same direction, independently of the EMU. The completion of the common market and greater mobility of capital and labor put additional pressure on Greece to reform its economy.

The Greek government has responded to these developments. It has announced that it will open the markets for telecommunication (end of 2000) and energy (2001) according to Community law. It also plans to deregulate the markets for transport and the labor and financial markets and to privatize additional public enterprises.[16] Supply-side conditions should further improve through reforms of the social security system and the tax system as well as public administration. The government also plans to redirect state expenditure from public consumption to more productive fields such as research and development or education and training. On the external side a possible stabilization in the Balkans could have particularly positive effects on Greece.

Whether the government is going to succeed with its plans will depend to large degree on the social acceptance of these measures. Currently the political and social conditions are rather favorable. The Greek government and the most important political parties still support the continuing process of economic reform. It remains to be seen whether this consensus will hold when the negative short-run effects of the reform process become more visible than the positive long-run effects. Yet, there is reason to be optimistic. Other small European economies such as Ireland have shown a remarkable ability for economic reform and Greece has demonstrated in the last years that it is willing to go in a similar direction.

[16] K. Simitis, op.cit.; G. Stournaras: Economic Prospects and Economic Policy Requirements in the Euro Zone, Eurobank, Greek Economy 2000, pp. 96-99 (in Greek).

Armin Rohde and Ole Janssen*

Estonia's Monetary Integration into EMU

Estonia is not only striving for rapid acceptance into the European Union, but it is also directing efforts towards being integrated into EMU without delay. The following article first comments on the extent to which the convergence criteria, as the central precondition for admittance to EMU, have been fulfilled. It then proceeds to discuss the compatibility of Estonia's present currency board system with the requirement of its participation in the ERM II. Finally, it looks into the consequences of a premature subjection to the ECB's monetary strategy.

In order to answer the question as to whether Estonia already sufficiently meets the requirements for joining the European Monetary Union (EMU) and thus the integrated euro area, it should first be clarified whether Estonia fulfils the "Copenhagen criteria" agreed on by the European Council in June 1993, in other words the qualifying criteria for being accepted into the European Union (EU) as a new member. For only members of the EU are allowed to participate in EMU. It is true that entry into the EU entails simultaneous acceptance into the Economic and Monetary Union, however with the status of member states to which a derogation applies. This is the position of Denmark, Greece, the United Kingdom and Sweden today.[1] This means that on joining the EU a country takes on a clear obligation to participate in the EMU without derogation at a later date. The precondition for this last step is the fulfilling of the so-called convergence criteria ("Maastricht criteria") according to the Treaty on European Union. Estonia is not only striving for rapid acceptance into the EU, but it is also directing efforts towards being integrated into EMU without delay.

The object of the following is not to assess Estonia's suitability for joining the EU in general political terms according to the "Copenhagen criteria", but rather to analyse the implications of a rapid accession to EMU in terms of monetary policy. To this end a brief

* Ernst Moritz Arndt University of Greifswald, Germany.

[1] Denmark and the United Kingdom have opting-out clauses to which the derogations apply. See Claus Köhler: Vertragliche Grundlagen der Europäischen Währungsunion, Volkswirtschaftlicher Kurzkommentar, Berlin 1999, pp. 115 f.

comment will first be made on how far the convergence criteria have been fulfilled, as the central precondition for admittance to EMU. This is taken as a basis for discussing the compatibility of the currently valid currency board system with the requirement of participation in the Exchange Rate Mechanism II. Finally, the consequences of a premature subjection to the monetary strategy of the European Central Bank are discussed.

Fulfilment of the Convergence Criteria

At first sight, the extent to which the five convergence criteria of the Maastricht Treaty have been fulfilled presents an optimistic picture for Estonia; on closer consideration, however, this impression has to be modified somewhat. The two criteria pertaining to national debt, which are, however, less relevant for the functioning of a monetary union, can be seen in a clearly positive light. According to the provisional figures for 1998, Estonia is in a very favourable position here even in comparison to the present EMU states, with a budget deficit of 0.3% of GDP and government debt of 4.6% of its GDP. Forecasts for the budget deficit for 1999, however, suggest a development which is rather critical for rapid accession to the EMU, unless the trend is just a temporary, cyclical phenomenon.

In addition, Estonia has made quite considerable progress in stabilizing the development of price levels. The inflation rate, measured according to the consumer price index (CPI), coming from a very high level, and seeming to be stuck at the 10% level for some time, fell steeply to around 4% in 1999. Thus it is only slightly above the figure required to fulfil the inflation criterion. This figure was originally calculated on the basis that a country's inflation rate was not allowed to be more than 1.5 percentage points above the average figure for the three EU member states with the most stable prices. Starting with the beginning of the EMU on 1.1.1999, a uniform inflation rate is calculated for the euro area, measured according to the so-called harmonized consumer price index (HCPI). It is then plausible to assume that the inflation rate criterion is fulfilled if a candidate's inflation rate does not exceed the HCPI by more than 1.5 percentage points. Since the inflation rate in the EMU for the first quarter of 2000 was around 2%, the price trend in Estonia has moved very strongly in the direction of the currently required, or maximum admissible, level of 3% to 3.5%. It remains to be seen, however, whether the favourable trend of inflation is the result of the economic slump in Estonia. The –3.9% growth rate of GDP for 1999 is the expression of a strongly recessive development. Only if price trends can be kept at their present level, or even reduced in the long term, in a situation where growth is normalized, i.e. GDP again shows positive growth rates, can it be assumed that the inflation criterion has been successfully fulfilled.

Problems arise for Estonia with regard to the fulfilment of the interest criterion. This states that over the course of a year before joining the EMU the average long-term nominal interest rate must not exceed by more than two percentage points that of those – at most three – member states which have achieved the best results with regard to price stability. In theory, the close linking of the exchange rate of the Estonian kroon first to the German mark and then to the euro, in combination with the free movement of capital, should have resulted in roughly identical interest rates in Estonia and in the EMU. Yet in fact considerable differences in the interest rates can be observed. These are an expression of high risk premiums. On the one hand, this indicates fear of devaluation despite clear and stringent currency board regulations, or in other words a lack of confidence in the durability of the exchange rate. On the other hand, the relatively small breadth and above all the small depth of the Estonian bond markets involve liquidity risks. Moreover, and this may well be the essential factor, the high interest rates suggest worries about the security and stability of the Estonian banking and finance system. As long as these worries cannot be plausibly assuaged they represent an obstacle to EMU membership which should not be underestimated.

At first sight the fulfilment of the exchange rate criterion appears favourable, as the Estonian kroon was, from the setting up of a currency board system in June 1992 to the end of 1998, strictly and rigidly linked to the German mark at a nominal exchange rate of 8:1, and from the beginning of 1999 it has been linked just as strictly to the euro at a rate of 15.6466:1. A closer look at the exchange rate criterion reveals, however, that for at least two years before entry into the EMU a country has to have kept within the normal bandwidths of exchange rates provided for in the exchange rate mechanism of the European Monetary System, without strong tensions. In legal terms, since the beginning of 1999 this means that the candidate has to have participated successfully for two years in the European exchange rate mechanism, also known as ERM II or EMS II. Thus in the following we must examine whether Estonia necessarily has to give up

its currency board system before it becomes a full member of the EMU, or whether its existing exchange rate system is compatible with the requirements of the Maastricht exchange rate criterion.[2]

Estonia's Participation in the ERM II

The new European exchange rate mechanism (ERM II) gives those EU member states for which a derogation is valid, also known as "pre-in" countries, the opportunity of fulfilling the convergence criterion pertaining to the required development of exchange rates before joining the EMU. The need to participate in this exchange rate mechanism arises quite simply from the necessity of being treated equally with the countries already participating in the monetary union, whose convergence test also included this criterion.[3]

Legally, the new European exchange rate mechanism is based on the "Agreement between the European Central Bank and the national central banks of the member states outside the euro area on an Exchange Rate Mechanism in Stage Three of Economic and Monetary Union" of 1st September 1998 and the "Resolution of the European Council on the establishment of an exchange-rate mechanism in the third stage of economic and monetary union" of 16th July 1997 in Amsterdam.

The essential components of ERM II can be described by the regulations concerning central rates, margins, obligations to intervene and credit facilities.[4] In contrast to the old European Monetary System (EMS), in which a grid of parities determined central rates and intervention rates for all participating currencies, and in which the German mark needed a long time to become an anchor currency, in ERM II the euro is by definition the official anchor currency. This means that, using a "hub-and-spokes approach", central and intervention rates are set only in relation to the euro. The standard fluctuation band is determined as ±15% compared to the relevant central euro rate. A "pre-in" country can apply to have a band narrower than the standard one formally set, taking progress in convergence into consideration. For example, Denmark has made use of this, with a band of ±2.25%. Besides this, it is possible for a "pre-in" central bank to arrive at a bilateral arrangement with the ECB for a narrower band to be set informally, i.e. as a rule without publication. This of course presupposes appropriate success in convergence.

The possibility of narrowing the band could be used by Estonia to agree on a fixed exchange rate, as under the present currency board system, in the form of a central rate against the euro with a fluctuation band of ±0%. In other words, Estonia would be formally in a position to maintain the fixed exchange rate within the framework of the currency board system even as a participant in ERM II.

However, problems could arise from the intervention requirements. Interventions can be divided into compulsory interventions and intramarginal interventions. Whereas intramarginal interventions are carried out already before the upper or lower margin is reached, compulsory interventions automatically start only when the so-called upper or lower intervention point has been attained. Depending on the decision of the European Central Bank Council, they are carried out either by the ECB or by the "in" central banks, which then act as agents for the ECB, together with the "pre-in" central bank involved. In principle, the financial volume of obligatory rate support operations is unlimited. To this end, "very short-term financing" has been set up between the ECB and the "pre-in" central banks participating actively in ERM II. This is an automatically accessible very short-term credit facility which can be used at first for three months, and subsequently, with the agreement of the creditor central bank, for a maximum of two further three-month periods. The main innovation compared with the basically analogous regulations in the old EMS is that compulsory interventions can now be stopped, both by the ECB and by the "pre-in" central banks in question, if price stability is endangered. If the stability goal is endangered, the "very short-term financing" can analogously also be broken off.

With this arrangement, participation in ERM II will not automatically reduce the danger of an involuntary realignment of the Estonian kroon due to market forces to less than the danger of devaluation within the framework of the present currency board system. The progressive narrowing of the band agreed in ERM II, i.e. a range of exchange rates approaching that of the currency board system, can even increase the likelihood of a realignment caused by speculative pressure.

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[2] See Deutsche Bank Research: Osteuropa und die EWU: Wirtschaftsbeziehungen und Beitrittsperspektiven, in: EWU-Monitor, No. 10, Frankfurt/Main, 10th February 2000, p. 15.

[3] See Deutsche Bundesbank: Operational features of the new European exchange-rate mechanism, in: Monthly Report October 1998, Vol. 50, No. 10, pp. 17-23, here pp. 20 f.

[4] For details see Armin Rohde, Ole Janssen: Europäische Zentralbank und Wechselkurspolitik, in: Diethard B. Simmert, Ernst Welteke (eds.): Die Europäische Zentralbank, Europäische Geldpolitik im Spannungsfeld zwischen Wirtschaft und Politik, Stuttgart 1999, pp. 211-230, here pp. 215 ff.

If a band of ±0% were to be agreed on for Estonia, in analogy to the currency board system, this would entail an enhanced danger of an increase in compulsory interventions on the part of the ECB and the Estonian Central Bank, the Eesti Pank. With such a band, practically every intervention would automatically be a compulsory intervention. For instance, if exchange traders were to increase the pressure to sell Estonian kroons, this could very quickly lead to a cessation of interventions by the ECB if it saw the aim of stability within the euro currency as endangered. The decisive factor would be less the absolute level of intervention, which would probably be fairly low in comparison with other countries participating in ERM II. Stopping an intervention in favour of the Estonian kroon would, rather, be a case of avoiding creating a precedent. If the ECB were to keep up an unlimited demand for the Estonian kroon as pressure to sell continued, then in similar situations, even in the case of national economies whose overall participation in the ERM II was on a larger scale, an important argument for ceasing interventions in favour of the national currency in question would not be valid, because of the principle of equal treatment. For this reason it is to be expected that the ECB may give up using the instrument of compulsory exchange market interventions.

If the ECB stops its intervention in a situation where the supply of Estonian kroons exceeds demand in order not to endanger stability within the euro area, then Estonia will bear the burden of intervention unilaterally. At first sight this circumstance may appear to be comparable to Estonia's status quo with its currency board system, so that the probability of a devaluation within the framework of ERM II should at least be no higher than with the present currency board system. However, in contrast to the present situation, in which Estonia bears the sole responsibility for the stability of its exchange rates and interventions basically do not attract much public attention, the cessation of an intervention by the ECB within the framework of ERM II would have a much greater publicity or signal effect on the markets. Exchange dealers oriented towards news and events would then further increase the pressure to sell, thus possibly pushing Estonia into a position of unsuccessfully "leaning against the wind".

Proponents of Estonia's participation in ERM II with a smooth transition from the fixed exchange rate within the framework of the currency board system to a band of ±0% could on the other hand object that unilateral intervention by Estonia without neutralizing the reduction of the money basis ("unsterilized intervention") would lead to increases in interest rates, which in turn would result in real economic adjustment mechanisms as in the currency board system. In this view, if the markets are convinced that a country is ready to bear these adjustment burdens, especially

Christoph Engel/Kenneth H. Keller (eds.)

Understanding the Impact of Global Networks on Local Social, Political and Cultural Values

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Opportunities and risks are twins. There are few to deny the opportunities of global networks in general and of the Internet in particular. But many fear for the concomitant risks, or what they perceive as a risk. Rascist speech, porriography and personality profiling rank highest in public awareness. Some concerns are quasi universal, like child pornography. But for others there are at least differences of degree. Following its history, Germany has tabooed right wing publications. And Americans, in their majority, feel hurt by nudity, which most Germans find quite inoffensive. Such examples lure into a simplistic opposition: global values threat local values. The reality of global networks, and of their interrelation with local values, is much more complex.
This volume explores different paths for understanding global networks, local values, and their reciprocal impact. It stretches from social philosophy to technology forecasting, from cultural theory to law, from systems theory to economic history, from sociology to external relations studies, from economics to political sciences.

2000, 298 pp., hardback with dust-jacket, 88,– DM, 642,– öS, 80,– sFr, ISBN 3-7890-6389-4
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in terms of the real economy, there is no speculative basis for an imminent devaluation and the need for an intervention would be reduced. Once again the situation arising within the framework of ERM II would apparently be comparable to the status quo of the currency board system, and the degree to which speculative pressure could be controlled would thus have to be assessed similarly.

In contrast to the present situation, however, when participating in ERM II Estonia would simultaneously be a member of the EU. If increases in interest rates due to intervention cause adjustments in the real economy, for instance in terms of Estonian economic growth or on the Estonian labour market, from the present perspective of the EU this is a painful but generally necessary process of adjustment for an accession candidate. The resolution of the Council of Europe on the introduction of ERM II states in its principles and aims that a stable economic environment is necessary both for the smooth functioning of the single market and for more investment, growth and employment, and thus is in the interest of all member states. Moreover the exchange-rate mechanism is intended to help those member states which do not belong to the euro area in orienting their economies towards stability, to promote convergence, and thus to support their efforts to introduce the euro. In this connection, Article 109 of the Treaty on European Union also stipulates that each member state for which a derogation is valid has to regard its exchange-rate policies as a matter of common interest. A painful process of real economic adjustment within the framework of ERM II such as would occur under the mechanisms of the currency board system in the case of averting pressure to devalue could thus be incompatible with these principles and aims of the EU and ERM II. In order to prevent this without having the ECB intervene in the currency market over the long term, the EU or ECB could in such a case have an interest in a rapid realignment of the Estonian kroon, which would reduce the extent of real economic adjustment. The specific action of the EU or ECB is here in fact less relevant than the expectations of the participants in the market with regard to possible modes of action or reaction. The interest of the EU in stable economic development in its member states could, from the perspective of speculators, thus raise the chances of realignment for a currency in ERM II and finally increase speculative pressure on this very currency.

This scenario becomes all the more relevant, the narrower the bands within ERM II are fixed at the outset, i.e. the faster or more directly compulsory interventions become necessary. Every devaluation of the Estonian kroon thus caused or forced could be interpreted as a contravention of the exchange-rate criterion and would thus delay full membership of EMU. It would be possible for Estonia to achieve full accession to the EMU sooner if it chose the apparent, and only at first sight absurd, detour of first giving up the absolutely fixed exchange rates of the currency board system in favour of a more flexible bandwidth system and then returning to fixed exchange rates on full accession to the EMU.[5] This would be the case, as shown above, because fixed exchange rates without bandwidth in a currency board system may, under certain circumstances, be judged differently from equally fixed exchange rates in a system of set but in principle adaptable exchange rates which, if necessary, are to be guaranteed by means of intervention according to the ERM II model.

In the phase of participation in ERM II it will be possible to assess more reliably how ready Estonia is to participate in the EMU. On the way into the euro area there is, however, no alternative to participating in ERM II itself. In this phase it will be a matter of convincing the markets in the long term of the credibility of the fixed exchange rate of the Estonian kroon to the euro. Besides successful participation in ERM II, whether Estonia can join the EMU quickly also depends on the extent to which the monetary policy of the ECB does justice to the economic situation in Estonia.

Implications of the ECB's Monetary Policy

The early participation of Estonia in the EMU should be appraised extremely critically, from today's point of view, in as far as the present monetary situation in Estonia would be confronted with the implications of the ECB's monetary strategy. "This strategy consists of two pillars. The first pillar is a prominent role for money with a quantitative reference value for money growth and the second consists of a broadly based assessment of the outlook for price developments and the risks to price stability".[6] The former is more relevant for the following considerations, particularly

[5] This procedure is called an absurd way in: Deutsche Bank Research, op. cit., p. 16.

[6] European Central Bank: The operational framework of the Eurosystem: description and first assessment, in: Monthly Bulletin, May 1999, No. 5, pp. 29-43, here p. 29. See also European Central Bank: The stability-oriented monetary policy strategy of the Eurosystem, in: Monthly Bulletin, January 1999, No. 1, pp. 39-50.

the matter of determining the quantitative reference value for the growth of the money supply.

Since in an integrated currency area more or less identical monetary conditions prevail for all participants, the monetary line laid down by the ECB would also be valid and take effect in Estonia, if it participated in EMU. This would mean that the reference value derived by the ECB for the money supply growth to be aimed at would also set the framework for the Estonian national economy. This would give no cause for concern only if the growth rate for the money supply were based on trends in overall economic benchmark figures in Estonia that had at least approximately the same levels or the same stability as in the euro area, or in the present participating countries. This is anything but the case, however.

As a matter of principle, the ECB bases its reference values on the development of three overall economic benchmark figures, in analogy to the potential-oriented monetary targeting policy pursued by the German Bundesbank from the end of 1974.[7] In practice it takes up elements of quantity theory, taking the familiar connection between money supply on the one hand and the real gross domestic product (GDP), prices and the velocity of circulation of money on the other hand as a basis. The growth of money supply aimed at is determined so that, at least in the medium term, it is in harmony with the primary aim of the European System of Central Banks, to secure price stability in the euro area.[8] The aim of price stability is, in the view and definition of the ECB, guaranteed if the rise in the harmonized consumer price index (HCPI) in the euro area is less than 2% compared with the previous year. With regard to the growth of real GDP, the ECB falls back upon its development trend in the euro area, which is also sign a that the ECB's concept is oriented towards the medium term. Specifically, it takes into account a growth rate for real GDP of between 2% and 2½% per year. It puts the trend of changes in circulation velocity at negative values between ½% and 1%. The figure of 1% applies if the period 1980 to 1999 is considered, whereas circulation velocity diminished by ½% on average from 1992 to 1999. From these benchmark figures the ECB derives a quantitative reference value for money supply growth of the broad aggregate M 3[9] at a level of 4½% per year by adding the growth rates for real GDP and the development of HCPI aimed at, and then subtracting the rate of change of the circulation velocity.

The reference value for money supply growth has thus been set so that a real growth of 2% to 2½% can be financed in the euro area while maintaining the defined price stability. The assumption of a stable relationship between money supply and price level implicit in this concept means that, in keeping with the quantity theory, a growth of the money supply greater than the 4½% calculated would in the medium term only lead to an inflation rate higher than that aimed at.

Now if the overall economic benchmark figures on which the ECB's money supply concept is based are compared with the corresponding figures for Estonia, striking differences are noticeable, which make it appear questionable whether Estonia should subject itself to the narrow corset of European monetary policy in the near future. Table 1 shows that for the period 1994 to 1998 on average Estonia's real GDP grew by more than 4%. The average growth rates of differently delimited money supply aggregates varied from just 20% for the narrowly defined money supply

Table 1
Development of Economic Indicators in Estonia between 1994 and 1998
(change over previous year in %)

Year	CPI	real GDP	M0[a]	M1[b]	M2[c]	V0[d]	V1[d]	V2[d]
1994	47.7	-2.0	11.8	28.4	40.1	33.9	17.3	5.6
1995	29.0	4.3	15.1	28.9	36.8	18.2	4.4	-3.5
1996	23.1	3.9	20.0	25.0	35.1	7.0	2.0	-8.1
1997	11.2	10.6	30.5	34.0	53.2	-8.7	-12.2	-31.4
1998	10.5	4.0	22.0	0.0	10.1	-7.5	14.5	4.4
mean value	24.3	4.2	19.9	23.3	35.1	8.6	5.2	-6.6

[a] M0 = cash issued, accounts of credit institutions held with Eesti Pank + Eesti Pank CDs, EEK accounts of nonresidents held with Eesti Pank.
[b] M1 = cash in circulation in the economy, demand EEK deposits.
[c] M2 = M1 + time and saving deposits (EEK), foreign currency deposits.
[d] Velocity of M0, M1, M2, where Vi = real GDP + CPI – Mi.

Sources: Eesti Pank: Statistical Datasheets, various volumes; European Central Bank: The Eurosystem and the EU enlargement process, in: Monthly Bulletin February 2000, No. 2, pp. 39-51, here p. 41.

[7] See Armin Rohde, Ole Janssen: Anmerkungen zu den Vorkehrungen für einen stabilen Euro, in: Carsten Lange, Armin Rohde, Horst M. Westphal (eds.): Monetäre Aspekte der europäischen Integration, Berlin 1998, pp. 13-28, here pp. 23 ff.

[8] See European Central Bank: Economic developments in the euro area, in: Monthly Bulletin, December 1999, No. 12, pp. 9-57, here pp. 10 f.

[9] The aggregate M3 includes currency in circulation, overnight deposits, deposits with agreed maturity up to 2 years, deposits redeemable at notice up to 3 months, repurchase agreements, money market fund shares/units, money market papers and debt securities up to 2 years.

M0 and a good 35% for the broadly defined money supply M2. The money circulation velocity, that is the quotient of the normal GDP and the average annual level of the respective money supply, showed average rates of change of between –6.6% (for M2) and +8.6% (for M0). It should be observed, as a look at the annual figures will reveal, that average figures are derived from rates of change which vary greatly from year to year. This means the spread of the yearly rates of change around the respective mean is considerable.

This last point suggests that the relevant economic or monetary relations are not (yet?) stable enough for a money supply concept to be applied. The available, admittedly very meagre, data indicate neither a stable demand for money nor a stable relation between money supply and price level, nor even that growth of the money supply predicts the development of the price level.

The fact that the development of the money supply lacks predictive value is shown particularly clearly by the data in Table 1, for whereas the rate of inflation sank continuously and clearly between 1994 and 1998, monetary expansion measured by money supply in various definitions was not only at a high level, it even accelerated to a not inconsiderable degree, at least up to and including 1997. If a national economy were to squeeze itself into a monetary jacket cut far too tightly, e.g. by the ECB, under such conditions, it would be in danger of missing economic growth or leaving growth potential unused, with tangible macroeconomic consequences, for instance on the labour market, in state revenue and state expenditure and in international economic relations. Here we should remind ourselves of the period of high real growth rates in the Federal Republic of Germany in the 1950s and 1960s, where the money supply also grew by 10% to 20% over a period of several years. If the German economy had then been pressed into a monetary strategy based on quantity theory, the internationally acclaimed "German economic miracle" would never have taken place.

Therefore it should finally be noted that for Estonia the monetary situation has not yet achieved the degree of stability that would be absolutely necessary in order to introduce the ECB's monetary strategy. From this point of view, Estonia is at the moment not yet ready to join EMU. We must wait and see to what extent membership of ERM II over at least two years will create more favourable conditions for taking on the ECB's monetary strategy.

Conclusion

The starting-point for considering whether Estonia is ready to participate in EMU is the extent to which the Maastricht Treaty's convergence criteria are fulfilled. For the fiscal criteria this must be seen as basically positive, and price stability seems to be approaching the Maastricht requirements. Something has to be done to reduce the difference in interest levels compared with the euro area, induced by risk premiums.

The exchange-rate criterion will prove to have been fulfilled when Estonia has participated successfully in ERM II for at least two years. Due to its experience with the fixed exchange rate within the currency board system and to the intervention rules of ERM II, fulfilling this criterion at first does not seem to be problematic. However, in particular narrowing the fluctuation bandwidth from ±15% to a margin of ±0% as in the present currency board system would tend to make interventions by the ECB and the Estonian Central Bank necessary too often, and the ECB might cease interventions for reasons of stability. The resulting unilateral intervention by the Estonian Central Bank would, in the case of non-neutralization, lead to real economic adjustment which would contravene one of the aims of ERM II, economic stability in the participating countries. Accordingly a realignment of the Estonian kroon would be probable. The apparent detour of changing from the fixed exchange rate of the currency board system via the system of broad fluctuation bandwidths back to fixed exchange rates within EMU will prove to be the more suitable route to accession to EMU.

The possibility of Estonia's joining EMU raises the question of Estonia's monetary compatibility with the monetary strategy of the ECB. The derivation of the money supply reference value for the euro area is oriented, inter alia, on GDP growth rates, which in the case of Estonia are insufficient. Moreover, the available data do not allow the conclusion that there is a stable relationship between money supply and price levels in Estonia. Given Estonia's present monetary framework, squeezing Estonia into the ECB's narrow monetary corset would make it a long-term disturbing factor.

Estonia is well on its way to joining the EU and EMU, but in this connection keeping a large part of its present exchange rate policy would mean a monetary policy detour. Once all formal obstacles have been surmounted, a responsible approach requires an examination as to whether the ECB's monetary concept is appropriate for the general situation in the Estonian economy. The time does not yet seem to be ripe for it.