. On the other hand, sceptical observers warn against overrating the growth potential of the new technologies. They point out that the impressive performance of the US economy in recent years owes much to a combination of particularly favourable circumstances, such as the strength of the dollar due to its “safe haven” function in the wake of the east Asian and Russian crises and to the consumption-boosting boom (which is unsustainable in the long run) on the US stock exchange.

With regard to the euro area, the question arises as to how good the chances are that the upswing now taking shape will usher in a new era of consistently higher non-inflationary growth. This question is relevant to monetary policy because the derivation of the reference value for the growth of the monetary aggregate M3 calls for an appraisal of the trend of real growth. When deriving the reference values for 1999 and 2000, the ECB Governing Council assumed that the trend growth rate in the euro area is currently running at between 2 and 2½%. This corridor is in line both with the results of internal forecasts and with the estimates of other institutions. But, when announcing the reference value for 2000, the Governing Council of the ECB explicitly pointed out that the growth rate in the euro area that was compatible with price stability could be enhanced distinctly by structural reforms on the labour and goods markets. The Council envisaged taking due account of any such changes.

However, this approach is not uncontroversial. Critics have accused the Governing Council of undue great caution. They have suggested that monetary policy should make an active contribution to fostering growth and employment by refraining from rais-

Stabilisation rules suffer from the unreliability of real-time GDP data and estimates of potential GDP

ing interest rates for the time being. However, that suggestion disregards the fact that, over the longer term, there is no trade-off between price stability and real growth. Any attempt to increase economic activity over and above the pace of potential GDP will in the short run lead to a rise in aggregate demand and output but, at given capacity levels, the pressure on wages and prices will likewise rise. In order to get accelerating inflation back under control again, the central bank will have to step on the brakes sooner or later; the upshot is a “boom and bust” cycle, which actually impairs the medium-term growth and employment outlook. Against this background, such well-known US economists as John B. Taylor and Martin Feldstein have drawn attention to the fact that it was specifically the early adoption by the Fed of a more restrictive policy stance during 1994 that was a key prerequisite of the longevity of the current upswing in the US economy.⁸

On the other hand, a policy of “testing” the limits to growth by refraining from raising interest rates for the time being would imperil the advantages associated with price stability. Moreover, it would be at variance with the assignment of responsibilities laid down in the Maastricht Treaty, which flatly rejects any involvement of monetary policy in other areas of economic policy if such involvement poses any risk to price stability. On closer inspection, it should be obvious that monetary policy cannot solve the grave structural problems that mark the employment situation in many member states of the monetary union. It is up to national governments and the parties to wage settlements to remedy such problems.

Inflation differentials within the euro area

In recent months, the question of whether national growth and inflation differentials pose a risk to the single European monetary policy has also attracted some attention. This discussion was triggered by a drifting-apart of the growth and inflation performances of particular countries, which has been discernible since mid-1998. For instance, the rise in consumer prices in Ireland and Spain in autumn 1999 was distinctly above the 2% mark, whereas the inflation rate in Germany, France and Austria remained below 1% into the late autumn. However, the spread visible at present, of about 2%, is much narrower than it was during the eighties. Besides, a comparison with the United States

shows that regional divergences on this scale are quite normal, even in a long-standing monetary union.⁹

The current inflation differentials in EMU are mainly due to two factors, according to studies by the ECB.¹⁰ In the first place, the differentials owe much to differences in the cyclical positions of the various economies. Secondly, the harmonisation of price levels between the member countries (on account of greater market integration, the enhanced transparency of prices and real economic convergence) likewise plays a role. The Eurosystem’s monetary policy can only be geared to the objective of price stability throughout the euro area. The Council is therefore neither required nor able to remedy inflation differentials resulting from the merging of the markets or from differences in levels of business activity. If economic disequilibria arise from persistent inflation differentials, it is, rather, the responsibility of national economic policy to adopt counter-measures, for instance in the fields of fiscal policy or structural policy.

Monetary policy strategy

Even more than the definition of its final goal, the monetary policy strategy of the Eurosystem has been criticised more or less vigorously right from the beginning. That is understandable inasmuch as the decision in favour of a two-pillar strategy represented a new departure. Unlike what would have happened in the event of the mere adoption of one of the previously practised alternatives of monetary targeting or inflation targeting, that decision meant that a certain period of “learning to understand” and of critical assessment of the Eurosystem’s strategic approach was foreseeable.

Hence it hardly comes as a surprise that the “ECB watchers” have mostly expressed their criticism against the background of the “pure” strategy which they have always preferred. To this extent, the proposed therapy was likewise foreseeable: whereas some called for a more prominent role of the money stock, others expressed doubts as to the relevance of monetary growth and demanded a strengthening of the second pillar, by means of the publication of detailed inflation forecasts.

ECB monetary policy is neither required nor able to remedy inflation differentials in EMU

⁸ See G. Baker: “Did a brave Fed kill off inflation, or was it luck?”, *Financial Times*, December 17, 1999, p. 4.

⁹ See ECB Monthly Bulletin, October 1999, pp. 39–49.

¹⁰ See the articles in the ECB Monthly Bulletins of July and October, 1999.

The role of monetary aggregates

Among the theorists and practitioners of monetary policy alike, it is generally agreed that, in the long run (i.e. after the expiry of all adjustment processes), inflation is a monetary phenomenon. The correlation between the money stock and prices is deemed to be one of the most robust “stylised facts” in economics.¹¹ Econometric studies which were conducted ahead of monetary union bore out this assessment for the euro area. They came to the conclusion that, in the past, the necessary empirical preconditions for a prominent role of the broad monetary aggregate M3 in the Eurosystem’s monetary policy strategy were met.¹²

On the other hand, it was not safe to assume that such a far-reaching regime shift as EMU would leave the payment and investment behaviour of households and businesses in the euro area unchanged. Furthermore, problems were to be expected in the changeover from national monetary statistics to the new, uniform standards. For that reason, the Governing Council of the ECB decided to announce a less binding reference value, rather than a pure money-stock target. It also decided to supplement that benchmark by a second pillar in the shape of a broadly-based analysis of price prospects.

In the light of experience to date, those decisions seem to have been right. For once, the movement of the money stock M3 in the euro area last year was largely consistent with the traditional determinants of money demand. There was no evidence of a collapse of the underlying relationships. On the other hand, statistical problems, reflected in frequent revisions of the data, caused some discomfort. Furthermore, there were major differences in money stock movements in the various countries.

Whether the empirical conditions for pure monetary targeting are met in the euro area will only be ascertainable on the basis of an estimation period encompassing a much longer period of time with the single currency. Considering that uncertainty about the underlying behaviour patterns cannot be eliminated within one or two years, a fundamental reorientation of the policy strategy in the direction of monetary targeting must definitely be regarded as premature at the moment.

11 See Robert E. Lucas, jr. (1996): Nobel Lecture: Monetary Neutrality, *Journal of Political Economy*, Vol. 104, No. 4, p. 336.
12 See Fagan and Henry (1998): Long-run money demand in the EU: evidence from the area-wide aggregates, in: *Empirical Economics*, 23, pp. 483–506, and the studies cited there.

The role of inflation forecasts

Besides the money stock, the ECB analyses – as part of the second pillar of its strategy – a wide range of other indicators of the underlying trend in the inflation rate. Critics have accused the ECB of leaving it unclear what importance the decision-makers attach to individual indicators of price prospects. The charge is that it is hardly possible for outsiders to reconstruct how the assessment of the risks to price stability in the second pillar of the strategy is effected. Hence the ECB should publish its overall appraisal in the form of an explicit inflation forecast.

Hitherto, the ECB has rejected any publication of its inflation forecast, drawing attention, among other things, to the substantial uncertainties in the euro area and to the associated risk of large forecast errors. However, President Duisenberg has already hinted that the ECB may publish its forecasts in the foreseeable future. However, the publication of forecasts poses a number of problems which should be addressed carefully before such a decision is taken.

One potential problem is that the general public may attach more weight to a published forecast than is justified by its actual significance in the monetary decision-making process. The accuracy of inflation forecasts over the time-horizon of one to two years that is relevant to monetary policy is highly uncertain. That applies all the more to the first few years of monetary union, when structural discontinuities are to be expected. Much thought still has to be given to the question of how the uncertainty associated with inflation forecasts can best be brought to the attention of the outside world.

A high degree of uncertainty exists, for instance, regarding the effects of the progressive structural changes in the financial system. The elimination of exchange risk within the euro area has increased investors’ propensity to diversify their portfolios across national borders. The growing demand for higher-yielding securities facilitates enterprises’ direct access to the capital markets. The longer-term repercussions of these trends on the transmission of monetary stimuli are not yet foreseeable.

But forecasts are based on estimates of equations and models that reflect the laws and behaviour patterns applying in the past. Conjectures on recent changes in such behaviour cannot be incorporated systematically into these models. To this extent,

The Governing Council’s decision to supplement a reference value for M3 with an analysis of price prospects seems to have been right

forecasts cannot provide a comprehensive summary of all the data relevant to monetary policy. Nor should forecasts be expected to curtail the discretionary leeway of decision-makers.

It should, moreover be borne in mind that every inflation forecast includes an assumption about the level of interest rates. Most of the central banks which publish their inflation forecasts assume constant central bank rates.¹³ This assumption, however, poses certain problems: if the published forecast is outside the envisaged target corridor for the inflation rate, a need to take interest-rate action can be derived therefrom. If the central bank responds by making such a move, that move, in turn, changes the inflation forecast.¹⁴ This consideration would seem to suggest publishing two or more forecasts, subject to alternative assumptions, which, in its turn, might impair transparency.

The transparency of interest-rate decisions

With respect to the criticism of its monetary policy strategy, the Eurosystem is faced with something of a dilemma: on the one hand, it is in the best interests of the decision-makers to comply with the call for greater transparency, thereby enhancing their credibility. On the other hand, the complexity of the chosen strategy cannot, in itself, be a sufficient reason for altering that strategy. Thus, the supporters of the two alternative proposals – either pure monetary targeting or inflation targeting – have so far failed to prove that a one-dimensional strategy is not only more transparent but also more promising in terms of attaining the final goal of price stability. On the contrary, given the change of regime and the associated uncertainty, the two-pillar strategy continues to appear superior to the aforementioned alternatives.

That raises the question of what the Eurosystem and its decision-makers can do to comply with the call for greater transparency in the context of the chosen strategy. A key role in this debate is played by information policy: the Governing Council must inform the general public at an early date, regularly and in a comprehensible way about its assessment

¹³ An exception is the Reserve Bank of New Zealand which publishes inflation projections based on a monetary policy reaction function that brings inflation back into the middle of the target range one to two years ahead. See Mayes, D.G. and W.A. Razzak (1998): Transparency and accountability: Empirical models and policy making at the Reserve Bank of New Zealand, *Economic Modelling*, 15, p.380, footnote 6.

¹⁴ Ex post, it is thus precisely a successful policy that arouses the impression of having been unduly restrictive or expansionary. See Alan Blinder (1999): *Central Banking in Theory and Practice*, MIT Press.

of the economic situation and the background to its interest-rate decisions. In the Eurosystem, this is done, firstly, through the Monthly Bulletins, in which the ECB gives a detailed appraisal of the monetary, financial and economic conditions in EMU, and secondly through the press conferences which are held once a month immediately after the meetings of the Governing Council.

At these press conferences, President Duisenberg explains the interest-rate-policy decisions of the Governing Council and then answers questions put by the journalists present. His introductory remarks may well be compared to an instant summary of the minutes of the meeting. Those comments may even be more informative for the markets and the media than carefully edited minutes which are published with a delay of several weeks. The Governing Council of the ECB has decided against publishing minutes of its meetings, in order to prevent the decision-makers from coming under pressure at the national level. Moreover, the experience gained in other countries suggests that the information content of published minutes is limited anyway.

With regard to the transparency of interest-rate policy, the question of how far the Governing Council should prepare the markets for forthcoming interest-rate measures has likewise been discussed recurrently in the past few months. That discussion was sparked off by the decision taken in December 1998 by the US FOMC to publish, in particular cases, a statement on its bias regarding future interest-rate policy immediately after the meeting. In principle, the announcement of such a “bias” provides an opportunity to steer the interest-rate expectations of market players in the direction desired by the central bank. However, as the US experience has shown, markets tend to interpret such bias statements not so much as a snapshot of current thinking but rather as a fairly certain prediction of the next move.. That gives rise to the danger of the decision-makers being compelled to take action, because a modification of their verdict, once passed, would call into question their credibility and competence. That applies with particular force to a newly-established institution such as the ECB, which does not yet have a “track record” of its own. To this extent, great caution is required regarding the publication of bias statements.

In order to stabilise market expectations, monetary policy must be strategically calculable: it must pro-

Verbal explanations of ECB policy decisions at the press conferences are more informative than published minutes

vide the markets with reliable guidance. However, that does not imply that every single policy measure must be predictable. Instead, the decision-makers must preserve the freedom to disagree with the markets, and to surprise market players on occasion, if necessary.

The role of exchange rates and asset prices

Among the strategic challenges, the ECB also has to face up to the issue of the significance of exchange rates and asset prices for monetary policy. Last year, public attention time and again focused on the weakness of the euro against the US dollar. That development owed a great deal to the growth differential between the euro area and the US economy. An additional factor was the mistrust of the markets with regard to the quality of European economic, structural and fiscal policy. However, the Eurosystem is not pursuing an exchange-rate target, nor is it aiming at a specific level of the euro exchange rate against the US dollar or any other currency. But since sustained fluctuations in the exchange rate are reflected in the movement of consumer prices, the Eurosystem cannot afford to ignore the exchange rate either. Instead, exchange-rate movements constitute a major building block in the second pillar of the monetary policy strategy.

Although the problem of the valuation of asset-price movements is less pressing at the moment for the ECB than it is for the US Fed¹⁵, in principle neither the Fed nor the ECB can afford to disregard strong movements of asset prices because they affect the saving, investment and consumption decisions of economic agents. At the same time, however, it is generally agreed among central bankers that equity prices and real-estate prices cannot be target variables for monetary policy because the uncertainty about the correct valuation of businesses or real property is too great. Nobody can say for sure whether a sustained upward movement of prices in a given period is warranted by the fundamentals, or whether it is a case of a speculative bubble, whose bursting might have grave implications for the economy.

Hence it must be examined under which conditions prices may go on rising, or corresponding expectations may strengthen. In my opinion, the axiom that inflation is always, in the long run, a monetary

phenomenon applies to asset prices, too. The risks that asset-price inflation may involve are a weighty argument in favour of curbing monetary growth. The simple idea behind this, that even a speculative bubble must be “fed” (i.e.: financed), is borne out by past experience. In Japan, for instance, the creation of a bubble in the late eighties was accompanied by a very strong expansion of the monetary aggregates.

In general, a monetary policy oriented towards the medium term which manages to keep the increase in the money stock in line with the real growth potential will hardly allow asset prices to lead “too vigorous a life of their own”. After all, keeping the money stock tight is part of the avowed strategy of the Eurosystem. That is why I consider it unlikely that asset prices will pose a major threat to stability in the euro area in the years ahead.

New means of payment (e-money)

Last among the strategic challenges is grappling with possible changes in non-banks’ payments. In particular, the monetary policy implications of a further dissemination of electronic money must be contemplated in this connection. As catchwords, I may mention, for instance, the problems posed by defining the monetary aggregates, and the impact of a (possibly sizeable) substitution of electronic money for currency.

Specifically in the context of the timetable for introducing euro banknotes and coins, it is now often argued that the possibility of the cross-border use of electronic money (e-money) will give an impetus to its more widespread employment. The charges for exchanging national currencies within the euro area have made this payment innovation seem comparatively attractive.

However, the empirical observations recorded to date fail to confirm this scenario. With a money card issuance total of Euro 63 million in November 1999, the amount of e-money issued in Germany was equivalent to just 0.05% of the volume of German currency in circulation. In the other countries of the euro area, the situation is similar or even less favourable to e-money.

Moreover, the central banks addressed this topic at an early date, and noted that unambiguous rules for the issuance of this new payment medium are desir-

Exchange-rate movements are part of the “second pillar” of monetary policy, but there is no exchange-rate target

¹⁵ The ratio of equity-market capitalisation to GDP in the euro area, at 63%, is much lower than in the USA, where it amounts to some 172% (at the end of 1998, see ECB Monthly Bulletin, August 1999, p. 36).

able. That relates primarily to the range of issuers, which is to be confined to credit institutions. As long as these rules are complied with, and as long as the process of the substitution of e-money for conventional payment media continues to proceed gradually, no serious disruptions of the single monetary policy are to be expected, at least in the foreseeable future. Even so, vigilance is imperative.

Logistical and institutional challenges

The exchange of currency in 2002

Despite its great significance, I shall allude to the logistical challenge only briefly: the introduction of euro currency in the first half of 2002 will call for yet another distinct *tour de force* on the part of the national central banks and credit institutions. To give an idea of the magnitudes involved: by 1 January 2002, a total of 13 billion euro banknotes must be printed and 70 billion coins minted in the eleven participating countries; in Germany alone, 4 billion euro banknotes and 17 billion euro coins must be produced.

In Germany, the period for the parallel circulation of currencies has been shortened to zero by law: from 1 January 2002 onwards, the euro will be the sole legal tender (the statutory “big bang”). But a total exchange of all currency on a single day is not possible. Hence the associations of the banking industry, of traders and of vending-machine operators have reached agreement on a transitional period of two months, i.e. up to 28 February 2002. The Bundesbank, however, is assuming that the exchange will be virtually complete after two to three weeks. During that period, it is expected that some 2.5 billion DM banknotes and 28 billion DM coins (with a face value of about DM 9.5 billion and a weight of some 98,500 tonnes) will be returned to the Bank.

EU enlargement

Among the institutional challenges facing the Eurosystem is the possible accession of those EU member states which have hitherto – for a wide variety of reasons – not participated in monetary union. The EU heads of state and government have agreed to Greece’s request to join the monetary union in the year 2001. The situation of Denmark, Sweden and the United Kingdom is more complex, since in

those countries a decision on joining the monetary union depends on the result of a referendum.

Yet another focus of attention is the countries which wish to join the European Union. Accession negotiations are currently being conducted with six countries; with six others the “accession process” has been initiated.¹⁶ At the European Council meeting in Helsinki, finally, Turkey was also recognised as a thirteenth candidate.

From the present perspective, it is to be expected that at least the six countries of the “first wave” will join the European Union in the foreseeable future (i.e. after the conclusion of the intergovernmental conference on institutional reform and the ratification of the results). For those countries, joining the EU also involves the obligation to give their central banks an independent status. This follows from Article 109 of the EC Treaty. That clause includes, *inter alia*, the ban on the financing of public sector deficits by the central bank, and the ban on public authorities being given access to financial institutions on preferential terms.

It is to be expected that most of the new member countries will join the EU with the firm intention of adopting the euro at a later date. One of the conditions for so doing is that the currency of the country in question should have been pegged to the euro successfully – i.e. without major exchange-rate fluctuations – for a certain length of time. Nowadays a wide variety of exchange-rate systems still exist.

Finally, the possible accession of a fairly large number of new participants to the monetary union will not fail to have an impact on the decision-making structures of the Eurosystem. If it is assumed that the number of members of the Executive Board will remain unchanged, the Governing Council of the ECB, after the accession of six new member states and the present “outs” to the monetary union, will comprise 27 members. After the accession of further member states, that figure will rise accordingly. In order to ensure effective decision-making, institutional reforms are inescapable here in the long run.

¹⁶ The six countries of the “first wave” are Cyprus, the Czech Republic, Estonia, Hungary, Poland and Slovenia; the other six countries are Bulgaria, Latvia, Lithuania, Malta, Romania and Slovakia.

EU membership imposes obligations on the accession countries with respect to future membership in EMU