

# Currency Boards in Central and Eastern Europe: Past Experience and Future Perspectives

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## **I Introduction**

The 1990s have witnessed a revival of currency board arrangements. Central and Eastern Europe has played a major role in this process: Estonia and Lithuania, and more recently also Bulgaria, have adopted this distinctly rule-based monetary framework. What are the experiences of these countries to date, what is the balance of economic advantages and drawbacks flowing from the currency board arrangements and how does the cost-benefit equation of this monetary framework change over time? Turning to the future, what are the implications of the unfolding transition process and the prospective integration into the European Union for the currency board arrangements in Central and Eastern Europe?

The purpose of this study is to take a closer look at these questions. In order to lay the groundwork for the subsequent analysis, chapter 2 reviews the basic principles of a currency board, while chapter 3 discusses its advantages and disadvantages and chapter 4 outlines typical reasons that have made countries exit this monetary framework in the past. The experience with currency boards in Estonia, Lithuania and Bulgaria is examined in chapter 5. Chapter 6 analyzes the future perspectives of currency board arrangements in the candidate countries, with a focus on future EU accession of the Central and Eastern European countries (CEECs). The conclusions of the study are presented in chapter 7.

## **2 The Functioning of a Currency Board**

The idea of currency boards was originally developed for the British colonies. Since these historical precedents, several countries, such as Argentina, Ireland, Singapore, Malaysia, Hong Kong, and more recently, Estonia, Lithuania and Bulgaria have introduced currency boards. A pure currency board arrangement is not only the strictest form of a fixed exchange rate regime; in fact, it is much more than that: Under a strict currency board, there is no monetary policy. Monetary Policy is in essence transferred to a foreign authority and to market forces. The monetary authorities commit to issuing domestic currency only in exchange for a foreign currency at a fixed exchange rate. In principle, the peg can be to a basket of currencies or to a single currency. In practice, all presently operating currency boards have opted for the latter on transparency and simplicity grounds.<sup>2)</sup> In addition, the reserve currency is often the currency of the country's main trading partner or more generally the currency which is used most for its international transactions. A currency board requires that official foreign exchange reserves are at least equal, at the given rate of exchange, to the domestic currency issued and usually also to the overall amount of the commercial banks' reserves with the currency board. In other words, domestic notes and coins are issued only if and when they are backed by foreign exchange reserves.

Table 1 highlights the main differences between a currency board and a traditional central bank: A currency board's balance sheet consists principally of its holdings of the reserve currency on the assets side. On the liabilities side, there is an equal value of cash held by the public and deposits by commercial banks. Currency boards often aim to hold excess reserves in

order to guard against asset valuation changes.<sup>3)</sup> These excess reserves correspond to the net worth of the currency board. Unlike a currency board, a traditional central bank holds not only foreign but also domestic assets. In most cases, an important part of these domestic assets consists of government debt.

Table 1

<b>Currency Board versus Central Bank</b>	
Assets	Liabilities
<b>Currency Board</b>	
Liquid reserve currency assets	Cash (deposits of commercial banks) Net worth
<b>Central Bank</b>	
Liquid reserve currency assets Domestic assets (government debt)	Cash and deposits by commercial banks Net worth

*Source: Williamson (1995).*

A currency board yields seigniorage, as it earns interest from its holdings of reserve currency securities. The net profit of a currency board corresponds to these interest earnings minus the cost of putting and maintaining notes and coins in circulation and other operating expenses of the board.

Currency boards are generally established by law. This is to guarantee that operations are protected from political interference and lobbying by various interest groups. The main characteristics of a currency board, i.e. the adoption of clear and stringent monetary rule and the provision of sufficient foreign exchange reserves to support the system, usually restrain the monetary authorities from extending credit to the government or the banking system. These rigidly upheld principles are practiced under a *pure (strict) currency board arrangement*. However, under a modified currency board arrangement, the law provides for some flexibility: The currency board may, for example, provide financial support to banks from its excess reserves, or it can borrow money from international capital markets to do so. The monetary authorities may also issue certificates of deposit or other securities to provide or withdraw liquidity.<sup>4)</sup>

A traditional central bank exercises monetary policy by using various monetary policy instruments to change the monetary base. A currency board, in contrast, has no (or only very limited) room for maneuver in the area of monetary policy. This means that money supply is determined solely (or primarily) by market forces: The monetary base increases only (or, at least, essentially only) when the public sells foreign currency to a currency board at the fixed exchange rate, or when foreign money flows into the country. Conversely, the monetary base decreases when the public sells cash back to a currency board and purchases foreign exchange, or when money flows out of the country.

Under a currency board system, the level of interest rates is also market-determined, either fully under a pure currency board and mostly under a modified currency board, as monetary operations are not permitted (under a pure currency board arrangement) or largely restricted (under a modified

currency board arrangement). Consequently, changes in the board's foreign exchange reserves will automatically be felt in domestic liquidity and interest rates. A fall in reserves, i.e. a deficit in the combined current and capital account, tightens domestic liquidity, which *ceteris paribus* leads to higher interest rates, while a rise in foreign exchange reserves increases domestic liquidity and leads, other things being equal, to lower interest rates.<sup>5)</sup>

In principle, it is possible to adjust an exchange rate fixed under a currency board. However, this very rarely occurs.<sup>6)</sup> After all, removing the certainty of the exchange rate, even once, encourages speculation about the prospects for a future realignment. As a result, the credibility gained through establishing a currency board would be severely hurt, which would subvert the underlying rationale of setting up such a monetary framework in the first place.

### **3 Advantages and Disadvantages of a Currency Board Arrangement**

Most advantages and disadvantages of a currency board arrangement<sup>7)</sup> are similar to the pros and cons of fixed exchange rate regimes.<sup>8)</sup> Here, however, we will focus on the specific arguments for and against currency boards, and not reproduce the debate on fixed versus flexible exchange rate regimes. Nevertheless, when arguing either for or against a currency board arrangement, it is important to bear in mind that the experience with different exchange rate regimes – ranging from flexible to fixed and the different variants in between – has shown that there is no single exchange rate system which would be optimal in all circumstances and at all times.

In practice, there have been various reasons for establishing a currency board. Some countries established a currency board in response to an economic crisis: They wished to end a currency crisis resulting from lost credibility and to support a stabilization and reform program. In other cases, a currency board was established because of limited expertise in monetary management.<sup>9)</sup>

In general, one of the main motives for installing a currency board is to build up credibility. The system implies the strict prohibition of financing government deficits or of the provision of credits to the banking sector. First, this should encourage sound fiscal policymaking, leaving spending cuts, revenue increases or lending from (domestic or foreign) banks as alternatives to the government. However, it cannot be taken for granted that a currency board arrangement automatically leads to a sound fiscal policy, especially if a country has lacked fiscal discipline in the past. In other words, a currency board arrangement does not necessarily endogenize fiscal policy. A currency board may also limit moral hazard in the banking system. It may be beneficial not to have a lender of last resort, if crises in the banking system result from poor bank management and supervision.

Since the currency board always has enough reserve currency assets to at least cover its liabilities, it should generally be in a position to effect the conversion into foreign exchange, unlike a central bank whose assets have been run down.<sup>10)</sup> A currency board also provides an automatic balance-of-

payments adjustment mechanism which essentially functions in the same manner as under the gold standard fixed exchange rate system. If the currency board country's combined current and capital account is in deficit, money supply is reduced and, *ceteris paribus*, interest rates rise, which promotes a capital inflow. At the same time, increased domestic interest rates reduce domestic absorption, thereby improving the current account position. However, it is important to distinguish between "movements along the demand curve for a currency" and "shifts in demand." That is, a currency board (and, more generally, any rigidly fixed exchange rate regime) will not be successful in leading to the automatic correction of external imbalances if currency preferences change.<sup>11)</sup>

One of the main arguments for currency boards is that they tend to deliver low inflation. In fact, there is some empirical evidence that currency boards are indeed associated with better inflation performance than other forms of pegged exchange rate regimes (even allowing for potential endogeneity of the regime choice). This superior inflation record appears to be mainly due to lower inflationary expectations, reflecting, on average, a higher degree of confidence in the currency board regime than in that of standard pegged exchange rate regimes.<sup>12)</sup> Empirical studies also point out that currency board countries exhibit a relatively better growth performance than other economies.<sup>13)</sup>

Finally, a currency board may have a specific appeal in economies in which foreign currencies are used in parallel to the country's own legal tender ("dollarization"). In such cases, there is an advantage in stabilizing the domestic currency by linking it tightly to that currency (dollar) via a currency board.<sup>14)</sup>

All in all, a currency board, if successful, can strengthen the credibility of the monetary authorities, may foster sound fiscal policies and should lead to lower inflation.

Despite the benefits, currency boards do have drawbacks as well. At the outset, it may be difficult for a country to gather sufficient hard currency reserves to back the entire monetary base. This is one of the reasons currency board arrangements are sometimes recommended to small open economies rather than to big countries.

The loss of active monetary policy under a currency board arrangement can have disadvantages: An active monetary policy can be helpful in a variety of situations, for example in the case of significant capital outflows or inflows. More generally, a purely rule-based regime is inflexible, which is particularly problematic in the case of shocks. In addition, the currency board may slow down the learning and reform process in (transition) countries, where both the experience in designing and conducting monetary policy as well as the availability of monetary policy instruments is limited.

Furthermore, a currency board tends to be procyclical: When an economy is doing well, capital flows in, interest rates fall, and this reinforces the economic boom. However, developments can change quickly due to the volatility of capital flows. As soon as capital flows out, interest rates rise, and it will become necessary to tighten fiscal policy.<sup>15)</sup> As a consequence, economic growth slows down.

Under a strict currency board regime, the monetary authorities cannot act as a lender of last resort, i.e. banks cannot ask for any rescue loans to avoid a crisis in the banking system. Although this may be beneficial for the banking system in the longer run, it can limit the room for maneuver for dealing with banking sector crises in the shorter term. However, the experience of modified currency boards disposing of a lender-of-last-resort function suggests that in practice a flexible and extensive use of these funds goes at the expense of the credibility that has been earned as a consequence of sticking to the strict rules of the currency board.<sup>16)</sup>

The prohibition of budgetary financing by the currency board does not necessarily force sufficient prudence on fiscal policymaking. The government may borrow from international financial markets, provided that a country has access to these markets. Eventually, this may lead to over-borrowing. Furthermore, in transition economies with state-owned banks, the government may be tempted to put pressure on such banks to extend credits in crisis situations and to fund this externally. Consequently, the authorities may be tempted to delay privatization of state-owned banks (which may have become the government's "lenders of last resort").

Moreover, there is the problem of real misalignment. If a country's inflation remains higher than that of the country to which the currency is pegged, the currency can become overvalued. However, this is only the case if real appreciation outpaces the trend appreciation of the equilibrium real exchange rate that is associated with above-average efficiency gains (which typically characterize the economic developments in catching-up economies). Furthermore, no exchange-rate-related competitiveness problem occurs as long as real appreciation is in fact the gradual correction of an earlier undervaluation.

Since the exchange rate cannot be altered to help the economy adjust to external shocks, such as a fall in exports or shifts in capital flows, domestic prices and wages must adjust. If, for example, wages are sticky, which they often tend to be, e.g. due to binding wage contracts or wage indexation schemes, the risk of the domestic currency to become overvalued is high. Against this background, measures designed to increase wage flexibility are particularly crucial under a currency board and the strict nominal exchange rate rigidity it entails.<sup>17)</sup> If prices and wages are sticky, adjustment to shocks is lengthy and costly in terms of both output and employment.

#### **4 Reasons to Abandon a Currency Board Arrangement**

So far, both economic research as well as technical assistance have focused more on how to start up a currency board or how to operate it than how to exit a currency board. The timing of the exit greatly depends on the initial motivations a country had for establishing the currency board.<sup>18)</sup> In some cases, a currency board is a transitional arrangement established to support a country's currency until credibility is restored, institutions are strengthened and financial markets are developed. As this process unfolds, the gradual relaxation of the currency board rules and later the abandonment of the system may be viewed as a "natural" development. However, a currency board can also be a more permanent type of arrangement,

particularly for countries that are frequently exposed to speculative attacks, for very small open economies, and for countries with a long history of chronic and high inflation, provided that prices and wages in these economies are relatively flexible.

Given the advantages and disadvantages of currency boards, it is quite obvious that there are various motives that can make a country switch to another monetary regime. Basically, the decision to exit a currency board may result from changes in the external environment or from mounting internal pressures. The success of the transition to a new system largely depends on the economic and political conditions of the country in question. One of the key concerns about the abandonment of a currency board arrangement is to design and implement the exit process in a manner which does not impair the credibility of the policymakers in general and of the monetary authorities in particular.

What were the reasons that led currency board countries to abandon this monetary framework in the past?<sup>19)</sup> A changing external environment was the reason Singapore and Malaysia exited their currency board arrangements in 1973. At the time, the currencies of Malaysia and Singapore were pegged to the U.S. dollar, which was weakening. As a result, both countries experienced a depreciation of their national currencies against those of the main trading partners, leading to an increase in inflation. At the same time, there were increasingly firm expectations of a (nominal) appreciation, which resulted in strong capital inflows and excess liquidity. Consequently, the Malaysian and Singaporean authorities gave up the fixed peg and adopted floating exchange rate regimes. Since both countries were in a "position of strength," given the revaluation expectations at the time of abandonment, these exits from currency boards proved not to be disruptive.

Argentina is a good example of both external and domestic shocks being catalysts for abandoning a currency board arrangement. During 1913/14, Argentina, which operated a currency board at the time, experienced an economic recession in the wake of a crop failure. In addition, due to a decline in exports and substantial repayments of foreign bank loans, the currency board's assets fell, leading to monetary tightening. Pressures to devalue the currency and worries about a severe monetary contraction and further asset losses finally led to the abandonment of the currency board system. When the Great Depression brought about a drastic decline in commodity prices, protectionism and a reduction in foreign lending to developing countries, the currency board, which had been reestablished in 1924, was dropped again. It is interesting to note that, in 1991, Argentina once more established a currency board system.<sup>20)</sup>

It has been argued that the credibility of each country's economic policies depends more on the country's track record in fulfilling past commitments than on present institutional arrangements.<sup>21)</sup> After all, implementation of monetary and exchange rate policy today can be particularly difficult if a country has used monetary policies inappropriately in the past. Consequently, new policy rules may well meet with considerable skepticism, and there may be situations where no formal institutions or laws can remove this lack of trust in the government's ability to carry out

commitments. Moreover, whether an exit from a currency board is smooth or fraught with turbulences will depend on how well the country has performed under the currency board arrangement.

The remainder of the study focuses on the three transition countries in which currency boards are in operation, namely Estonia, Lithuania and Bulgaria. Another country in transition, Bosnia-Herzegovina, is currently in the process of establishing a currency board as part of a stabilization and reform program supported by an IMF standby loan granted in late May 1998 and other external financial assistance.<sup>22)</sup> The case of Bosnia-Herzegovina is not reviewed in this study, as the currency board is not yet functioning.<sup>23)</sup> Chapter 5 reviews the experience in each of the three countries to date. Chapter 6 deals with the future perspectives of the currency board regimes in Central and Eastern Europe, in a context of progressing transition and approaching integration into the EU.

## **5 Experiences with Currency Boards in Estonia, Lithuania and Bulgaria**

### **5.1 Estonia**

In mid-1992, Estonia, broadly in parallel with its two Baltic neighbors, Latvia and Lithuania, adopted a stabilization and reform program. The collapse of the Soviet Union and of central planning in 1990/91 had resulted in difficult economic conditions: a sharp fall in output, high inflation, malfunctioning payments and monetary arrangements, a trade shock leading to shortages of goods and raw materials and a loss of export markets. While all three Baltic countries have been quite successful in their transition to a market economy, the paths of stabilization have been different, which is also true for the monetary policy and exchange rate regime.<sup>24)</sup> While Estonia and subsequently Lithuania adopted currency boards, Latvia followed a money-based stabilization program before switching to a de facto peg of the lat to the SDR in February 1994.

In Estonia, the main goals for exchange rate policy were stability and credibility. Estonia adopted a currency board in June 1992. At that time, the Foreign Currency Law, the Currency Law and the Law on the Security of the Estonian Kroon went into force. In conjunction with the Law on the Central Bank of the Republic of Estonia passed in May 1993, these laws form the legal basis for the country's currency board arrangement.<sup>25)</sup> The ruble was replaced by the kroon, which was pegged to the Deutsche mark at the rate of 8 to 1. Base money was fully backed by foreign reserves, initially by gold, and shortly thereafter by DEM-denominated assets.<sup>26)</sup> The Bank of Estonia was divided into two departments, the Issues Department and the Banking Department.<sup>27)</sup> The Issues Department became responsible for operating the currency board, and the Banking Department was entrusted with managing excess foreign reserves which, in principle, can be used to provide loans to troubled financial institutions in emergency situations.<sup>28)</sup> Credit to government by monetary authorities was prohibited, as was lending to banks or state-owned enterprises. Furthermore, it was laid down that seigniorage in the form of interest earned was to be passed to the Banking Department. Finally, the Law on the Security of the Estonian Kroon

gave the central bank the right to revalue the kroon, whereas a devaluation decision can be made only by Parliament.

With the currency-board-based monetary system in place, the main monetary policy activity of the Bank of Estonia has been the participation in the foreign exchange market, i.e. purchase and sale transactions between the central bank and commercial banks. As for monetary instruments, the Bank of Estonia has used central bank bills (certificates of deposit/CDs), reserve requirements and a standing deposit facility. Central bank bills have been issued since May 1993. Initially, these papers were floated mainly for market development purposes: The primary aim was not to withdraw surplus liquidity from the market, but to increase the collateral banks could use in the interbank market. More recently, they have mainly been issued in order to smooth fluctuations in cash demand. All in all, the volumes of CDs issued have remained relatively small compared to overall liquidity in the system.<sup>29)</sup> In the second half of 1996, the Bank of Estonia introduced a standing deposit facility with the aim of stabilizing banks' base money demand. The role of this facility has remained minor, chiefly due to the very low interest rates attached to it.<sup>30)</sup> The minimum reserve rate has been at 10% ever since the introduction of the kroon, while some features of the mandatory reserve regime (as e.g. calculation methods and coverage) have been adapted at several instances. Since mid-1997, changes within the mandatory reserve regime have become more substantial.<sup>31)</sup> Other instruments, such as repos and reverse repos, swaps or (re)discounts have not been used under the Estonian currency board arrangement.

Almost immediately after the adoption of the currency board, foreign reserves began to accumulate, indicating the growing confidence in the fixed exchange rate regime (see Table 2). In May 1998, the foreign reserve cover of the Estonian currency board amounted to 125%.

Table 2

**Foreign Exchange Reserves of the Bank of Estonia excluding Gold**

	USD million (end of period)
1992	
2 <sup>nd</sup> quarter	51.9
3 <sup>rd</sup> quarter	134.9
4 <sup>th</sup> quarter	170.2
1993	386.1
1994	443.4
1995	579.9
1996	636.8
1997	757.7

Source: Bank of Estonia.

The Estonian currency board was established with fully liberalized current account transactions and a system of relatively few capital controls. It was felt that full capital liberalization was premature in the early phases of transition, as the restructuring of the country's banking system had only just started. Virtually full capital account convertibility was achieved in late 1993. In the course of the banking crisis of 1992, many Estonian banks collapsed, mainly as a result of their weak balance sheets and the tight

monetary conditions implied by the currency board arrangement.<sup>32)</sup> Although the excess reserves at the disposal of the Banking Department would have been sufficient to rescue troubled banks, the Bank of Estonia refrained from intervention. Consequently, several bank failures occurred up to 1994. Later, in 1994, the Bank of Estonia did grant some loans to surviving and newly merged banks. During the same year, some banks were privatized, and a loan recovery agency was established as well. The reorganization – concentration and privatization – of the banking sector has continued since. By now, the state has divested all its ownership shares in the banking sector, apart from a minority share in one bank, which it plans to sell in the near future. Presently, nine banks are operating in Estonia (plus one branch of a foreign bank), while the respective figure in 1994 was 23. The number of banks is expected to decline further, as the banking sector is improving its competitiveness and effectiveness.

Since the adoption of the currency board, the Estonian kroon has experienced pressure on a few occasions, for example, in the first quarter of 1994 and at the end of 1995. The last time the kroon was under severe pressure was in October 1997, when speculations about a possible realignment heated up. Against the backdrop of very large current account and trade deficits and adverse developments in the global stock markets due to the Asian crisis, the Tallinn Stock Exchange index fell by half within a few days. During this episode, the Estonian authorities reiterated their unequivocal commitment to maintaining the currency board.<sup>33)</sup>

Developments in the Estonian foreign exchange market have been fairly calm since. However, several matters of concern remain. The economic boom that had set in late in 1996 accelerated to a very fast growth of GDP in 1997 (11.4% in real terms); in parallel, the already high current account deficit grew further to 13% of GDP in 1997; domestic credit expansion has continued at an extremely rapid pace (around 80% in 1997); inflation began to rise again in spring 1997 and reached more than 14% annually in early 1998 as a consequence of surging domestic absorption.<sup>34)</sup> Finally, the real exchange rate kept on appreciating (see Table 3).<sup>35)</sup>

Table 3

**CPI-Based Real Effective Exchange Rate Index of the Estonian Kroon  
against the Currencies of Foreign Trade Partners, March 1998 (June 1992 = 1)**

	December 1992	December 1993	December 1994	December 1995	December 1996	December 1997	March 1998
<i>Real effective exchange rate index</i>							
Average	2.048	1.832	2.374	2.676	2.912	3.065	3.169
Against the currencies of developed industrial countries	2.129	2.930	3.903	4.894	5.483	6.062	6.341
Finland	2.260	3.163	4.037	5.056	5.725	6.403	6.721
Germany	1.884	2.455	3.399	4.303	4.872	5.389	5.645
U.S.A.	1.856	2.265	3.404	4.666	4.810	4.636	4.708
Sweden	2.293	3.339	4.493	5.418	5.949	6.584	6.890
Against the currencies of transition economies	1.909	0.785	0.967	0.871	0.886	0.838	0.846
Russia	2.373	0.858	1.099	0.914	0.957	0.908	0.919
Latvia	1.072	0.679	0.781	0.872	0.848	0.821	0.826
Lithuania	1.331	0.590	0.648	0.673	0.635	0.573	0.574

Source: Bank of Estonia.

The continuing real appreciation of a national currency may weaken a country's export competitiveness, leading to a widening of trade and current account deficits. Indeed, Estonia has experienced a substantial widening of its current account deficit during transition. This has mainly been due to the growing trade deficit, which, in turn, has resulted from the rapid growth of domestic import demand, encouraged by the surge in domestic credit. Consequently, widening deficits have raised questions about Estonian export competitiveness. However, if real appreciation reflects a rise in productivity, the country's competitive position is not harmed. In Estonia, both exports and imports have increased, although the growth of the latter has outweighed that of the former. In addition, part of the trade deficit has been compensated by the surplus of the services balance and by foreign direct investment. Clearly, changes in the real exchange rate of the kroon cannot be used directly as a measure of competitiveness. Nevertheless, the question of Estonia's competitive position and the possibility of realignment will remain as long as the country has a very high current account deficit. In the medium to long run, therefore, attention should be focused on increasing domestic savings, widening the export base and replacing imports with locally produced goods.<sup>36)</sup>

Within the framework of the currency board arrangement, the Bank of Estonia and the Estonian government have taken a number of measures to strengthen the financial system. The focus has been on sound capital adequacy of financial institutions, appropriate risk management and efficient supervision. The regulative environment has been adjusted to EU and BIS standards.

Against the backdrop of the upturn in GDP growth and large capital inflows, a number of steps have been taken to limit commercial bank credit and to protect or even strengthen banks' balance sheets. Recent measures include an extension of reserve requirements to include domestic banks' net liabilities to foreign credit institutions (July 1997),<sup>37)</sup> an increase in the capital adequacy requirement for credit institutions from 8% to 10% (October 1997) and a tightening of the principles of calculating the capital adequacy of banks (July 1997 and April 1998). In addition, the Bank of Estonia introduced, in November 1997, minimum additional liquidity requirements for credit institutions, which supplement the minimum reserve obligations of banks,<sup>38)</sup> and lifted the daily minimum requirement.<sup>39)</sup> Moreover, the minimum capital requirement for banks was lifted from EEK 60 million to EEK 75 million as of January 1998.<sup>40)</sup> Efforts to improve banking supervision have also been enhanced, which is important given the fact that Estonian banks own many nonbank financial institutions that are operating actively in the securities, insurance and leasing markets. Preliminary evaluations indicate that the measures taken by the Bank of Estonia have had positive effects on commercial banks' behavior.<sup>41)</sup> Credit expansion has slowed, and the average capital adequacy of the Estonian banking sector has improved, reaching 15.2% at the end of March 1998.<sup>42)</sup> Still, the central bank is planning to raise the capital adequacy ratio further to 12% this year.<sup>43)</sup>

Table 4

Selected Macroeconomic Indicators of Estonia				
	1994	1995	1996	1997
Real GDP (growth in %)	- 1.8	4.2	4.0	11.4
Average annual consumer price inflation (%)	47.7	28.8	23.1	11.2
Central budget balance (% of GDP)	- 0.6	- 0.5	- 1.6	1.5
Current account balance (USD million)	-170.8	-187.9	- 423.1	- 608.9
Trade balance (USD million)	-353.0	-707.1	-1,141.1	-1,446.0
Unemployment rate (end of period)	4.1	4.0	4.3	3.6

Source: IMF; trade and current account balances: national sources.

All in all, Estonia's currency board arrangement has played an important role in the country's macroeconomic stabilization in general and in lowering inflation in particular. It has contributed to Estonia's economic growth by increasing both the public's and foreign investors' confidence in the soundness of policymaking, with a strict monetary and a sound fiscal policy being pursued. In the case of Estonia, the currency board arrangement has indeed been associated with fiscal discipline: The country has recorded only small central budget deficits until 1996, while last year a surplus of 1.5% of

Chart 1

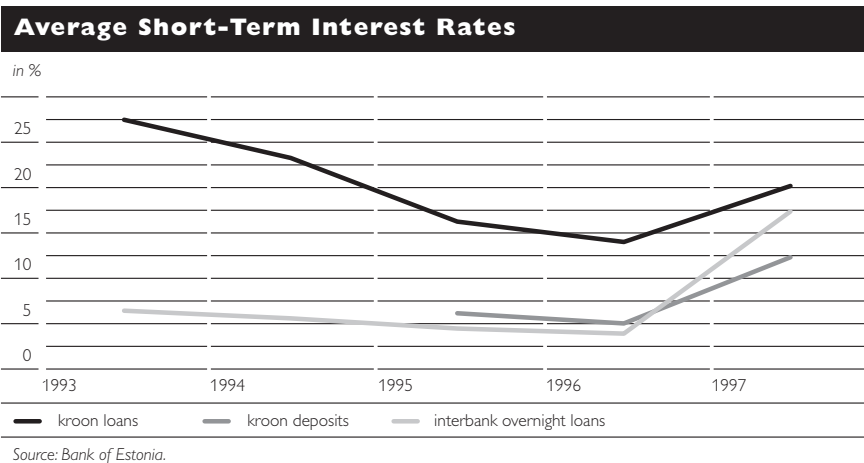


Chart 2

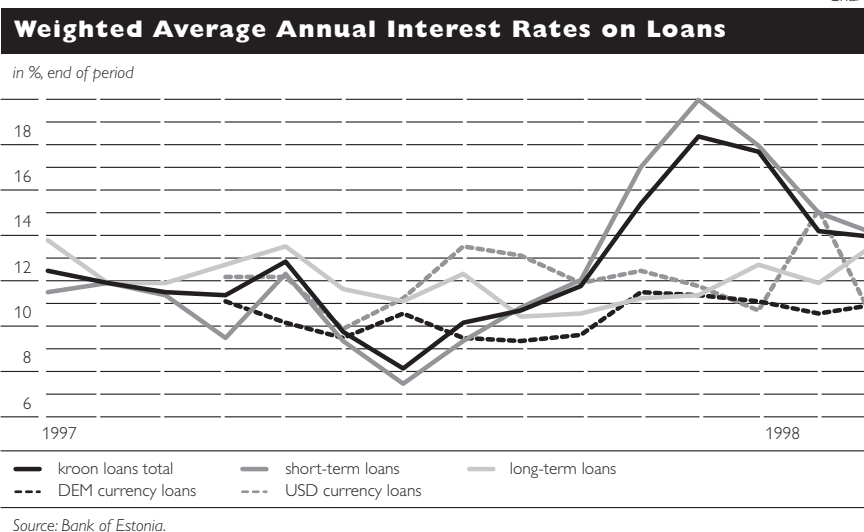
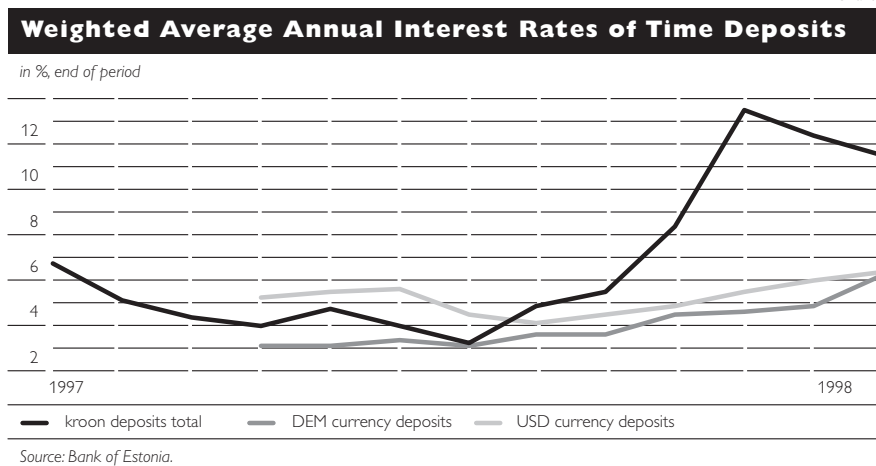


Chart 3



GDP was registered; the record on general government balances has been slightly more favorable over recent years. Since the establishment of the currency board, Estonia has attracted capital inflows that have overcompensated current account deficits and thus expanded money supply, reduced interest rates (at least until recently; see Charts 1, 2 and 3) and that have thereby facilitated structural change and enhanced the business climate. At the same time, capital inflows have been one of the main factors preventing Estonia's inflation rate from converging further to the level prevailing in the anchor country.

Estonia's economic performance over the last one and a half years has also shown some further limitations and drawbacks associated with currency board frameworks. Against the backdrop of an overheating of the economy, it became particularly evident that the set of policy instruments at the disposal of policymakers under such a monetary arrangement is truly limited, which makes it much more difficult to correct, in an effective manner, undesirable (macro)economic and financial developments.

Despite this somewhat more mixed experience in recent times, the Estonian authorities remain committed to the monetary framework in place since June 1992: According to the 1998 economic policy program of the Estonian government and the Bank of Estonia, the fixed exchange rate of the Estonian kroon against the Deutsche mark and the currency board arrangement will continue to be the cornerstones of Estonian monetary policy in the future. With the inception of Stage Three of Economic and Monetary Union (EMU) on January 1, 1999, the euro will most likely replace the Deutsche mark as Estonia's anchor currency, and the peg to the euro will be set according to the conversion rate of the Deutsche mark to the euro.<sup>44)</sup>

## 5.2 Lithuania

Lithuania left the ruble area in October 1992, after an interlude of a few months during which the talonas, the interim coupon currency introduced in May 1992, had circulated in parallel with the ruble. In June 1993, the talonas was replaced by the litas. During the first months of transition, the monetary environment in Lithuania was characterized by relatively lax

monetary policies, which were exacerbated by large ruble inflows. Consequently, the talonas depreciated, under the then prevailing floating exchange rate regime, by over 50% against the U.S. dollar between October 1992 and April 1993, and an increasingly large share of transactions was conducted in foreign currency.<sup>45)</sup> Monetary policy was substantially tightened in May 1993 and, by mid-August 1993, the Lithuanian currency had regained more than half of its earlier losses against the U.S. dollar. Subsequently, the exchange rate of the litas vis-à-vis the U.S. dollar remained stable.

In October 1993, Lithuania's Prime Minister suggested the introduction of a currency board along the lines of the Estonian model, thereby initiating a lively debate over the country's future monetary framework that took place against the background of the successful monetary policy exercised by the Bank of Lithuania on the one hand and the fresh experience of major exchange rate swings on the other. While the government and the IMF supported the idea of introducing the currency board system, the Bank of Lithuania, some commercial banks and many industrialists opposed it.<sup>46)</sup> Finally, in April 1994, Lithuania set up a currency board and the litas was pegged to the U.S. dollar at the rate of 4 to 1. The Law on the Credibility of the Litas, the legal basis for the new monetary arrangement, determined the activities of the Bank of Lithuania and made it responsible for administering the currency board. Unlike in the case of Estonia, the organizational structure of the Lithuanian central bank remained unchanged. The Bank of Lithuania was obligated to provide on request dollars both for currency and for all other liquid liabilities of the Bank, including reserves and other deposits of commercial banks, government deposits, and litas-denominated correspondent balances of other central banks. Initially, the cover of base money with net international reserves (gross reserves minus purchases from the IMF) was below 100%, although it was fully covered by gross reserves.<sup>47)</sup> However, the resources borrowed from the International Monetary Fund were considered a suitable backing for the arrangement due to their long-term character. Like Estonia, Lithuania too experienced rapid growth in reserve money right after the establishment of the currency board (see Table 5). Within a few months, the Bank of Lithuania reached not only full cover with respect to net reserves, but succeeded in building up excess reserves of around 15% of total deposits in the banking system, an order of magnitude which was perceived to be adequate for lender-of-last-resort

Table 5

**Foreign Exchange Reserves of the Bank of Lithuania excluding Gold**

	USD million (end of period)
1992	45.3
1993	350.3
1994	
March	342.7
December	525.5
1995	757.1
1996	772.3
1997	1,010.0

Source: IMF

purposes in potential future crisis situations.<sup>48)</sup> In April 1998, the foreign reserve cover of the Lithuanian currency board was at 137%.

When the currency board was established, the government was given the power to change the exchange rate after consulting the central bank. However, in June 1994, amendments made to the law granted the central bank the right to change the exchange rate after consulting the government in accordance with the central bank's constitutional right to control money issuing. When the currency board was set up in April 1994, Lithuania had already achieved current account and virtually unrestricted capital account convertibility.

It follows from the preceding analysis that Lithuania, like many other currency board countries, chose a modified currency board arrangement. In other words, certain principles of central bank activities remained in existence: Commercial banks were still obligated to keep minimum reserves at the Bank of Lithuania, and the Bank of Lithuania was reserved the right to extend liquidity loans to commercial banks from excess reserves.<sup>49)</sup> Credit to government was prohibited, as is typically the case in any currency board arrangement. As regards seigniorage, the Bank of Lithuania retains interest earned on foreign exchange.

Up to 1996, the Bank of Lithuania used two types of monetary policy instruments, namely reserve requirements and short-term credit facilities for commercial banks. Lithuania has used mandatory reserve requirements quite actively in order to regulate liquidity in the financial system, whereas short-term facilities, designed to provide funds in the case of transient liquidity shortages, have only played a very limited role in monetary management.<sup>50)</sup> Swap operations or central bank bills have not been used.<sup>51)</sup>

Towards the end of 1994, some Lithuanian banks began to experience liquidity problems. In response, the Bank of Lithuania took steps which, according to some observers, were not fully in line with the playing rules of a currency board. In particular, the Bank granted the largest commercial bank exemptions from reserve requirements and allowed banks to use Treasury bills to fulfill reserve requirements.<sup>52)</sup> During the course of 1995, indications of an impending banking crisis increased. The activities of various small banks were suspended for reasons such as the violation of banking practices, insufficient capital adequacy or the inability to fulfill minimum capital requirements.<sup>53)</sup> In the summer of 1995, the activities of one of the largest Lithuanian private commercial banks were suspended. Problems in the banking sector finally culminated in December 1995, when two medium-sized private commercial banks representing about 25% of total deposits were found to be insolvent. In addition, two of the state-owned major banks with a combined share of 35% of total deposits proved to be in need of new capital in order to meet capital adequacy requirements. To cope with this situation, the two medium-sized banks were closed, and the state-owned banks were recapitalized.

The Bank of Lithuania granted only very moderate financial support in the form of liquidity loans to banks under stress. However, it eased monetary conditions by reducing mandatory reserves from 12% to 10% in April 1995 and further to 5% in May 1996. In addition, in March 1996, the

penalty for shortfalls in fulfilling reserve requirements was suspended. In the summer of 1996, the crisis subsided and the aggregate deposits in the banking system started to grow again, especially in the banks which were perceived to be healthy, indicating that the public had regained confidence in the financial system. In parallel with the beginning relaxation of the situation, penalties for reserve shortfalls were reintroduced (June 1996) and a schedule for a gradual restoration of mandatory reserve requirements to 10% was devised, implemented and completed in 1997.<sup>54)</sup>

In the aftermath of the banking crisis, the restructuring of the banking sector has continued to proceed rather slowly. In particular, privatization of state-owned banks has not advanced very far, but is currently being speeded up. In March 1998, 11 commercial banks, the Lithuanian Development Bank and a special management company, established in 1996 to take over nonperforming loans from problem banks, carried out operations. In the regulatory environment, there has been tangible improvement. Over recent years, the Bank of Lithuania has adopted a number of prudential regulations in correspondence with international standards in order to enhance the stability and effectiveness of financial institutions. Among other things, this has included capital adequacy rules, minimum capital requirements, foreign exchange exposure and liquidity limits. The calculation of capital adequacy ratios was broadly put in line with the international methodology as of January 1997. Simultaneously, the capital adequacy ratio was reduced from 13% to 10%. The minimum capital requirement for commercial banks was raised in several steps from LTL 5 million, i.e. ECU 1.13 million in 1993, to ECU 5 million at the beginning of 1998.<sup>55)</sup> In parallel, the central bank stepped up its efforts to ensure that banks meet prudential regulations.

Evaluating the experience of the past years, the Lithuanian currency board has brought about both advantages and problems. As to the latter, the Lithuanian currency board has suffered from shaken credibility and devaluation rumors several times. In December 1994, for example, the opposition in Parliament suggested that, in light of high inflation, the real appreciation of the LTL, and the increasing trade deficit, the currency board arrangement should be abolished, the litas devalued and monetary policy returned to that of a traditional central bank.<sup>56)</sup> In December 1995, the banking crisis, which was accompanied by the central bank's loss of more than a tenth of its reserves in only two months, raised doubts about whether a fixed exchange rate will be maintained.<sup>57)</sup> These devaluation rumors contributed to relatively high interest rates (see Charts 4, 5 and 6).

Table 6

**CPI-Based Real Effective Exchange Rate Index of the Lithuanian Litas  
against the Currencies of Foreign Trade Partners (June 1993 = 1)**

	December 1993	April 1994	December 1994	December 1995	December 1996	December 1997	March 1998
<i>Real effective exchange rate index</i>							
Total	0.759	0.791	0.882	0.883	1.025	1.226	1.301
Against the EU	1.648	1.774	2.098	2.562	2.982	3.593	3.744
Against the CEECs	1.401	1.404	1.543	1.651	1.717	1.906	1.881
Against the CIS	0.535	0.535	0.503	0.312	0.342	0.381	0.404

Source: Bank of Lithuania.

Like in Estonia, the relatively high inflation rate as well as the large current account deficit (see Table 7) raise certain concerns, in particular about the medium-term stability of the nominal exchange rate. It is interesting to note that the litas appreciated much less in real effective terms over the last years than the kroon (see Table 6). This appears to be due to different levels of the exchange rates in the respective base periods, distinct

Chart 4

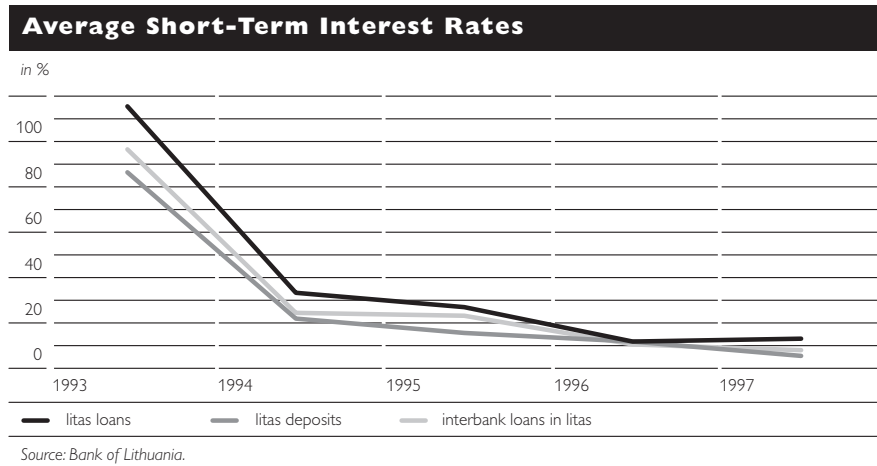


Chart 5

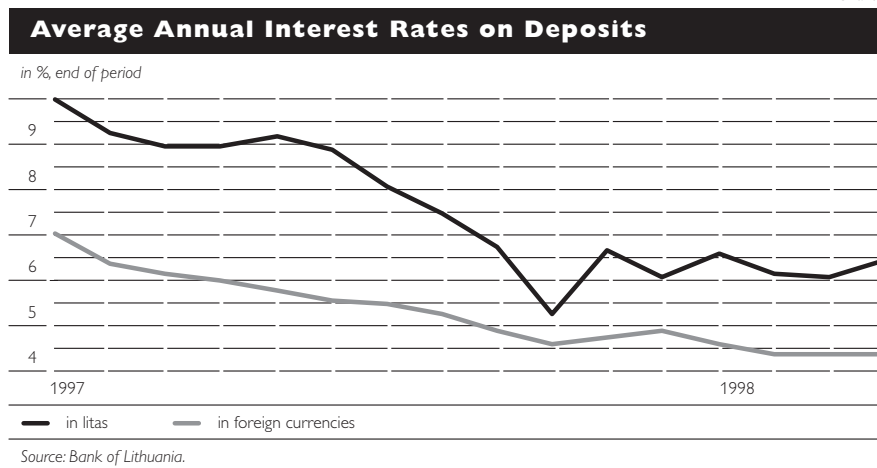
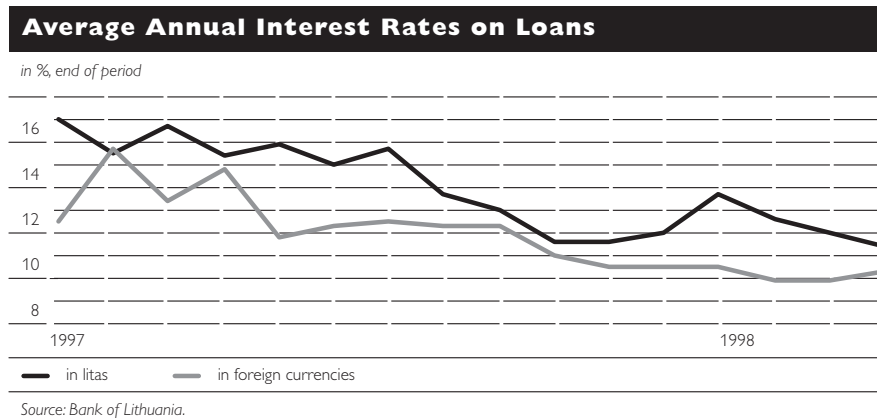


Chart 6



productivity developments and a certain divergence of foreign trade orientations. It goes without saying that the differences in real appreciation trajectories between Estonia and Lithuania per se do not allow any meaningful assessment of the competitive positions of both countries over time.

The greatest benefits of the Lithuanian currency board came in the form of falling inflation, lower interest rates (although not to the levels of developed industrial countries) and economic recovery. Real GDP began to grow in 1995, and growth has accelerated gradually to reach 5.7% in 1997. CPI inflation fell from 72% in 1994 to 9% last year. However, reducing inflation to Western European levels remains difficult, inter alia due to the continuing adjustment of relative prices (in particular the incomplete lifting of administered prices for utilities and social services to cost-recovery levels). Furthermore, the currency board has helped to reduce the degree of dollarization in the economy.<sup>58</sup>) The presumed connection between the currency board and sound fiscal performance has been less pronounced in the case of Lithuania. During the years 1994 to 1996, the central government deficit was steadily around 2% of GDP, whereas in 1997, it diminished to 1% of GDP. However, general government deficit figures were roughly 2 percentage points higher over the period.

Table 7

<b>Selected Macroeconomic Indicators of Lithuania</b>				
	1994	1995	1996	1997
Real GDP (growth in %)	- 1.8	4.2	4.0	11.4
Average annual consumer price inflation (%)	72.1	39.7	24.6	8.9
Central budget balance (% of GDP)	- 1.8	- 1.8	- 2.5	- 1.0
Current account balance (USD billion)	- 93.8	-614.3	-722.6	-944.5
Trade balance (USD billion)	-204.9	-698.0	-878.6	-930.0
Unemployment rate (end of period)	3.8	6.1	7.1	6.7

Source: IMF; trade and current account balances: national sources.

At the end of 1996, Lithuanian policymakers arrived at the conclusion that, (mainly) for integration reasons (i.e. membership in the European Union and eventually participation in the euro zone), Lithuania should gradually exit the currency board. A more active position in the process of harmonization towards EU monetary policy is considered possible only if the country returns to a standard central bank framework. Consequently, a three-stage plan to abandon the currency board was adopted and began to take effect at the beginning of 1997. This exit strategy and its implementation will be discussed in section 6.3.

### 5.3 Bulgaria

In contrast to Estonia and Lithuania, Bulgaria went through an extended and not particularly successful phase of conventional (money-based) stabilization before introducing a currency board in mid-1997. In the case of Bulgaria, it was the IMF which proposed and, in fact, urged the authorities from early November 1996 onwards to adopt a currency board. In the light of the swift falling-apart of a policy package agreed upon between the Fund and Bulgaria in July 1996 and the rapid deepening of the financial crisis in the country, the Fund came to the conclusion that orthodox stabilization would not work at

that stage of Bulgarian transformation and that a major shift in strategy was warranted in order to break the macroeconomic deadlock and to establish lasting monetary confidence. After having been debated fairly intensely for some time, the currency board idea, which had met with some skepticism initially, received broad acceptance by the Bulgarian public and by the country's policymakers at the turn of 1996/97. However, a political stalemate between government and the opposition delayed the formulation of a currency-board-based program for a few months. Simultaneously, the crisis escalated further: Economic activity slumped, the lev plunged, the budget deficit soared, inflation skyrocketed and real wages collapsed. Only after a wave of public protest that led to a change in government in February 1997 did the efforts at stabilization and reform gain momentum, and a comprehensive policy package was worked out within a few weeks.<sup>59)</sup>

At the heart of the stabilization and reform program of April 1997 was a currency board which was to be introduced after a preparatory phase of a few months. The specific institutional features of the currency board were not laid down in detail in the original program, but it was envisaged that the board would in principle be modeled on the Estonian example.

The program was based on tight fiscal policies and, during the preparatory phase for the currency board, firm monetary policies.<sup>60)</sup> Furthermore, the program envisaged a replenishing of official foreign exchange reserves in order to arrive at a full backing of the monetary base. Incomes policies for the state enterprise sector were intended to be both restrictive and performance-oriented. Sound macroeconomic policies were to be complemented by a range of structural reforms – with a specific focus on financial sector reform and enterprise restructuring as well as by liberalization measures in the areas of prices, trade and the exchange system.<sup>61)</sup>

What were the main preparatory steps for the establishment of the currency board in Bulgaria? At the center of the public debate about the new monetary arrangement was the issue of the exchange rate rule. At the end, the result of the discussion on the most suitable anchor currency and the appropriate level of the peg was an exchange rate peg of the lev to the Deutsche mark at a rate of 1,000:1.<sup>62)</sup> This was incorporated in a thoroughly overhauled Law on the Bulgarian National Bank (BNB), which was adopted by Parliament in June 1997. The law obliges the BNB “to sell and purchase Deutsche marks against levs on demand up to any amount within the territory (of Bulgaria) on the basis of spot exchange rates, which shall not depart from the official exchange rate by more than 0.5 percent, inclusive of any fees, commissions and other charges to the customer.”<sup>63)</sup>

The law also revamped the organizational setup of the central bank, thereby realigning it with the requirements of a currency board. The new structure is built on three basic departments:<sup>64)</sup> The Issue Department has the function to run the currency board. It shall “maintain full cover for the total amount of monetary liabilities of the Bulgarian National Bank,<sup>65)</sup> by taking actions needed for the efficient management of the Bank's international foreign exchange assets.” The role of the Banking Department is to act as a lender of last resort “in case any systemic risk for the stability of the banking system arises.” The BNB may extend lender-of-last-resort credits

only to solvent banks with a maturity of up to three months “provided they are fully collateralized by gold, foreign currency or other such high-liquid assets.” These credits must be lev-denominated. The maximum aggregate amount of such credits must not surpass the lev equivalent of gross foreign exchange reserves. Apart from this case, the BNB may not extend credits to banks.<sup>66)</sup> The third department is the Banking Supervision Department, which is headed by a Deputy Governor, who exercises the supervision of the banking system “separately and at his own discretion.” Bank licenses are granted and revoked by the Governor on proposal of the Deputy Governor responsible for banking supervision.

The BNB law contains some further regulations which are of particular relevance for a currency-board-based monetary framework: “In the performance of its functions, the BNB shall be independent from any directions of the Council of Ministers and from other state bodies.” The BNB shall be the official depository of the state, but it may not extend credits to the state or any state agency. The Bank “shall determine ... the minimum reserve requirements” for banks with the BNB. In fact, minimum reserve requirements are the only monetary instrument the Bank retains at its disposal under the currency board regime.<sup>67)</sup> Moreover, the BNB shall compile Bulgaria’s balance of payments and it “may organize and operate payments systems and clearing offices.”<sup>68)</sup> Finally, the law contains clear rules on accountancy and reporting requirements.<sup>69)</sup>

Also in June 1997, Parliament passed a new banking law which i.a. incorporates a tightening of most prudential regulations (e.g. in the areas of capital requirements, the withdrawal of bank licenses, reporting requirements), a strengthening of banking supervision and an easing of procedures for banks in collecting overdue claims.

Alongside these legal and institutional measures, monetary operations were successively phased out during the preparatory phase of the currency board. First, budgetary lending as well as the refinancing of banks was stopped, and the Bank refrained from using the minimum reserve instrument actively. The exchange rate was steered and subsequently maintained close to the envisaged rate under the currency board by unsterilized intervention. Finally, shortly before the introduction of the currency board, open market operations were discontinued.<sup>70)</sup> In the fiscal policy realm the focus was on the 1997 budget law, which was approved by Parliament at the end of June. After all these preparatory steps, the currency board went into operation on July 1, 1997.<sup>71)</sup>

How has the Bulgarian economy performed under the currency-board-based program? Apart from some initial pitfalls in the area of incomes policy, macroeconomic policies were carried out along the lines of the program,<sup>72)</sup> and the currency board has operated according to the rules.<sup>73)</sup> The implementation record in the field of structural reforms has been satisfactory, with some slippages in specific areas, typically due to insufficient administrative capacity – and thus limited potential to implement policies – rather than to a lack of political will.

A comprehensive tax reform was adopted in December 1997. The main focus of the reform is on further strengthening tax collection, on unifying

the (formerly fragmented) incomes tax regime and on lowering, to some extent, the overall corporate tax level (primarily by allowing for a long-delayed revaluation of fixed assets and thus reasonable depreciation schedules).

In the area of enterprise sector reform, the envisaged closure of large lossmakers was completed in late 1997. The financial isolation and restructuring of another group of enterprises (public utilities and “strategic” commercial firms) has proceeded, but this is clearly a policy field where additional, sustained action is needed. Losses have been contained; however, much needs to be done to ensure enterprise viability in a number of cases and to avoid the (re)emergence of quasi-fiscal liabilities. Privatization of state-owned enterprises was speeded up under the program: The first wave of mass privatization was completed last summer,<sup>74)</sup> a number of large enterprises has been sold to foreign investors and many small and medium-sized companies have been denationalized, primarily via management and employee buyouts. An ambitious privatization strategy for 1998/99, adopted last October, foresees i.a. an accelerated privatization of large enterprises through the involvement of international consultancy firms and investment banks. Moreover, in March 1998, Parliament adopted the legal basis for a second round of mass privatization.

In October 1997, Parliament passed a new foreign investment law aimed at improving the business environment for foreign direct investors by granting them equal treatment with Bulgarian-owned businesses and by providing adequate protection of foreign investment. The law also grants generous tax and customs exemptions or reductions for so-called priority investments, which has been criticized i.a. by the IMF.<sup>75)</sup>

The soundness of the banking system, which is dominated by six large and originally state-owned banks controlling 80% of overall assets, has considerably improved after the financial crisis of 1996 and early 1997, which had led to a shakeout in the sector.<sup>76)</sup> At the end of the third quarter of 1997, the banks’ risk-weighted capital adequacy ratios reached an estimated 9% on average. Bank privatization, one of the cornerstones of financial sector reform, has proceeded, although somewhat more slowly than expected. In July 1997, the first of the six large banks, the United Bulgarian Bank, was privatized. The privatization process of Post Bank, another large bank, is at an advanced stage, while the sale of a third bank did not come through in the fall of 1997, when the offers of the two bidders were rejected. One of the six banks, Biochim, has very weak balance sheets and is envisaged to be restructured under a management contract with a foreign bank before being privatized. In order to accelerate the process, the government has recently adopted a bank privatization strategy incorporating an action plan listing concrete steps to be taken over the next months.

In mid-April 1998, Parliament passed a deposit insurance law which revamped the system established two years ago: The burden of compensating the depositors of failed banks was transferred from the budget to the banking sector – the banks are to set up and to fund a Deposit Guarantee Fund with the BNB – and protection was limited.<sup>77)</sup> Also in mid-April, Parliament approved a law that corporatizes the State Savings Bank.<sup>78)</sup>

Agricultural sector reform has remained one of the problem areas of Bulgarian reforms. Incomplete land restitution and the degree of state intervention have been of particular concern.

The results of the stabilization and reform program have clearly been beyond expectations.<sup>79)</sup> In fact, as early as March 1997, there was a distinct improvement and further advances could be registered in subsequent months, especially with regard to inflation, interest rates, exchange rate stabilization, budgetary developments and the external position of the economy.<sup>80)</sup> The transition to the currency board arrangement was smooth.

Positive trends have continued after the introduction of the new monetary regime. The contraction of economic activity has bottomed out and, for 1998, most observers expect GDP growth in real terms on the order of 2% to 4%. After being in the range of 3.5% to 5.5% during the third quarter of 1997, monthly (consumer price) inflation subsequently fell to the low single-digit level.<sup>81)</sup> Interest rates have fallen to very low nominal (and negative real) levels.<sup>82)</sup>

The current account reached a surplus of approximately 5% of GDP in 1997, largely due to a trade surplus of a similar order of magnitude (primarily reflecting low imports during the first crisis-ridden months of 1997). The capital account was also in surplus, essentially driven by significantly increased (and mainly privatization-related) FDI inflows and substantial (net) disbursements of IMF loans. The crisis in Southeast Asia has not had tangible spillover effects on Bulgaria.

Table 8

**Development of the Balance Sheet of the BNB Issue Department**

since July 1997

	July 1, 1997	July 31, 1997	December 31, 1997	May 29, 1998
Total assets BGL billion	2,820	3,461	4,412	5,131
Forex cash and nostro accounts	701	1,745	2,264	1,333
Monetary gold	641	641	644	647
Foreign securities	1,466	1,067	1,495	3,142
Accrued interest receivable	12	8	9	9
Total liabilities BGL billion	2,820	3,461	4,412	5,131
Currency in circulation	599	834	1,42	1,394
Bank deposits and accounts	529	656	858	537
Government deposits and accounts	1,153	1,166	1,601	2,283
Other deposits	34	13	25	17
Accrued interest payable	10	0	2	3
Banking Department deposit	494	792	506	897

Source: Bulgarian National Bank.

The evolution of the balance sheet of the BNB Issue Department illustrates the country's successful performance. On the assets side, the significant increase of official foreign exchange reserves reflects last year's favorable balance-of-payments developments.<sup>83)</sup> On the liabilities side, currency in circulation expanded substantially until end-1997 (reflecting increased demand for lev-denominated cash). Bank deposits went up during the first months of the currency board due to surging deposits by the public and by enterprises with the commercial banks coupled with a very conservative credit policy of the banks. More recently, bank deposits at the Issue Department have decreased, apparently mirroring the lower growth of

deposits with commercial banks due to the distinct decline in interest rates and some credit expansion by the banking sector. Government deposits have also grown substantially, reflecting the country's strongly improved fiscal performance: After having recorded a general government budget deficit of 13.4% of GDP in 1996 (a high proportion of which was directly financed by the BNB), the deficit was contained to 2.6% of GDP last year, thereby remaining clearly below the original target of 6.2% of GDP. This outcome was primarily due to expenditure restraint, lower-than-projected interest rates and improved tax collection. For 1998, the budget plan contains a general government deficit of 1.7% of GDP; for 1999, a balanced budget is envisaged. During the first months of 1998, fiscal developments were clearly stronger than expected, and the central budget recorded a considerable surplus.<sup>84)</sup> Finally, the funds at the disposal of the Banking Department have also been on an overall increasing trend since the inception of the currency board.<sup>85)</sup> So far, there has been no need for the Banking Department to act as a lender of last resort.<sup>86)</sup>

Overall, the currency board has played an instrumental role in achieving the turnaround Bulgaria has experienced since the spring of 1997. It has provided "the much-needed anchor for macroeconomic and financial stabilization."<sup>87)</sup> Not only has the currency board effected a "fundamental change in the attitude of the majority of the Bulgarian population towards the course of the reform process,"<sup>88)</sup> it has also created an environment which has been conducive to appropriate fiscal and incomes policies as well as to structural change and financial discipline. Thus, judging from its short record so far, the currency board has been a success story.

## 6 Future Perspectives

### 6.1 General considerations

What are the future perspectives of the currency boards that are presently in operation in Central and Eastern Europe? Will the currency boards constitute viable monetary frameworks in the long run, or will they rather turn out to be temporary arrangements that will give way to alternative policy regimes in the foreseeable future? In order to answer these questions, one has to look into two main subsets of issues. On the one hand, it must be examined whether the balance of *economic* advantages and drawbacks flowing from the currency board arrangements in Central and Eastern Europe has shifted over time and how it will presumably change in the future. To put it differently, is there a need to recalculate the economic side of the original cost-benefit equation? On the other hand, the question arises of what relevance the prospects of *EU integration* have and will have for the candidate countries with a currency board. Will a currency board be an appropriate monetary framework for joining the European Union and, eventually, for participation in the euro zone?<sup>89)</sup> Obviously, both sets of questions are partly interrelated. This is particularly true in the sense that the candidate countries' macroeconomic policies should center, as the European Council in Madrid in December 1995 put it, around "the creation of a stable economic and monetary environment" as one of "the conditions for the gradual, harmonious integration" of these countries into the EU.

The three country cases reviewed in the preceding chapter raise a number of questions related to the overall balance of economic advantages and drawbacks that are associated with currency board arrangements, questions which may tend to become ever more pressing the longer such a monetary arrangement is in place.

There is the danger of real misalignments caused by prolonged inflation differentials which are not associated with corresponding productivity differentials or by asymmetric real shocks. If the nominal exchange rate cannot be changed, prices and wages must be flexible in order to avoid a lengthy adjustment process characterized by low economic activity and high unemployment. This raises the question of to what extent goods and labor markets are sufficiently flexible in the three countries under review. Moreover, as monetary policy is severely restricted under a currency board, most of the macroeconomic adjustment burden will fall on fiscal policy. Here the issue is whether the budgetary authorities of transition economies have sufficient room for maneuver, both in the short and in the medium term, and whether they are in the position to prevent contingent fiscal liabilities from emerging. Fiscal flexibility is all the more needed as interest rates in the currency board country may often be out of line with what the state of the economy would call for due to diverging economic cycles between currency board and anchor country, both in terms of amplitude and synchronicity, to “vagaries” in capital flows and to structural differences.

Exchange rate misalignments carry particularly pronounced risks in economies which have embarked on a catching-up process typically associated with an extended period of current account deficits. If such deficits are perceived as becoming too high, market sentiment may shift suddenly. Under a currency board, the resulting change in capital flows will immediately and fully translate to a corresponding monetary contraction.

With increasing capital mobility, capital flows may prove to be ever more challenging to the macroeconomic management in currency board countries for other reasons as well. Capital inflows may impede disinflation, as they lead to an automatic rise in the money supply (as sterilization is ruled out under a currency board arrangement). Moreover, if inflows are not fully channeled into real investments, they may cause asset price bubbles. A further problem relates to short-term capital flows, which at times exhibit erratic fluctuations. If these flows are used to finance long-term projects, this volatility will bring to light such maturity mismatches and strain the balance sheets of companies (in case of direct financing from abroad) and/or the banking system (if flows have been channeled through the banks).

At the same time, the benefits associated with currency board arrangements may lose importance over time: The currency board may have played its role as a credibility-enhancing device and policymakers, while in a standard currency board context being barred from gaining direct experience in using monetary policy instruments in a standard currency board context, may still have acquired expertise over time in making appropriate assessments of economic developments and, by following the events in other countries, they may have become better prepared for

conducting monetary policy. All this will probably tend to reduce the advantages rule-based arrangements carried at the outset.

All these issues will be discussed country by country in subsequent sections of this chapter. Obviously, most of these questions may be more relevant for Estonia and Lithuania, where a currency board has been in operation for a number of years. Bulgaria, in turn, is at a much earlier stage in the process, so that the balance of advantages and drawbacks of a currency board has probably not changed so far.

Integration issues form the second major category of factors that are relevant for assessing the future perspectives of currency boards in Central and Eastern Europe. In judging whether a currency board is an appropriate monetary framework for joining the EU and, ultimately, the euro zone, one has to look into two main issues.

First, Economic and Monetary Union embodies a set of institutional and legal provisions that pertain, in principle, to all EU Member States no matter whether they are members of the euro zone or not. These rules relate, *inter alia*, to central bank independence, the maintenance of price stability as the primary statutory objective of central bank policy and the prohibition of budgetary financing by central banks.<sup>90)</sup> Is a currency board compatible with these provisions? The two critical areas here are central bank independence and the goal of price stability, as monetary financing of budget deficits is ruled out under a currency board arrangement.

There is no obvious reason why a central bank which runs a currency board should not be in a position to fulfill all the requirements the Treaty on European Union lays down in the area of central bank independence. In other words, provided that a currency board is operated by (and embedded in) an independent central bank, the issue of central bank independence should not constitute any legal obstacle to EU membership. Can a currency board country make price stability the primary statutory objective of central bank policy? There is, in principle, no obstacle either, although clearly a currency board has (next to) no policy tools at its disposal to directly fight inflation. Nevertheless, due to its systemic and operational features, a currency board tends to deliver low inflation or even price stability.

Second, can a currency board country participate in close and institutionalized monetary and exchange rate policy cooperation within the European Union? Here the answer is much more ambiguous. First, monetary policy cooperation among EU countries is based on the existence of market-based monetary policy instruments and, in fact, on their active and effective use, if the need arises. It is hard to see how a currency board country could take part fully in such a cooperation. This also implies that a currency board country cannot fully participate in an institutionalized exchange rate cooperation of a standard EU type, an important feature of which would be “the flexible use of interest rates.”<sup>91)</sup> This has two implications. First, currency board countries would find it very difficult to live up to the fact that all applicants “are expected to participate in an exchange rate mechanism”<sup>92)</sup> upon their joining of EU. Moreover, formal participation in an exchange rate mechanism for a defined period of time is one of the preconditions for the eventual joining of the euro zone.

If a country cannot join such a mechanism due to the characteristics of its domestic monetary framework, it will not be able to accede to the euro zone eventually. This would also make it difficult to make its commitment “to adhere to the aims of ... economic and monetary union” fully credible, which is, after all, one of the criteria for EU membership.<sup>93)</sup> Likewise, a currency board does not allow for any direct control of price level and interest rate developments, which can complicate meeting the monetary convergence criteria. Finally, on a more practical plane, it should be kept in mind that the eventual participation in the euro zone requires that any national central bank be in the position to fully implement monetary policy decisions taken by the European Central Bank. Experience shows that preparations for doing so both within the national central bank itself but also vis-à-vis the domestic commercial banks take time even for countries that have long operated a set of sophisticated monetary policy instruments.

What positions have the European Commission and the EU Member States taken on these issues? In the Commission’s July 1997 opinion on Estonia’s application for EU membership, the currency board is depicted in a positive manner, both from a legal perspective and from a monetary policy viewpoint. Estonia is lauded for having one of the most, if not the most, independent central bank of all applicant countries. This would seem to suggest that the Commission shares the opinion that a central bank which operates a currency board can, in principle, fulfill the Treaty’s provisions on central bank independence.<sup>94)</sup> The *avis* on Estonia states that price stability will have to be the primary objective of central bank policy and that monetary policy will have “to be conducted with market-based instruments and ... be ‘efficient’ in transmitting its impulses to the real economy.” Moreover, it is said that the country is expected, upon EU accession, to cooperate within an exchange rate mechanism. However, the *avis* leaves open what this implies for Estonia’s currency board arrangement in the preaccession and accession context. In fact, the opinion concludes that Estonia’s participation in EMU as a non-euro area country “should pose few problems in the medium term” while, in this context, “[t]he successful implementation of the currency board to date” is found to be “encouraging.”

It should be added that the continuous appreciation of the real effective exchange rate, associated with nominal exchange rate stability, is the only critical remark the Commission’s *avis* has on Estonia’s monetary regime. This suggests that the Commission shares some of the economic worries we have mentioned, but none (or next to none) of our EU-integration-specific concerns. It is interesting to note that the Council, in its thorough discussion of the opinions during the fall of 1997, has not questioned the Commission’s assessment on currency-board-related issues. Nor do the accession partnerships of the EU with Estonia, Lithuania and Bulgaria, adopted by the EU Council in March 1998, take a position on these questions.

In conclusion, currency boards appear to be increasingly controversial monetary frameworks for advanced transition economies which strive for EU membership in the medium run, for both economic and integration reasons. This raises the question of devising appropriate exit strategies from currency board arrangements. Such strategies must lay down when, how and

to what alternative monetary arrangement the countries under consideration should leave the currency board regime. Clearly, it must be the overarching goal of any exit strategy to design and implement the regime change without losing hard-won credibility. Retaining credibility may be a particular challenge, as the credibility earned under a currency board regime derives from following and sticking to a set of rules while, during the transition to a standard central bank, the public has to be convinced that the authorities are in a position and have the expertise to make correct assessments, to design an adequate monetary policy strategy and implement it properly, which implies, in particular, that they have a set of monetary policy instruments at hand that can be applied in an effective manner. Moreover, the authorities have to be perceived as being capable of reacting in a suitable manner to unforeseen developments and of taking the necessary corrective actions.<sup>95)</sup>

## 6.2 Estonia

The exit question poses itself most clearly for Estonia, which is the most advanced among the three economies under consideration here. Estonia is also the country that has moved farthest with regard to EU integration, being one of the five CEECs which began accession negotiations with the European Union in March 1998. According to the authorities, the currency board will not only remain in place for the foreseeable future without tangible changes, it is also considered to provide a good starting point for Estonia's integration into EMU.<sup>96)</sup>

Undoubtedly, the fixed exchange rate in the form of a currency board arrangement, under which Estonia has already been operating for six years, has some merits, such as experience with a fixed exchange rate regime, relatively low inflation, strong structural policies, and fiscal discipline. Given the authorities' commitment to maintaining the currency board, the credibility attached to the system and the economic and political complexities associated with a change of the monetary framework, there would seem to be no urgent reason to leave the currency board now.

However, as was already mentioned in section 5.1, very fast economic growth has created a set of new risks, which puts the currency board arrangement under increasing pressure. In particular, there is a risk that the current account deficit will become unsustainable. Although this deficit has so far been financed to a large (but since 1996 declining) extent by FDI inflows, it makes Estonia's financial system increasingly dependent on foreign capital and vulnerable to shifts of sentiment in the international capital markets. As the currency board arrangement tightly restricts the use of monetary policy to limit domestic demand growth, fiscal policy is, apart from incomes policy, the main instrument left to dampen domestic absorption. In light of growth, current account, inflation and interest rate developments since 1997, it seems appropriate to adopt an even stricter budgetary stance than that aiming at a general budget surplus of 1.8% of GDP for 1998 embraced so far.<sup>97)</sup> Apparently, the Estonian authorities have most recently come around to sharing this assessment.<sup>98)</sup> At this stage, one may conclude that the Estonian currency board can be maintained if fiscal policy, including the envisaged further tightening, is implemented as

planned, if it succeeds in curbing GDP growth and the current account deficit, and if limited monetary measures are sufficient to keep bank lending under control and to address potential complications resulting from capital flow volatility.

Accession to the European Union is the prime policy objective for Estonia. In this perspective, it may become necessary to abandon the currency board arrangement in order to develop experience with monetary policy formulation and implementation, as participation in the European System of Central Banks (and eventually in the euro area) will require the active use of monetary policy instruments. Another integration-related reason which may lead to a future exit from the currency board system has to do with inflation. If Estonia wants to maintain its currency peg against the Deutsche mark and later against the euro, it will have to bring down inflation from currently 13% to 14% to a level much closer to that in the anchor country or area. High interest rates, which presently prevail in Estonia, help to bring inflation down. However, under a fixed exchange rate regime, high nominal interest rates create incentives for large capital inflows. Inter alia, these inflows may contribute to a further increase in domestic absorption, which may lead to higher imports and, other things being equal, to a further widening of the current account deficit. In the Estonian case, this could cause serious pressures to devalue the kroon and abandon the currency board. High inflation differentials versus the anchor country or area also give rise to an appreciation of the real exchange rate, which can weaken Estonia's competitive position. This in turn could increase the pressure for devaluation.

There are also other open questions related to the exit issue, in addition to "why," namely the timing of the exit and the way to abandon the regime. In general, it would seem wise to exit before it is "too late," i.e. before a major crisis actually occurs. This might also help to preserve hard-gained credibility. In Estonia, this could imply, for example, that the exit from the currency board arrangement may take place if the current account deficit begins to expand further, or as soon as there is a substantial change in the composition of capital inflows, which finance the current account deficit, towards less long-term and more short-term capital. Concerning the question of "how," a program like the one currently being implemented in Lithuania could be one option: A gradual abandonment could smooth the transition to a new monetary arrangement. In practice, a gradual approach would imply that the monetary authorities subsequently retreat from covering the monetary base entirely with foreign currency and move step-by-step to a mixture of foreign currency and domestic assets. As the kroon is increasingly backed by domestic assets, the central bank can engage in open market operations to influence interest rates. Finally, there is the question of which system a country should exit to. Possibilities vary from a new fixed peg to a floating system. Given Estonia's aspirations to become an EU member, a peg to the euro with relatively wide fluctuation bands could be one of the options which suggest themselves.

### 6.3 Lithuania

Lithuania has made substantial progress with transformation and has a fair chance to enter EU accession negotiations in one or two years, provided that macroeconomic policies remain sound and that structural reform proceeds. Lithuania is the one country under review here which has revised its assessment on the benefits and the drawbacks of the currency board. In 1996, policymakers came to the conclusion that, (mainly) for integration reasons, the country should gradually exit the currency board while, for the time being, it should retain a fixed peg regime.<sup>99)</sup>

In the coming years, one of Lithuania's strategic goals is membership in the European Union and eventually participation in Stage Three of European Economic and Monetary Union. According to the Bank of Lithuania, an active position in the process of monetary integration is possible only by returning to a standard central bank model, i.e. by eventually abandoning the currency board. This would give the authorities more freedom in setting monetary policy as well as fiscal and exchange rate policies.

The Bank of Lithuania has adopted a gradual exit approach according to which the currency board will be abandoned in three stages. The remainder of the section reviews the main elements of the exit strategy set in the Monetary Policy Programme of the Bank of Lithuania for 1997–1999, as well as progress in implementing the strategy. This is followed by a short assessment.

The first stage started at the beginning of 1997. According to the program, the Bank of Lithuania launched new monetary instruments while maintaining the requirement that base money be fully backed by net foreign reserves. Once the Bank of Lithuania is able to conduct monetary policy through new instruments, the second stage will begin. So far, the new instruments have included repurchase and deposit auctions for government securities between the Bank of Lithuania and commercial banks. All together, there were four repo auctions and five time deposit auctions in 1997. This year so far, there have been three repo auctions and one deposit auction. However, the volumes traded have remained small.<sup>100)</sup> In principle, the repo transactions enable the Bank of Lithuania to make short-term (up to one month) loans to credit institutions and thereby smooth temporary fluctuations in liquidity. In other words, the Bank of Lithuania up to now has held interest-rate tenders, where it determines the maximum volume for which commercial banks compete by bidding interest rates. From these interest-rate tenders, the Bank of Lithuania will later move to volume tenders, where a fixed interest rate is set and banks make their bids by indicating the amounts they want to borrow. Consequently, the Bank of Lithuania could then be able to influence base interest rates. The mandatory reserve instrument, which has proved to be an effective monetary policy tool, is maintained and developed further. As of April 1998, the base for reserve requirement calculation was widened.<sup>101)</sup>

In addition, short-term lombard loans for which commercial banks will have to pledge specific securities as collateral (bills of exchange, or government securities) to the central bank will be introduced. The Bank of Lithuania will set the interest rates on lombard loans above interbank market

and repo rates. This will allow the central bank to establish an interest rate ceiling in the money market and will force banks to use lombard loans only on special occasions.

The introduction of overnight loan operations was planned for the first half of 1998.<sup>102)</sup> Indeed, on April 16, Lithuania's central bank announced that it will set a 13% interest rate for overnight loans when it starts extending them to commercial banks.<sup>103)</sup> These overnight loans will be available for banks that face a shortage of funds in their central bank correspondent accounts.

In addition, the Bank of Lithuania is planning to conduct reverse repos, giving commercial banks the opportunity to perform more operations with government securities. This will increase demand for such paper and also develop the primary and secondary markets.

In the second stage, a number of amendments will be introduced into the Law on the Credibility of the Litas. These amendments will aim at providing legal conditions to the Bank of Lithuania to perform operations of a traditional central bank through a more active control of money supply and interest rates. Full backing will remain in place, but the asset base eligible for backing the money supply will be broadened.

However, in order to avoid public misperceptions, the Bank of Lithuania will need to tightly monitor money supply and will need to carefully watch over the stability of the litas. On the other hand, during the transition to a fully-fledged central bank framework, the fixed rate of the litas with regard to the U.S. dollar should, according to the program, remain unchanged. This should have a positive impact on public confidence in monetary policy. Finally, the second stage is to include measures to be used only in the case of crisis, in particular if the foreign currency reserves of the Bank of Lithuania diminish by more than 20% and/or if this declining tendency is evident for more than three consecutive months. For example, in such a situation, the rules on mandatory reserves could be changed so that required reserves made against foreign currency liabilities would have to be kept in litas. This would force banks to convert required reserves into litas and would increase demand for reserve money accordingly.

In the third stage, but not before 1999, the litas will be linked more closely to EU currencies and eventually – at the latest at the end of the year 2000 – pegged to the euro. It could prove suitable to link the litas, during a transitional period, to a currency basket consisting of the U.S. dollar and the euro. The weight of the U.S. dollar and the euro in the basket will be established in accordance with the currency structure of the balance of payments and the public debt at the time of decision taking. If, however, during the coming years transactions in euros increase swiftly, the Bank of Lithuania may peg the litas to the euro without the transitional link to a currency basket.

The third stage will begin, however, only after specific monetary conditions have been fulfilled. These include stability in financial and monetary markets, constant growth in deposits with banks and a monthly inflation rate within 0.5% to 0.8% for at least six consecutive months. If there is a need for some exchange rate flexibility, this should be achieved by

introducing a relatively narrow fluctuation band against the currency basket or the anchor currency, which would contribute to discouraging speculative capital flows. Such a step would, however, not be taken before the end of 1999.

Achieving a successful exit will greatly depend on the authorities' ability and readiness to use the newly-found freedom in economic and monetary policymaking in a prudent manner. Various factors point in favor of the gradual exit strategy the Lithuanian authorities have chosen. First, Lithuania is a small open economy rapidly integrating into the EU, which makes it very sensitive to external shocks. Second, the country has had a rather positive experience with the currency board, meaning that at least some credibility has been gained from the currency board. Third, Lithuania's transition to a market economy, especially in the financial sector, is still underway.

Alternative approaches to the exit issue seem to be less promising: A quick abandonment of the currency board coupled with devaluation would increase the prices of imports and result in higher inflation and interest rates, without reducing the current account deficit substantially.<sup>104)</sup> This also implies that a devaluation would further raise the social costs of transition. A floating exchange rate, if chosen now as a new regime, would lessen the predictability of exchange rate developments, impede corporate planning and discourage (foreign and domestic) investment.

#### **6.4 Bulgaria**

For Bulgaria, the question of exiting the currency board is not on the political agenda at this stage. The authorities intend to stick to the currency board for the foreseeable future. One of the ways in which they underlined their commitment is the provision enshrined in the 1997 BNB Law to replace the lev link to the DEM by a euro peg "when the euro becomes legal tender in the Federal Republic of Germany."<sup>105)</sup>

What is at stake in the current phase is strengthening the medium-term viability of the currency board. Currently, Bulgaria is negotiating a three-year Extended Fund Facility agreement with the IMF which aims at consolidating and further improving the achievements reached under the current standby arrangement by maintaining sound macroeconomic policies and by accelerating and deepening structural reforms and liberalization measures. The focus of this package is exactly to improve the medium-run sustainability of the currency board arrangement.

The main challenge in this context is to avoid a future exchange rate misalignment that would be difficult to correct under a currency board regime. At the current stage, the exchange rate to the DEM appears to be at a broadly appropriate level.<sup>106)</sup> However, as in other transition economies, inflation in Bulgaria will, in all likelihood, be higher than in Germany (or the euro zone respectively) for an extended period of time.<sup>107)</sup> Average annual consumer price inflation for 1998 is expected to be at 26% to 28% (with a December to December inflation of 11% to 12%);<sup>108)</sup> inflation is envisaged to fall to 10% on average (and 8% to 9% end-of-period) in 1999 and to 5% to 6% (both on average and end-of-period) by 2001. As the nominal exchange rate is locked in through the currency board arrangement, the

country will face a prolonged real appreciation of the lev. In order to preserve its competitive position in such a situation, Bulgaria will have to meet a number of policy challenges.

In the macroeconomic area, maintaining a sound fiscal stance and following productivity-oriented incomes policies, including for the time being administratively regulated wage restraint in the state enterprise sector, seem to be most important. In parallel, the authorities will have to broaden and deepen structural reforms. There is a particular need to persevere with enterprise sector reforms, with a focus on privatization and, as regards public utilities and selected strategic enterprises, on restructuring and rehabilitation.<sup>109</sup>) It will be equally important to continue to reform the Bulgarian financial sector, in a comprehensive and steadfast manner, in order to increase the efficiency of financial intermediation. Moving ahead with bank privatization and a further strengthening of financial sector supervision will be particularly crucial. There are good reasons to maintain a cautious approach towards rapidly liberalizing short-term capital flows before solid macroeconomic and financial consolidation has been achieved.<sup>110</sup>) Finally, in order to preserve social cohesion and facilitate structural change, social policy has to be developed further and funded adequately (taking into account the overall fiscal constraint).

A policy package along these broad lines would contribute to containing inflation and simultaneously create framework conditions which are conducive to the unfolding of productivity advances. Consequently, real appreciation would, by and large, not outstrip the appreciation of the equilibrium real exchange rate, competitiveness would be maintained or even improved, and this would bode well for the medium-term sustainability of the currency board regime.<sup>111</sup>)

At the current stage, impediments to growth in Bulgaria are primarily structural in nature, and the nominal exchange rate stability which comes along with the currency board is not an obstacle to recovery, provided the country is not hit by a major adverse shock, macroeconomic policies remain sound and the dynamics of structural change are kept up. In fact, there appears to be a continuing need for the currency board to fulfill its anchoring function for economic and financial developments in the country. The Bulgarian transformation experience, in particular, has shown how detrimental the lack of such a stability-enhancing device can be: While real GDP in the advanced transition economies has already come close to or even surpassed the pretransition level, Bulgaria's 1997 gross domestic product was no less than 38% below that of 1989.

Over the next few years, the currency board appears to be a monetary framework conducive to macroeconomic consolidation and deep structural change. In the longer run, when these challenges have been met and Bulgaria has started to get closer to EU accession, the time may come to revisit the currency board arrangement. However, it should be noted that the potential option of a future regime shift does not feature in the statements of the Bulgarian authorities at this stage.

In fact, different representatives of the Bulgarian government have recently announced that Bulgaria aims to fulfill the Maastricht convergence

criteria by 2001 and that the currency board is to be instrumental in this process. In the policymakers view, meeting the Maastricht benchmarks is to help underscore Bulgaria's quest for EU membership.<sup>112)</sup>

When assessing these pronouncements, a number of issues have to be taken into account. First, a currency board, if managed well and shored up with the necessary fiscal policies and structural reforms, is a framework that is generally conducive to achieving stable macroeconomic conditions. Nevertheless, it should be borne in mind that, under a currency board regime, there is no policy tool to combat inflation directly. The same holds true, in principle, for the direct control of interest rates. Moreover, a non-EU Member State cannot fulfill the Maastricht exchange rate criterion, which presupposes, *inter alia*, formal membership in the Exchange Rate Mechanism of the European Union for two years, a mechanism which only EU Member States can enter.

If Bulgaria embarks on a dynamic catching-up process characterized by major and sustained productivity increases while holding the nominal exchange rate stable, inflation will be tangibly above the reference value for the Maastricht criterion, which has been below 3% during recent years.<sup>113)</sup> More generally, there are a number of sensible arguments why transition economies in a catching-up process should not head for low single-digit inflation prematurely.<sup>114)</sup> Overambition with respect to the Maastricht criteria and, in particular, with respect to the monetary benchmarks facilitates neither the transition process nor EU accession.

Given the broad range of unknowns about the longer-term outlook, it may not be perfectly sensible for policymakers to go too far, at this stage, in defining the prospective role the current monetary arrangement may have with respect to integrating Bulgaria into the European Union and eventually into the euro zone. In particular, it would presumably be somewhat problematic if the currency board were to be depicted as a shortcut for Bulgaria's prospective inclusion into the monetary dimension of EU integration. Apart from the institutional and policy-coordination-related considerations raised above, it should be noted that it is very unlikely that the current exchange rate will still be the appropriate rate for joining the euro zone in the distant future, even if the economy is not hit by major adverse shocks and its adjustment capabilities prove to be substantial during the whole intermediate period.

As regards the longer-term perspectives of the currency board, in particular against the backdrop of EU accession, Bulgaria will have a "latecomer advantage." It will be in a position to follow the developments in Estonia and Lithuania and draw the lessons from the developments in these two economies. In case it turns out that currency boards are not the most suitable arrangements for long-term economic development and full integration into European Union structures, Bulgaria will face the challenge of effecting the monetary regime change in a timely and smooth manner, benefiting from the experience of the other countries.

## 7 Conclusions

In the 1990s, there has been a revival of currency board arrangements, which has been propelled to a large extent by Central and Eastern European countries: Estonia, Lithuania and Bulgaria have introduced this particular monetary framework. A currency board represents the strictest version of a fixed exchange rate regime where the monetary authorities commit to issuing domestic currency only in exchange for a foreign currency at a fixed exchange rate. The exchange rate peg usually is to a single reserve currency (rather than to a basket) and it is enshrined in law. Unlike a traditional central bank, which can exercise an active monetary policy by using various monetary policy instruments, a pure currency board has no monetary policy: It is quasi transferred to a foreign authority and to market forces.

One of the main advantages of establishing a currency board is that it is a suitable framework for building up credibility. The pure currency board system implies the strict prohibition of financing government deficits or extending credits to the banking sector. In addition, experience shows that currency boards deliver relatively low inflation and interest rates, provided that the exchange rate is fixed to the presumably low inflation reserve currency (which has usually been the case). Like any fixed exchange rate system, a currency board also offers predictability and the prospect of a stable nominal exchange rate.

One of the main challenges currency board countries tend to face are exchange rate misalignments. If a country's inflation remains higher than that of the country to which the currency is pegged, the national currency can become overvalued. Since the nominal exchange rate cannot be altered to ease adjustment to external shocks, domestic prices and wages must adjust. However, they often tend to be sticky. Moreover, a currency board is inconducive to financial market development and may slow down the learning and reform process in countries where the experience in designing and conducting monetary policy is limited.

In a modified currency board, some of the disadvantages of a pure regime are mitigated by the introduction of rudimentary monetary policy instruments and a lender-of-last-resort function. Nevertheless, the main drawbacks associated with a currency board regime remain also under a modified arrangement.

Among the Central and Eastern European countries, Estonia has had the longest experience with the currency board arrangement. As a part of its stabilization and reform program, Estonia adopted a modified currency board arrangement in June 1992 when the ruble was replaced by the kroon, which was pegged to the Deutsche mark. Estonia's currency board arrangement has played a crucial role in macroeconomic stabilization, lowering inflation and interest rates, stimulating economic growth, and enhancing the credibility of the monetary authorities. Nevertheless, the appreciation of the real exchange rate and very fast economic growth combined with a growing current account deficit remain matters of concern.

Lithuania also established a modified currency board regime in April 1994, and the litas was pegged to the U.S. dollar. Like in Estonia, the Lithuanian currency board has contributed to reducing inflation and interest

rates and stimulating economic recovery. However, the monetary authorities' credibility has been perceived to be less solid than in Estonia due to the Bank of Lithuania's more flexible interpretation of the main principles of a currency board.

In contrast to Estonia and Lithuania, Bulgaria went through an extended and not particularly successful phase of conventional stabilization before introducing a currency board in mid-1997. At the turn of 1996/97, the country was in a deep economic and financial crisis. To redress the situation, a comprehensive currency-board-based stabilization and reform package was launched. In the meantime, the contraction of economic activity has bottomed out, inflation has substantially fallen, and official foreign exchange reserves have increased significantly, reflecting favorable balance-of-payments developments. The currency board has played an instrumental role in achieving this turnaround. Thus, judging from its short record so far, the currency board has been a success story.

The currency board arrangements of Estonia and Lithuania are presently experiencing increasing challenges which mainly stem from persistent real appreciation, high current account deficits and increasing capital mobility. EU integration aspirations may raise further questions about whether a currency board constitutes the best monetary framework for both countries in the medium run.

At the moment there are no urgent reasons to abandon the currency board in Estonia. However, in the light of future EU membership and eventual participation in the euro zone, one of the most essential issues for Estonia is to bring inflation closer to the European rates. Higher interest rates help to bring inflation down, but they also encourage capital inflows, which, in turn, bring their own problems, like increased volatility and – as they cannot be sterilized under a currency board arrangement – higher money supply and increased inflation. This, together with the appreciation of the real exchange rate, may in the future create serious pressures either to realign or to fully abandon the currency board. Furthermore, monetary policy cooperation among EU countries is based on the existence of market-based monetary policy instruments and their effective use, if necessary. Full participation in institutionalized exchange rate cooperation of a standard EU type requires the flexible use of interest rates. The need to develop skilled monetary policy decision making and implementation could be a reason to abandon the currency board already before accession to the European Union.

Lithuania has revised its assessment on the benefits and the drawbacks of the currency board. In 1996, policymakers came to the conclusion that, for integration reasons – participation in the monetary and exchange rate policy cooperation in the EU and the adoption of the *acquis communautaire* – the country should gradually, in three stages, exit the currency board while, for the time being, retaining a fixed peg regime. Achieving a successful exit will greatly depend on the authorities' ability and readiness to use the increasing freedom for monetary policymaking wisely.

Finally, for Bulgaria, where the currency board was established only last year, the question of drawing up an exit strategy is clearly not on the agenda

at this stage. Instead, the authorities' efforts rightly focus on strengthening the medium-term viability of the currency board. In order to underline their commitment to this regime, the DEM link of the lev is to be replaced by a euro peg when the euro becomes legal tender in Germany.

The specific analysis of currency board arrangements illustrates the broader challenges policymakers in Central and Eastern Europe have to face. The appropriateness and long-term viability of monetary regimes in Central and Eastern Europe, especially in view of integration into the European Union and the unfolding transition process, will require continuous monitoring and reassessment in the years to come.

Editorial close: June 3, 1998.

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- 2 See Balino, Enoch et al. (1997).
- 3 The value of a currency board's assets can shrink, for example, if interest rates in the reserve currency country rise.
- 4 Monetary operations under a modified currency board are usually strictly limited in several ways. Their main aim is to smooth short-term interest rate volatility in the money market. If the scope for monetary operations is expanded beyond fairly narrow boundaries, the question arises of whether such a revised monetary framework could still be labeled modified currency board arrangement.
- 5 In this study, we take the current account, the capital account (excluding reserves) and the change in reserves as the three standard components of the balance of payments.
- 6 In Hong Kong, for example, there have been periodic discussions over the possibility of realigning the Hong Kong dollar. However, the proposal has always been rejected.
- 7 See e.g. Williamson (1995); Balino, Enoch et al. (1997).
- 8 For reviews of the literature see e.g. Wickham (1985), Aghevli et al. (1991); Isard (1995), Chapter 11; International Monetary Fund Institute (1992).
- 9 Santiprabhob (1997).
- 10 However, as the foreign reserves of a currency board usually cover only the monetary base and not broad money, this conversion cannot be guaranteed if there is a large-scale bank run during which a major share of deposits in domestic currency is withdrawn and simultaneously converted into foreign exchange.
- 11 Tschinkel (1998).
- 12 See Ghosh et al. (1998), who quantify the inflation differential between currency board and other fixed peg countries as being on the order of 4 percentage points per year.
- 13 See Ghosh et al. (1998), who conclude that "average annual per capita growth was almost twice as high under currency boards than under floating or pegged exchange rates" and that this finding holds across the various per capita income categories.
- 14 See Liviatan (1993).
- 15 See Williamson (1995).
- 16 See Santiprabhob (1997).
- 17 See Calvo et al. (1997).
- 18 See e.g. Balino, Enoch et al. (1997).
- 19 In presenting these reasons, the author draws on Balino, Enoch et al. (1997).
- 20 On April 1, 1991, Argentina's Congress approved the Convertibility Law, which obligates the central bank to issue domestic currency almost exclusively against the U.S. dollar value of foreign reserves at the fixed rate of one peso per U.S. dollar received by the central bank. See Zarazaga (1995).
- 21 See e.g. Zarazaga (1995).
- 22 In fact, the Dayton agreement of November 1995 laid down that a central bank should be established in Bosnia-Herzegovina, and that it should operate as a currency board for the first six years of its existence. After some delays, the central bank was set up in August 1997. It will become fully operational with the establishment of the currency board, which was underway when this study was finalized and is to be completed during the second half of June 1998 with the introduction of a new Bosnian currency, the convertible mark to be pegged to the DEM at par value.
- 23 There was some discussion also in Slovenia in 1991 about whether a currency board constitutes an appropriate monetary framework for a country which was, at that time, about to achieve monetary sovereignty. In the event, the currency board option was dismissed and Slovenia opted for a regime of managed floating for the newly introduced tolar. More recently, the question of whether a currency board could be of help to Romania in overcoming its recurrent slippages with stabilization and reform has been asked. However, at least for the time being, the authorities have a clear preference for sticking to orthodox stabilization.
- 24 See Krzak (1997).
- 25 Eesti Pank (1992).
- 26 Saavalainen (1995). When the currency board was set up, the Bank of Estonia disposed of substantial quantities of gold that had been deposited in foreign central banks before World War II, so that it could meet backing requirements with its own net international reserves.

- 27 Bennett (1993).
- 28 See Article 14 of the Law on the Central Bank of the Republic of Estonia. The assistance is normally available on a case-by-case basis. Since such assistance is limited to surplus foreign exchange reserves, it cannot come in conflict with the cover rule of the currency board.
- 29 In practice, commercial banks have the possibility to redeem central bank CDs with the Bank of Estonia before they mature or to conclude repurchase agreements with the Bank of Estonia using the central bank CDs they have as collateral (see Bank of Estonia 1997a).
- 30 The interest the Bank of Estonia pays the commercial banks on deposits exceeding the reserve requirement was one percentage point below the prevailing discount rate of the Deutsche Bundesbank until November 1997, when it was lifted to the level of the discount rate of the German central bank.
- 31 Recent changes in the minimum reserve regime are depicted in some detail below.
- 32 Eesti Pank (1992).
- 33 See e.g. Eesti Pank Press Release, October 23, 1997.
- 34 In April 1998, the annual inflation rate fell slightly to 12.6%. For details see Statistical Annex.
- 35 The slowdown in the real appreciation of the kroon during 1997 was due to the depreciation of the nominal exchange rate of the kroon against the USD, which partly compensated persisting inflation differentials.
- 36 For a more detailed analysis see Pautola and Sutela (1998).
- 37 This step was taken to reduce incentives for capital inflows channeled through the banking system.
- 38 Minimum additional liquidity requirements were set at 2% of the reserve requirement of the reporting month in November 1997 and raised to 3% a month later.
- 39 The mandatory reserve requirement is averaged on a monthly basis. The measure by which the daily requirement was doubled to 4% aimed at stabilizing the banks' kroon liquidity during the course of the minimum reserve period.
- 40 Reuters, December 19, 1997.
- 41 Hagelberg (1997).
- 42 Reuters, April 20, 1998.
- 43 Eesti Pank (1997d).
- 44 Eesti Pank (1997d).
- 45 Saavalainen (1995); Korhonen (1996).
- 46 Dubauskas (1996); Camard (1996).
- 47 Of the three Baltic states' monetary authorities, the Lithuanian central bank had to enter transition with the smallest amount of foreign reserves relative to the size of the economy. Lithuania bolstered its foreign exchange reserves under an IMF standby arrangement with a duration of 17 months, which was supplemented by a Systemic Transformation Facility (STF) arrangement, both approved by the Fund's Executive Board in October 1993. The funds borrowed from the IMF have maturities of up to ten years.
- 48 Camard (1996). This was achieved by fresh purchases from the IMF and by gradually reducing the stock of credit outstanding at the time the currency board was set up.
- 49 The central bank can provide credits of up to LTL 20 million to banks which experience liquidity problems, provided there is sufficient excess reserve cover. The Bank of Lithuania has indicated that it would grant such credits, if at all, primarily to large banks whose bankruptcy would carry a systemic risk for the financial sector. See Dubauskas (1996).
- 50 A more detailed account is presented below in the short review on banking sector developments.
- 51 From the beginning of 1997, Lithuania started to gradually exit from the currency board arrangement, which has implied the introduction of new monetary policy instruments (see chapter 6.3).
- 52 At the same time, official foreign exchange reserves were used as collateral for government borrowing, a step that was also considered to be a "compromise of the spirit of the (currency board) arrangement" (Camard, 1996).
- 53 Rudgalvis (1996).
- 54 See Knight et al. (1997).
- 55 Rudgalvis (1996).
- 56 Rudgalvis (1996); Camard (1996).
- 57 Rudgalvis (1996).
- 58 See Korhonen (1996).
- 59 This policy package was accorded with the IMF, the World Bank and the European Union. Inter alia, it has been supported by an IMF standby arrangement which was approved on April 11, 1997. The standby credit has a volume of SDR 371.9 million and a duration of 14 months. In addition, the IMF granted Bulgaria SDR 107.6 million from the Compensatory and Contingency Financing Facility.
- 60 The program and, in particular, the up-front measures and policies in the first phase of the program were reviewed in Backé (1997) and are thus not presented in detail here again.

- 61 *In the currency-board context, it is interesting to note that the program contains only relatively minor steps in the field of exchange deregulation (e.g. removing limitations to profit repatriation for small joint ventures). Bulgaria still has not accepted the obligations of Article VIII of the IMF's Articles of Agreement yet, although current account transactions have been freed de facto. Most capital movements (except for inward FDI and related flows) still require BNB permission or are subject to specific conditions, like the observance of holding periods before any resale or the registration and implementation of transactions by local custodian banks in the case of foreign investment in Bulgarian Treasury bills. In practice, most existing regulations on capital movements have been applied relatively flexibly. Moreover, the central bank's exchange obligation under the currency board regime (see below) makes it difficult to enforce some of the remaining restrictions on capital movements.*
- 62 *Article 29 of the 1997 BNB Law. The choice of the anchor currency was between the USD and the DEM. While foreign exchange market considerations would have favored a link to the USD, the foreign trade orientation was seen to support a DEM peg. Eventually, Bulgaria's aspirations to join the EU tipped the balance in favor of the Deutsche mark; intermediate solutions pegging the lev to a trade-weighted basket (see Mihov, 1998) did not get tangible support in this debate. (Linking the lev to the DEM implied that the BNB had to shift from USD-denominated assets, which had dominated in the composition of its foreign exchange assets, to DEM-denominated assets during the months preceding the introduction of the currency board arrangement.) As regards the appropriate level of the peg, the authorities opted for a relatively strong exchange rate (and were supported on this by the Fund) for price stability reasons, while some argued for a more depreciated rate to preserve export competitiveness (e.g. the Economic Institute at the Bulgarian Academy of Sciences, see Reuters, June 5, 1997, and Dietz 1997).*
- 63 *See article 30 of the 1997 BNB Law.*
- 64 *See articles 19 and 20 of the 1997 BNB Law.*
- 65 *According to article 28 of the 1997 BNB Law, the monetary liabilities of the BNB consist of all banknotes and coins in circulation issued by the BNB and of any balances on accounts held by other parties with the BNB (with the exception of accounts held by the IMF).*
- 66 *See article 33 of the 1997 BNB Law. This means that "there exist no more leaks to monetize the fiscal and quasi-fiscal debt, which was one of the main causes for macroeconomic instability in the past" (Dobrinsky, 1997b).*
- 67 *The fulfillment of minimum reserve requirements is overseen by the Banking Department.*
- 68 *See articles 40 to 45 of the 1997 BNB Law. The law contains an exception to the prohibition of direct lending to government: The onlending of IMF credits to the government is permitted.*
- 69 *See articles 46 to 51 of the 1997 BNB Law. The balance sheet of the Issue Department has to be published weekly. The basic BNB assets and liabilities must be published monthly, with separate balance sheets of the Issue and the Banking Department to be presented. The BNB shall report twice a year to Parliament and to the public on its activities. The annual report and the annual financial statement (which has to be certified by an international auditor) shall be submitted to Parliament.*
- 70 *See Dobrinsky (1997b).*
- 71 *Full backing of base money by official foreign exchange reserves had already been achieved in January 1997 as a consequence of the collapse of the lev (see Balyozov, 1997).*
- 72 *In fact, macroeconomic policies had already been tightened right after the change in government in February 1997.*
- 73 *The Bank continued to abstain from actively using the minimum reserve requirement, which has remained unchanged at 11% since January 1997. However, the direct impact of the reserve requirement has been limited since spring 1997, as commercial banks have usually held considerable excess reserves with the BNB (due to high liquidity in the system and very cautious credit policies).*
- 74 *Mass privatization was launched in early 1996 and included 1,040 preselected state-owned enterprises. In the first round of mass privatization, 666 enterprises sold two thirds of their assets, 81 companies sold between half and two thirds, the rest less than 50% of their assets. Overall, 16% of the state property was privatized through this scheme in the phase up to summer 1997.*
- 75 *There are three types of priority investments, namely investments with a volume of USD 5 million or more, investments that create more than 100 jobs and investments in distressed regions. An amendment to the law adopted in March 1998 eliminates a few specific FDI-related tax and customs preferences without, however, changing the regime in general. Recently, a working group with IMF and World Bank participation was set up and assigned the task to propose a further and more substantive reduction of the scope of preferential treatment under the act.*
- 76 *17 banks accounting for half of total deposits in the sector (excluding the State Savings Bank) had their licenses revoked by the BNB, and most of them were declared bankrupt by the courts. Liquidation of these banks has been slow, though. The strengthening of the banking sector since last spring is due to several*

- reasons, primarily to some rehabilitation and partial recapitalization measures, the erosion of the banks' liabilities during the hyperinflation episode, and markedly more cautious credit policy stances of banks.
- 77 Under the new law, individual and enterprise deposits denominated either in lev or foreign currencies of up to (an equivalent of) BGL 2 million (DEM 2,000) will be compensated to 95%. Deposits of up to BGL 5 million will be covered to 80%. Amounts above BGL 5 million are not insured.
- 78 This law has a bearing on the future design of deposit insurance in Bulgaria, as it envisages that the presently effective full and unlimited state guarantee for deposits at the State Savings Bank give way to standard protection after a transition period of two years.
- 79 This has also been acknowledged by international organizations, see e.g. OECD (1998), European Commission (1998) and IMF (1998).
- 80 For a review of the early results of the program, see Dobrinsky (1997b) and also Backé (1997), furthermore the data series contained in the Statistical Annex of this publication.
- 81 In October and November monthly inflation decreased to 0.5%. In the period December 1997 to February 1998, it hovered between 1.5% and 2%. In March 1998, the consumer price level fell by 0.1%; in April, monthly inflation was at 0.1%.
- 82 For government debt, they have come fairly close to German rates: The average yield of three-month Treasury bills is currently (end of May 1998) at 5.1%, that of six-month Treasury bills at 5.6%, that of twelve-month bills at 6.8%. On the interbank market, interest rates have recently oscillated between 1% to 2% annually for overnights and around 7% to 8% for one-year deposits.
- 83 The upturn in foreign assets was particularly pronounced during the first weeks of the currency board's operation, reflecting, to a considerable extent, a resident capital inflow (that had already set in during the second quarter) flowing from a perceptible boost of confidence in the monetary regime and the policies put in place in its support.
- 84 In the first three-and-a-half months of 1998, the surplus was at BGL 413 billion, which corresponds to almost 2% of the GDP expected for 1998.
- 85 When the currency board was set up, the funds allotted to the Banking Department amounted to more than 30% of the overall (both lev- and foreign-exchange-denominated) deposits in the banking sector not covered by liquid foreign exchange assets of the banks.
- 86 In fact, the BNB could not have effected any such lending until recently, as it promulgated the implementing regulations for lender-of-last resort lending (see article 33 of the BNB Law) only in the spring of this year.
- 87 Dobrinsky (1997b).
- 88 Mihailov (1998).
- 89 For both economic and legal reasons, the EU candidate countries from Central and Eastern Europe will, in all likelihood, first accede to the European Union and only later to the euro zone.
- 90 In addition, any EU Member State has to stick to the Treaty provisions on the coordination of economic policies (including adherence to those regulations of the Stability and Growth Pact that are binding for all EU Member States), the interdiction of privileged access of public authorities to financial institutions and the liberalization of capital movements.
- 91 The flexible use of interest rates is a main feature of the Exchange Rate Mechanism II (ERM II), which will govern the exchange rate relations between the euro area and nonparticipating EU countries from the inception of Stage Three of EMU. The principles, objectives and main features are laid down in a Resolution of the European Council adopted at the European Council meeting in Amsterdam in June 1997; see European Council of Amsterdam (1997), Conclusions of the Presidency, Annex II.
- 92 European Commission (1997), Agenda 2000, Volume 1.
- 93 European Council of Copenhagen (1993), Conclusions of the Presidency.
- 94 It is very interesting to note, though, that the Commission's opinions on Bulgaria and Lithuania are less clear on this issue: The avis on Lithuania states that "the issue of the central bank's independence... will become relevant" only with the gradual abandonment of the currency board. The opinion on Bulgaria suggests that only "after the eventual cessation of the currency board arrangement will [Bulgaria] be able to have an independent Central Bank."
- 95 See also Tschinkel (1998).
- 96 See Eesti Pank (1997d).
- 97 See Eesti Pank (1997d). Policy developments so far have apparently been in line with program targets. Parliament has passed a 1998 central budget that corresponds to the overall goal of a general government surplus of 1.8% of GDP. During the first five months of 1998, revenues were at 37.4% and expenditures at 36.6% of the target for the whole year (Reuters, June 1, 1998).
- 98 In early June 1998, the government and the Bank of Estonia agreed on an additional economic program for the remainder of 1998. Further fiscal tightening is the main component of this package: The new target for this year's public sector surplus is 2.5% of GDP (see e.g. Reuters, June 3, 1998).

- 99 *Bank of Lithuania (1997).*
- 100 *The total volume of accepted tenders in the repo auctions held this year corresponds to only 1.3% of all litas-denominated loans of operating commercial banks and foreign banks branches. The average interest rates at time deposit auctions have been between 3.2% and 6% (information provided by the Bank of Lithuania).*
- 101 *In concrete terms, bank liabilities vis-à-vis foreign banks and other credit institutions were subjected to reserve requirements. This is to create equal conditions for attracting the funds of residents, local enterprises and foreign banks (Reuters, March 1, 1998).*
- 102 *European Commission (1998).*
- 103 *Reuters, April 16, 1998.*
- 104 *This is due to the fact that a significant share of Lithuanian imports is inflexible to price changes (Bank of Lithuania, 1997), although a devaluation would have, at least temporarily, a positive effect on Lithuanian exports.*
- 105 *See article 29 BNB of the Law.*
- 106 *The substantial current account surplus of 1997 does not imply that the lev is significantly undervalued. In fact, most of the surplus is due to last year's trade surplus which, in turn, resulted from low imports during the first crisis-ridden months of 1997. Most observers expect the moderate current account deficits for 1998 and subsequent years to be financed by foreign direct investment inflows. On the other hand, the low level of Bulgarian average wages and salaries expressed in U.S. dollars (monthly wages and salaries were at approximately USD 50 to 60 in 1997) and the high and increasing level of foreign exchange reserves provide robust evidence that the lev is not overvalued at the present stage.*
- 107 *For a detailed analysis of the phenomenon of persistent moderate inflation in transition economies, see Krzak (1996).*
- 108 *Originally, average annual consumer price inflation for 1998 was expected to come to 35% (with a December to December inflation of 16%), but Bulgaria's better-than-awaited inflation performance in recent months (see section 5.3) made the authorities modify their forecast.*
- 109 *Privatization should be directed primarily by efficiency considerations. Management and employee buyouts and mass privatization, both of which have played a significant role in denationalization so far, should not be a main method of privatization in the future so as to avoid potential corporate governance problems and related impediments to structural change.*
- 110 *Due to the currently low yields, surges in (non-FDI) capital inflows which could complicate policymaking are unlikely for the time being. However, this may change over time. Sound macroeconomic policies and financial sector reform will be instrumental in reducing potential adverse effects associated with future capital flows. As these policies take hold, a phased liberalization of the remaining capital account restrictions would seem to be appropriate.*
- 111 *It should be noted that the real effective exchange rate of the lev is not only dependent on developments in the domestic economy and on the DEM/euro-lev link but also on exchange rate movements between the anchor currency and third currencies, in particular the U.S. dollar. Given that a significant share of Bulgarian foreign trade is denominated in U.S. dollars, major exchange rate changes between the Deutsche mark and, in the future, between the euro and the U.S. dollar would affect Bulgaria's competitive position.*
- 112 *See the statement of Bulgarian Foreign Minister Mikhaylova after the launching of the EU enlargement process by a meeting of the Ministers for Foreign Affairs of the fifteen Member States of the European Union, the ten Central and Eastern European applicant states and Cyprus on March 30, 1998 (BTA, March 31, 1998), the speech Prime Minister Kostov held at a meeting of the Group of the European People's Party in the European Parliament (BTA, May 5, 1998), and the announcement of Deputy Prime Minister Bozhkov at the annual meeting of the EBRD in Kiev (BTA, May 12, 1998).*
- 113 *This is due to the Balassa-Samuelson effect, which rests upon faster productivity growth in the traded than in the nontraded sectors. Money wages, which increase in line with productivity advances in the traded sectors, are equalized across sectors. Thus, factor prices in nontradable sectors rise faster than productivity, which pushes up prices of nontradables.*
- 114 *For a concise set of arguments see Wyplosz (1997).*