BULGARIAN NATIONAL BANK

The Role of a Currency Board in Financial Crises: The Case of Bulgaria

Roumen Avramov

DISCUSSION PAPERS

DP/6/1999

June 1999

DISCUSSION PAPERS

ISBN 954 – 9791 – 16 – 5

Printed in BNB Printing Center

Send your comments and opinions to:
Publications Division
Bulgarian National Bank
1, Alexander Battenberg Square
1000 Sofia, Bulgaria
E-mail: Press_office.bnb.bg@ibm.net
Publications
Web.site: www.bnb.bg

Contents

I. A Currency Board Arrangement – Basic Features and the Bulgarian Case 5

II. The 'Vulnerability Topography' of a Currency Board 9
Internal Vulnerability 10
External Vulnerability 13

III. What Is Left for a Central Bank in a Currency Board Framework? 16

IV. The Exit Strategy Debate 19

Abbreviations

BNB	*Bulgarian National Bank*
BOP	*Balance of Payments*
CBA	*Currency Board Arrangement*
ECB	*European Central Bank*
EER	*Effective Exchange Rate*
EFF	*Extended Fund Facility*
EMU	*Economic and Monetary Union*
ERM	*Exchange Rate Mechanism*
ESCB	*European System of Central Banks*
EU	*European Union*
FDI	*Foreign Direct Investment*
IFI	*International Financial Institutions*
IMF	*International Monetary Fund*
LLR	*Lender of Last Resort*
WB	*World Bank (International Bank for Reconstruction and Development)*

I. A Currency Board Arrangement – Basic Features and the Bulgarian Case

The currency board arrangement (CBA) is a monetary system providing for the national currency issue (central bank monetary liabilities) to be fully covered by a convertible foreign (reserve) currency. The national and reserve currencies are freely convertible into one another at a fixed exchange rate. The foreign currency covers only base money (the narrowest monetary aggregate) of the currency board economy.

The CBA bears a certain resemblance (though in a completely modified context) with gold standard principles. It could be considered as a 'surrogate' for the automatism and the rules of the gold standard. In some sense it is a return to the goals' hierarchy of the gold standard and to the corresponding adjustment mechanisms. Both systems aim to subordinate money supply to simple, effective and transparent rules. They affect macroeconomic policy by imposing the strongest discipline – that of capital movements and the markets.

Under a CBA, money supply is strictly limited. This result is achieved along two lines.

First of them is the fixed exchange rate. CBA are often seen as an extreme form of fixed exchange rate systems whereby irreversibility of commitment is guaranteed by a legally fixed parity between the national currency and the reserve currency. Thus the currency board is capable of enhancing confidence, reducing the risk of attack against the national currency and imposing the stricter discipline rules of fixed exchange rate regimes. Devaluation is eliminated as a possible source of increasing the nominal money stock.

Furthermore, money supply is strictly constrained by eliminating one of its sources. Under the classical two-tier banking system, the central bank issues money against both foreign and domestic assets. In this case it performs issuing functions by increasing its monetary liabilities against lending to government (budget financing) or commercial banks (refinancing or lender of last resort). Manipulation of domestic sources of reserve money underlies monetary policy and, in a sense, is the

---

Roumen Avramov, Member of the Managing Board of the Bulgarian National Bank.

Paper presented at the Bank of England, Centre for Central Banking Studies Academic Workshop 'Lessons for Central Bankers from Recent Financial Crises', London 19 – 23 April 1999. The author is grateful to Boris Petrov and Kalin Hristov from BNB Monetary and Financial Research Division for the preparation of the charts.

raison d'etre for central bank existence. However, if manipulation is exercised beyond certain sound limits and under governmental pressure it starts to generate inflation.

Under a CBA, the currency issue is backed only by foreign assets, whose dynamics is independent of monetary authorities' actions and tied to the balance of payments, especially capital flows. As currency issue against domestic assets is impossible, major sources of inflation (direct or indirect budget deficit monetization and support of insolvent banks by the central bank) are eliminated. The major channel of inflation (between central bank and government) is nonexistent and the newly created monetary authority plays a passive role with regard to money supply. The latter is determined outside the central bank, which responds automatically to economic agents' autonomous demand for money.

With a CBA major monetary policy functions typical of a classical central bank become void. Simple rules replace to a great extent discretionary decisions (and temptations) consistent with monetary policy. The fundamental issue of central bank independence is radically resolved by **amputating** those functions that materialize its relationship with the government and by exporting monetary sovereignty outside the country.

The introduction of a CBA prompts significant changes in economic behavior.

- *It largely extends the scope of hard budgetary constraints.* Government and banks are directly affected by this as they should translate hard budget constraints to state-owned enterprises and (through banks) to the private sector. However, such transmission is not completely guaranteed and transfers intended to cover losses and costs in a given sector (or economic agent) at the expense of others do not disappear altogether. The central bank itself faces new constraints because it is deprived of the inflation tax, which is a major source of income in a classical central bank model.
- *The currency board fixes a key price – the exchange rate – while all other variables move freely.* The economy cannot adjust to external shocks through the exchange rate. Their impact on economic agents is direct. The burden of adjustment falls on the real sector and financial variables – interest rates, incomes, output volumes, productivity growth, employment – are among the main shock absorbers. A currency board is basically a pro-cyclical device.

This makes market and institutional flexibility an even more pressing issue as flexibility is crucial for ensuring efficient adjustment.

- *The opening of the economy is essential.* The CBA is extremely sensitive to capital outflows and inflows and to the balance of payments surplus/deficits, which ultimately cause money supply expansion or contraction. Under a currency board, the impact of capital flows on money supply cannot be sterilized.

The CBA is not a universal monetary system. It is introduced when confidence in the classical central bank and its ability to use independently and reasonably available tools is undermined. A currency board is assumed to be expedient when the national currency unit is practically destroyed, most often in the wake of hyperinflation. In this context, the CBA is a powerful instrument to remonetize economic life and return confidence in the financial system. Finally, the success of a currency board depends on broad political consensus at its adoption as it represents a specific public contract and a basically new monetary constitution.

Few countries have introduced the currency board system, best known being Hong-Kong, Argentina and Estonia. In none of them does the CBA operate in its 'pure' form. It has gradually acquired national peculiarities.

The currency board in Bulgaria was introduced with the new Law on the Bulgarian National Bank of 10 June 1997. The legal framework for its implementation was extended and elaborated with the Law on Banks adopted shortly afterwards, which introduced strict supervisory rules and higher requirements for commercial bank safety.

The CBA was adopted after several inconclusive attempts to stabilize the economy in 1991 – 1996 and a major financial crisis, which culminated in a short-lived hyperinflationary episode in December 1996 – February 1997. During those attempts all, but one, nominal anchors were exhausted without success, stabilization policy itself was compromised and key institutions lost their credibility. The boldest solution was to introduce the only remaining nominal anchor (the exchange rate), design a 'new' institution (a currency board), gain credibility by transferring monetary sovereignty abroad, and – for the IMF, which has seen its own prestige eroded – to support a different paradigm.

Thus, from the outset, the CBA was situated in a broader context. It was conceived (and self-imposed by broad national consensus) as a

cultural shock, a tool for imposing financial discipline rather than as a simple stabilization scheme. The currency board was perceived as a clear departure from the past, an arrangement designed to overcome the deeply rooted reluctance to modernize the Bulgarian economy after seven years of piecemeal, inconsistent and incomprehensive reforms, and as an ambitious plan to deal with the institutional failures during the first transition years.

The general principles of the Bulgarian currency board comply with institutional arrangements of similar monetary systems. Nevertheless, some specific features need be highlighted.

- Bulgaria did not create a new monetary institution (as did Hong-Kong) but used the institutional design of the existing central bank. Taking the traditional model of the Bank of England, two separate departments were established within its structure: an Issue Department and a Banking Department. The residual deposit of the Banking Department with the Issue Department provides the accounting link between them. This deposit represents the positive net value of the currency board, i.e. the excess of foreign exchange reserves over reserve money and other Issue Department liabilities.
- Reserve money cover must exceed 100% but there is no fixed norm. The excess is intended to be used by the BNB to intervene as lender of last resort in case of a systemic liquidity crisis in the banking system. This provision is to be enforced in extremely limited circumstances and exclusively for solvent banks.
- The BNB is left with only one discretionary tool to regulate banking system liquidity: setting the minimum reserve requirement ratio.
- A government deposit is included in the currency board liabilities. On the one hand, the deposit accumulates IMF (and other international financial institutions inflowing funds and is covered by Issue Department liquid assets. This represents the strongest guarantee that debt payments to international financial institutions will be met. On the other hand, the presence of the government deposit in currency board liabilities indirectly affects reserve money, its growth causing (under specific conditions) reserve money to diminish and *vice versa*. Budget deficit or surplus assumes a key importance for overall stability and monetary system liquidity.
- The government deposit includes foreign currencies (mostly

US dollars) other than the reserve currency. This entails that a portion of Issue Department assets not to be denominated in Deutschemarks. To reduce the currency risk for the Issue Department, the law provides for the gap between assets and liabilities denominated in currencies other than the Deutschemark not to exceed 2% in either direction.

- A peculiarity of the Bulgarian currency board is the BNB's legally provided right to extend direct credit to the government against purchase of special drawing rights from the IMF. The maturity of the government debt to the BNB, denominated in SDR, completely matches BNB debt to the IMF. This right is consistent with BNB function as a government agent and it formalizes government financing against IMF credits.
- Deutschemark (DEM) is the reserve currency of the Bulgarian currency board, while it does not dominate foreign trade transactions and the country's foreign debt denomination. Given the asymmetric denomination of a considerable portion of domestic debt (in levs/Deutschemarks) and foreign debt (in US dollars), the effects of USD/DEM exchange rate fluctuation are partially neutralized.

II. The 'Vulnerability Topography' of a Currency Board

An economy operating under CBA principles needs greater flexibility of the markets in order to cope with missing adjustment instruments of monetary policy and of the floating exchange rate. But the bulk of measures in this area extend outside the functions and competencies of the central bank.

The sensitivity of a CBA to output and BOP fluctuations has not been empirically tested. By any means, the arrangement is functioning smoothly – as any other monetary system – in the context of a balanced BOP and a sustained growth in the economy. But a CBA is fully compatible with a GDP slowdown or a BOP deficit as well. While pro-cyclical, the CBA has also a stronger elasticity to exogenous shocks. As the experience of Argentina and Hong-Kong shows, in case of major shocks the economy reacts by sharper fluctuations of interest rates, real variables and a tighter fiscal policy stance. An indirect threat for the system could come from political pressures for a withdrawal from the CBA through a change in the fixed exchange rate. The depression of the real sector and the restrictive financial conditions will make public

consensus, needed for the successful operation of the CBA, less sustainable.

Internal Vulnerability

The implementation of the CBA in Bulgaria has produced important shifts in financial flows and hence – in the balance of economic power.

By restructuring financial flows and debt burden, the implementation of the CBA has had an important impact on the role of **government** in the economy

The government was put under harder budget constraints concerning domestic revenues and expenditures. A considerable adjustment effort occurred in 1998, resulting in the building up of a large fiscal reserve account. The external debt service, however, still needs a continuous infusion of foreign financing.

At the same time, the currency board *de facto* strengthens (by narrowing the focus) the position of the government. The CBA provides it with a credible excuse for spending moderation. During 1991 – 1996 the government had a formal autonomy in decision-making, not a real one – the burden of the internal debt ruled out any possibility for effective policy choices.

The hyperinflationary episode of 1996 – 1997 'diluted' the debt stock denominated in national currency, in particular the government's domestic debt. The servicing of total government debt was reduced from unsustainable levels in 1996 (interest payments equaled 18% of GDP) to a comfortable 2.5% in 1998. The dramatic fall in interest rates (from 300% in September 1996 to 5% during 1998) allowed non-interest payments in budget expenditures to increase from 7% in January 1997 to 50% in February 1998 and 1999. Debt maturity was gradually extended. There was a clear crowding-out of domestic debt by foreign debt **(Charts 5, 6, 7, 8).**

The Ministry of Finance became the centerpiece of overall liquidity management in the economy. It performs a 'quasi-monetary policy' through the government deposit at the central bank and treasury-bills issuing. The responsibility (and the risks) for the overall monetary stability (in particular for interest rates) shifted to a great extent from the central bank to the fiscal authorities.

The hyperinflationary outburst preceding the introduction of the

CBA cleaned up the **commercial banks'** balance sheets as well. The banking system was recapitalized through revaluation gains from their forex-denominated assets and the closing of ailing banks. At the same time, the real value of lev-denominated liabilities eroded substantially.

A sound banking system is an essential condition for the stability of the CBA. As expected after a deep financial crisis, with the introduction of the CBA commercial banks changed substantially their behavior. They adopted a cautious stance and a pronounced risk-aversion policy. The outcome has been a general credit restraint and a dramatic improvement in the liquidity position of commercial banks. A longer period of stability is needed, however, in order to overcome the shock of the previous financial collapse.

At present, the banking system is not a source of major risks for the economy **(Charts 9, 10, 11)**. Maintaining this position is not easy. Banks are facing a profitability problem related to the lack of creditworthy opportunities in the real sector, still subject to a deep restructuring. They adjust their portfolio by shifting to deposits abroad and investing in government securities. Some cost cuts have been effected, but mergers and rationalization of the highly fragmented banking structure is still ahead.

The direct effects of the CBA for the **real sector** are ambiguous. The CBA provides the economic agents with a framework of financial stability, longer horizon and broader choice. The benefits of the new environment can be fully capitalized, however, only through a sizable investment effort.

After years of declining output (with the only exception of the anemic recovery in 1994 – 1995), economic growth is starting from a very low point and has not yet entered a stage of full-fledged expansion. A moderate 3.5% GDP increase was recorded in 1998, but this (and higher) rate need to be sustained for several years in order to produce tangible effects. In spite, growth projections have been revised downward against the negative global and regional outlook **(Charts 1, 2)**.

During 1991 – 1996 the real sector used to adjust to different types of shocks through arrears, bad debts and devaluation of the exchange rate. Many of those possibilities are no longer disposable with a CBA. Entrepreneurial surveys confirm indirectly the change by showing that the main challenges faced by producers are shifting from financial problems and solvability of their clients to general and specific market conditions.

The experience from the last two years demonstrates, however, that 'liquidity surrogates' does not disappear altogether. Although bank arrears have declined substantially, some interfirm arrears and debts to the budget have piled-up, concentrated mainly in large state-owned companies. Loopholes for hidden subsidies and soft budget constraints are still in place. Most of them are to be eliminated in the framework of the three-year EFF with the IMF, but the economy still faces deep sectoral inefficiencies and imbalances to be addressed by bold medium-term reforms.

A CBA is not a panacea for the deeper transformation of a transition economy. The outcome of this transformation – and the long-term viability of the CBA itself – depends on the success of the entire set of supporting structural reforms. The change in the mentality and behavior of the real sector is the most difficult aspect of the transition, even with the strong constraints of a CBA in place. But if the currency board is to be considered, as it is, as a *cultural shock*, its success (and vulnerability) depends critically on the penetration and adoption of a new culture of financial responsibility.

The restructuring of the financial flows in the economy and the elimination of the crowding-out effect with the CBA permitted **households** to obtain access to some credit resources. An appreciable increase of lending to households (mainly consumer credit through the State Savings Bank) has been observed. At the same time, after a rapid recovery of the wage losses from hyperinflation, personal income has grown at a moderate rate.

Remonetization of the economy is probably the essential goal of the CBA and the most synthetic test for its success. It should be remembered that the main macroeconomic precondition for the introduction of a CBA is 'disappearance of money' – a CBA is of doubtful usefulness in the absence of a previous demonetization of the economy.

This was the case in Bulgaria at the beginning of 1997, with an almost complete dollarization, a tangible perspective of default on foreign debt and a *de-facto* default on the internal debt through a continuous monetization of fiscal and quasi-fiscal deficits triggering hyperinflation. The CBA was the only appropriate arrangement to restore confidence in the national currency and the financial system as a whole.

Remonetization has been under way since July 1997. After a strong increase in the second half of 1997, growth of monetary aggregates

slowed in 1998. The deceleration is only partly due to a deterioration of the external sector position (current account deficit and a squeeze in the capital account surplus). Under a CBA money supply is directly influenced by balance of payments developments, but the causal link is only with narrow monetary aggregates. Commercial banks have still the possibility to expand or reduce credit without the strong constraints imposed on the issue of reserve money and the dynamics of M2/M3 is influenced also by other factors, such as changes in the multiplicator or the degree of credibility of the financial system.

The most pronounced increase was observed in the 'money outside banks' component of M1, reflecting the much lower opportunity cost to hold cash balances and widespread cash transactions. Broader aggregates rose slowly, due to the relatively moderate growth of bank deposits **(Charts 12, 13, 14, 15)**.

Total domestic credit remains at historically low levels. The main factors behind this trend are diminishing government borrowing requirements after the introduction of the CBA and the forced isolation of many state-owned enterprises from the credit market. Credit to the private nonfinancial sector has been limited in 1997 – 1998, although lev credit is showing signs of revival in the second half of 1998 and the first months of 1999. The fastest pace is observed for credits to households **(Charts 19, 20, 21, 22)**.

As expected, a return of confidence in the national currency has accompanied the CBA. Although the share of foreign currency deposits has diminished, it remains, however, very high by historical standards **(Charts 16, 17,18)**. A much more pronounced trend has been the sharp decrease in forex-denominated loans extended by banks. Overall, the confidence in the banking system after the deep financial crisis of 1996 – 1997 is returning only cautiously with still a weak bank intermediation.

External Vulnerability

The recent global financial turmoil has stressed the fragility of the international financial architecture and the need for reshaping some of its underlying principles. Economies operating under CBA were among the most seriously threatened by the crisis. In a broader perspective, a basic principle of their monetary system – the fixed exchange rate – was questioned.

The launching of the CBA in Bulgaria benefited from a timely and calibrated foreign financing. An IMF standby arrangement was ap-

proved in April 1997. It was the first (out of five during 1991 – 1996) to be completely disbursed. Later on, a three-year EFF was agreed in September 1998. Besides, a significant net inflow of foreign resources was recorded during 1997, due to the sizable surplus of the current and capital accounts. The assets of the Issue Department increased by 27.5% in the second half of 1997 and by 15.8% in 1998 **(Charts 23, 24)**.

By definition a CBA is more exposed to external shocks and with a more limited scope of instruments to absorb them. Thus it creates a more vulnerable (and hence more conditional) external environment for the national economy. The two-year experience in the context of growing global financial instability provides some valuable tests in this respect.

The direct, **trade channel**, was not of primary importance for the transmission of impulses from the most affected areas of the world economy. Trade with Russia amounted to 5.5% of exports and 20% of imports in 1998. We have to add another 7.2% of exports and 5% of imports for the other CIS countries. Even if exports to the CIS region fell dramatically in 1998 (by decreasing 38%), it turned out that sectoral depressions affecting world markets for the main Bulgarian export items (such as chemicals and steel products) are far more important. The overall trend of demand in the EU area also becomes a relevant factor, as its weight approaches 50% in Bulgarian trade **(Charts 25, 26, 26A)**.

Figures for the effective exchange rate (EER) show that no major appreciation of the lev has been observed since the implementation of the CBA. In fact, the movement of the only relevant exchange rate (USD/DEM) has been favorable for Bulgarian exporters, as the depreciation of the Deutschemark in the world forex markets has created a safety buffer. It compensated partially the negative terms of trade developments **(Chart 28)**.

The impact of a possible appreciation of the lev has been a permanent concern for the public and professional debate. The sensitivity of the issue is largely due not so much to actual trends, but to the fact that competitive devaluation is no more an option as it was during the previous inflationary episodes. The only available adjustment mechanisms are related to productivity improvements and cost-cutting which are not familiar to many exporters.

Capital flows are of crucial importance for the smooth functioning of the CBA **(Charts 27, 29)**.

Sizable *short-term portfolio investment* inflows were registered in the period preceding the installation of the CBA, attracted by the wide interest rate differential and by the imminent perspective of a successful stabilization, firmly supported by the IMF. With the gradual fall in interest rates after June 1997, the inflow vanished, before reversing its direction. This reversal could hardly be attributed to the effects of the Asian crisis. Instead, it reflected the changing conditions in the Bulgarian economy and the lower yield of Bulgarian domestic debt securities. The rudimentary development of the national capital market further isolated the economy from the impact of short-term capital movements **(Chart 30)**.

Bulgaria is still strongly dependent on *official foreign financing.* Since the outset of the transition IMF, WB and EU loans have traditionally ensured the needed BOP support. A growing part of the increase in foreign reserves is obtained at the cost of higher indebtedness to IFIs. While in 1997 growth in foreign debt represented only 9% of the increase of foreign reserves, in 1998 this ratio was 68% **(Charts 32, 33)**.

The present government's initial intention to raise funds through a bond issue has been postponed due to deteriorating conditions in emerging markets. Their virtual isolation from international capital markets is probably the major channel of influence of the world financial crisis on transition economies like Bulgaria.

To attract *FDI* has been a constant long-term policy goal. In the context of a currency board FDI are essential to ensure external and fiscal balances. Although a clear surge was observed in 1997, the pace of FDI slowed afterwards – they amounted to USD 504 million in 1997 and to USD 364 million in 1998. This trend is due to many factors, ranging from problems with structural reforms to limited attractive opportunities for privatization. With the outburst of the crisis in Kosovo the negative impact of the 'regional factor' has overshadowed many other considerations by undermining investors' confidence **(Chart 31)**.

The changing risk of the Bulgarian economy has been reflected in the quotation of Bulgarian Brady bonds. A neat upward trend was observed in 1997. This trend closely correlates with the successful preparation and implementation of the CBA.

As it can be seen from **Chart 34,** since the fall of 1997 the timing of the *fluctuations* of Bulgarian bonds follows this of indexes for countries with similar rating and for emerging markets. The amplitude of the fluctuations, however, is somewhat deeper in the Bulgarian case. The

Russian crisis and events of minor importance have been amplified for the Bulgarian Brady bonds index. This higher sensitiveness has important domestic repercussions as well. The domestic markets trend of government-issued, USD-denominated ZUNK bonds also follows the fluctuation of Bulgarian Brady bonds (**Chart 35**). Thus world financial crisis directly influences the financial position of some Bulgarian banks, as they detain large volumes of ZUNK bonds.

Overall, developments in capital movements have had a mixed impact on the CBA. Although they have not directly threatened the stability of the Bulgarian currency board, the global financial crisis and political instability in the region have prevented the country from a broader access to foreign capital. Current account financing remains fragile and the BOP equilibrium is conditional upon the uncertain (heavily dependent on the global crisis) balance of the capital account.

Global trends have had some *positive effects* as well. The declining pace of interest rates in 1998 is by no means beneficial for a debtor country. Besides, lower interest rates in the reserve currency country are a basis for lower levels in the domestic markets as well. (Part of this effect is neutralized by lower yields of Issue Department assets invested abroad.) Finally, the Russian crisis and the dramatic fall of the prices of the Russian debt have permitted to settle pending debt issues with the two Moscow-based, ex-COMECON banks at extremely favorable terms for Bulgaria. Thus the official gross foreign debt of the country was reduced by more than USD 500 million.

III. What Is Left for a Central Bank in a Currency Board Framework?

At first glance the central bank seems the main 'looser' from the introduction of a CBA. Monetary sovereignty is transferred abroad. The room for manoeuvre of the central bank is strongly reduced. It looses its control over the monetary base – domestic components of money creation, normally managed by the central bank, disappear. The markets and the autonomous decisions of economic agents determine money supply, which is anchored by fixing the exchange rate. Short-run liquidity management is abandoned – there is no more control over interest rates fluctuations, no interventions in the exchange markets, no open-market operations. The central bank is strongly limited in its lender of last resort functions.

But what is the central bank really loosing under a CBA?

Theoretically the BNB had a complete 'autonomy' under the floating exchange rate regime in 1991 – 1996. It mismanaged, in practice, the instruments put at its disposal under pressures from governments and other sources. Strong conditionality was already in place through two channels: external – as the central bank was constrained by its limited reserves; internal – as government deficits were implicitly or explicitly monetized. The terminal financial crisis produced a nearly hyperinflationary environment in January – February 1997. In this context no economic agent – including the central bank – had a real margin for free decisions.

The CBA was a deliberate choice and an intentional limitation in the functions of the BNB. But, paradoxically, a greater autonomy was attained at the cost of the amputation of several of the 'classical' functions of the monetary authority:

- The central bank was redesigned as an institution obeying simple monetary rules. Its margin of maneuver was narrowed, but at the same time possible disequilibria stemming from misleading discretionary measures were also limited.
- The central bank was completely 'disconnected' from the government budget by ruling out any direct financing of fiscal deficits.
- The regulatory and supervisory responsibilities of the BNB have been strongly enhanced with its new legal status. Almost every prudential regulation has been amended in a sense of greater strictness and tighter supervisory rules.
- The central bank acquired larger responsibilities in the management of the foreign reserves. The assets of the currency board (the Issue Department of the BNB) are invested under very strict rules in order to achieve complete security, high liquidity and a comfortable return.

Probably, the only tangible 'loss' concerns the immediate institutional interests of the central bank. It has been put under hard budget constraints by abandoning the previous revenues related to the inflation tax and restraining itself to income earned from the management of external assets. But, at the same time, the BNB gained in transparency and liquidity. Its accounts were 'cleaned' with the launching of the CBA and a new, much more transparent, format for the presentation of the assets and liabilities of the institution was adopted. By its very design, a CBA has to maintain its assets in a highly liquid form and to follow a strict definition of foreign reserves. The asset management policy of a CBA is even more prudent and conservative than that of a

'classical' central bank.

A residual area of important direct and indirect influence of the central bank is the regulation of the allowed flexibility in the management of commercial banks' liquidity.

According to the new Law, the BNB is still empowered to change the ratio of minimum reserve requirements. A change can be made only after consultations with the IMF, and the use of this tool is restricted to cases of major shifts in the financial outlook. But the amended scheme for minimum reserve regulation has left substantial flexibility in the day-to-day management of commercial banks' reserves.

The rules for utilization of the LLR facility, foreseen in the Law, are very strict. This function can be exerted exclusively in the event of a systemic liquidity crisis in the banking sector.

With respect to the management of commercial banks' foreign assets, the BNB removed the reserve currency (Deutschemark) from the list of currencies making up their open positions. In line with the basic principle of the CBA, exchange of levs and Deutschemarks is treated as completely risk-free. This approach permitted the banks to invest in DEM-denominated assets abroad and to manage more effectively their liquidity in the context of a narrow range of possibilities in the Bulgarian economy.

A more comprehensive step is the expected adoption of a new Foreign Currency Law. The draft is still being discussed, but there is consensus to elaborate the Law as a liberalized framework for current account transactions. Meanwhile, the turbulent international financial conditions have shifted the emphasis on the proposed treatment of capital account transactions. The authorities have adopted a more cautious philosophy, by considering a more gradual liberalization in this matter.

Under a CBA the main responsibility for the overall liquidity stance of the economy has shifted from the central bank to the Ministry of Finance. Fiscal balance is crucial for the stability of the CBA. Although a balanced budget is not a *conditio sine qua non,* it is highly desirable to pursue a sound fiscal policy. A persistent departure from fiscal stability will inevitably undermine the financial foundations of the system.

During the last two years, fiscal adjustment in Bulgaria has been largely the outcome of spontaneous realignment of financial flows.

This positive adjustment was supported and enhanced by a deliberately prudent fiscal stance, while the sizeable primary surplus was utilized mainly for upgrading the long-depressed current expenditures and for some investment outlays.

In the midterm, however, fiscal policy faces two main challenges.

On the one side, equilibrium has to be maintained in the context of higher fiscal costs of structural reforms. Many of the expected steps (social security, health, retirement, energy) need an important government effort. The three-year EFF explicitly allows such an effort in carefully designed areas, by tolerating a 'conditional' budget deficit of 2.8% for 1999. Besides, fiscal bottlenecks could arise from unavoidable investment expenditures needed by the economy following an almost whole decade of decapitalization. Part of the resources is expected to come from the budget according to the ambitious government's investment program in infrastructures. The sustainability of the program is fragile and any change in its underlying assumptions could easily produce fiscal disequilibria.

The other midterm fiscal problem is related to the level of the tax burden in the economy. It is widely accepted that the current level is not sustainable in the long-run as it nurtures the underground economy and hampers the needed increase in savings. A tax cut, however, is conditional upon higher collectibility, broadening of the tax base and ultimately – upon widespread revival in economic activity.

IV. The Exit Strategy Debate

The Bulgarian CBA is clearly set up as a long-term arrangement. No change is considered in the foreseeable future and it is the firm position of the BNB and the government that this system successfully meets the need for a noninflationary monetary constitution. Experience with other CBA, like those in Hong-Kong, Argentina and Estonia, has proven that the arrangement is remarkably stable and able to face shocks of different magnitude and nature in the context of an unchanged institutional framework. There is convincing factual evidence that the Bulgarian CBA also confirms the stability of this monetary system – a set of indicators is presented in **Charts 36, 37, 38.**

Nevertheless, the issue of a possible exit strategy has been presented in academic and, to a less extent – in public debate almost since the implementation of the CBA. Besides, the Lithuanian 'exit program' provides a precedent, although the plan is apparently related to a con-

flicting situation between the peg to the US dollar and the goal to join the EU.

In fact, the 'exit issue' is that of CBA's internal development logic. Theoretically, only two options are available – a return to exchange rate flexibility and a full-fledged central bank; a monetary union. (I consider only the orderly options. An exit in crisis is not the outcome of a deliberate policy choice, but a passive decision in the face of uncontrollable events.)

The *first option* is not a viable one in the Bulgarian institutional and economic context. The pre-CBA experience has shown the futility of the budget constraints on economic agents and the low credibility of the main institutions in a 'classical' context. A stronger pressure for responsible behavior of the financial system is needed and it is satisfactorily ensured by the simplest and unsophisticated monetary constitution, which does not allow a manipulation of the exchange rate, and/or of the money supply.

The *second option* is more in line with the intrinsic logic of the CBA. For Bulgaria (which is an associated member of the EU) the natural way-out from a CBA is to join the EMU after accession to the EU.

This outlook was explicitly included in the design of the Bulgarian CBA. The Law on the BNB (the institutional framework of the CBA) stipulates an automatic shift from the Deutschemark to the Euro on 1 January 1999. This saves a complex and risky operation, which (if the lev were pegged to the US dollar) would have been necessary in the context of Bulgaria's accession to the EU.

A sufficiently long period under a CBA may become an asset for a country seeking to join the Euro-zone. The stable and smooth long-term functioning of the CBA is highly desirable for at least two reasons: to stabilize the macroeconomic parameters, thus paving the way for an eventual convergence towards the Maastricht criteria; to get accustomed economic agents to behave in an EMU-like economic environment by incorporating many of the main features (and of the financial constraints) proper to the Euro-zone. It might be observed, in particular, that a CBA incorporates many of the principles of the European System of Central Banks – independence, limited autonomy of decision and monetary policy tools, fixed exchange rates, ban of fiscal deficits financing. In this context, the currency board stabilization may prove to be the best way to prepare for Bulgaria's convergence with EU economic and monetary standards, and EMU at a later stage.

The mechanism designed for the 'out'-countries to join EMU provides a clear framework for an exit strategy. The optimal path for Bulgaria seems to be to maintain the CBA until the accession to the EU, to declare immediately the intention to enter EMU and to follow the established schedule. It is at this stage that the compatibility of the CBA with an EU membership becomes a relevant problem. (The legal opinion may come soon, during the accession negotiations between the European Commission and Estonia.) In the hypothesis of a complete institutional compatibility, a passage through ERM-II seems unnecessary, as the CBA provides an even stronger peg to the Euro. At the same time, a CBA is obviously not identical to a central bank – member of the ESCB. In the latter case a much more sophisticated set of monetary policy instruments is still available.

It is by any means clear, that this scenario entails a long way of structural and institutional reforms, as well as a prolonged effort towards a convergence of macroeconomic policy to that of EU member countries.

Recently another scheme of monetary union has been discussed in the context of the search for solutions to the global financial crisis. The plan of a complete *'dollarization'* of the Argentinian economy was presented as a new option for an exit strategy.

In its 'negotiated' form this idea matches almost completely the EMU scenario. If Argentina dollarizes with an ensured seignorage income and LLR commitment from the Federal Reserve System (a highly improbable hypothesis), that country will follow exactly the possible exit strategy for the Bulgarian CBA towards EMU. The non-negotiated dollarization corresponds, in turn, to an unilateral adoption of the Euro without any institutional link with the EU. Some economists in Bulgaria have recently advocated this idea. Like in Argentina, the rationale behind it is to provide an irreversible peg, to enhance credibility (which is not complete under a CBA regime) and to increase the attractiveness of the economy for foreign investors.

The deficiencies of such a strategy are manifold. It establishes the most constraining monetary system by eliminating even the residual instruments of monetary flexibility available to the CBA – a manipulation of minimum reserve requirements and some LLR facilities. Money supply becomes entirely subordinated to the considerations of the monetary conditions of the reserve currency country. The adopted currency (the Euro in the Bulgarian case) would be in fact a 'surrogate' one – a currency without a central bank. Monetary restrictions would

increase, but without the benefits of a full membership in the institutional infrastructure of the European Economic and Monetary Union. The residual central bank would have neither the voting power in the European central banks, nor even the rights and the policy instruments of the national central banks of EU countries.

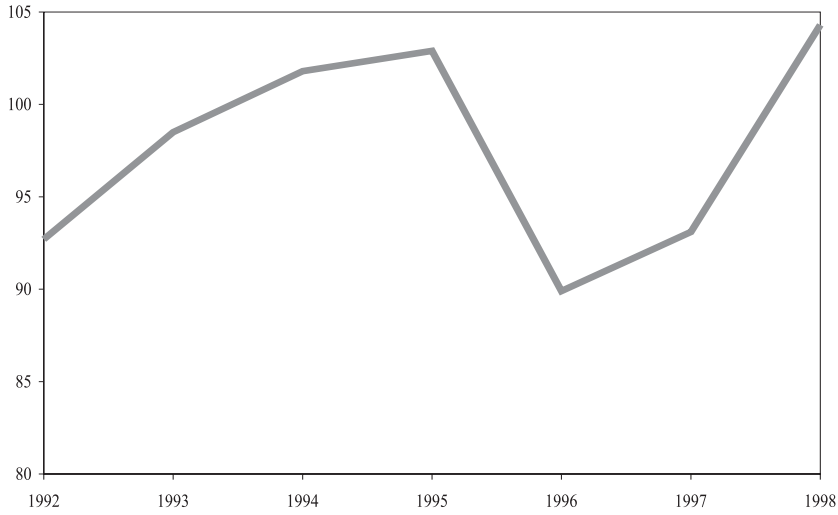
The goal of an exit strategy is not to multiply the already strong monetary restrictions in place under a CBA. The scope to increase credibility of the economy lies outside the monetary area. If credibility can be enhanced only at the cost of a complete removal of the national currency, probably the country faces structural problems, which could hardly be resolved through a monetary union with a much more developed economy. This is not the case of Bulgaria. For it, as for any country operating a CBA, the real threat is the ever-faltering and lagging support from background structural reforms.

Charts

Chart 1. Real GDP Growth, 1992 – 1998 24
Chart 2. Real GDP Growth, IV Q 1996 – IIIQ 1998 24
Chart 3. Consumer Prices Inflation, Dec. 1996 – Feb. 1998 25
Chart 4. Consumer Prices Inflation, Feb. 1998 – Jan. 1999 25
Chart 5. Government Debt/GDP, 1996 – 1998 26
Chart 6. Annual Base Interest Rate, Feb.1996 – June 1997 26
Chart 7. Annual Base Interest Rate, June 1997 – Jan. 1999 27
Chart 8. Expenditures of the General Government Budget/GDP, 1996 – 1998 27
Chart 9. Credit Portfolio of the Banking System, IVQ 1997 – IVQ 1998 28
Chart 10. Liquidity of the Banking System, IIIQ 1997 – IVQ 1998 28
Chart 11. Capital Adequacy Ratios, IVQ 1996 – IVQ 1998 29
Chart 12. Reserve Money/GDP, 1991 – 1998 29
Chart 13. M1/GDP, 1991 – 1998 30
Chart 14. M2/GDP, 1991 – 1998 30
Chart 15. M3/GDP, 1991 – 1998 31
Chart 16. Foreign Currency Deposits/Total Deposits, 1991 – 1998 31
Chart 17. Foreign Currency Deposits/Total Deposits, IVQ 1996 – IVQ1998 32
Chart 18. Foreign Currency Component of M3, IVQ 1996 – IVQ 1998 32
Chart 19. Domestic Credit/GDP, 1991 – 1998 33
Chart 20. Claims on Government/GDP, 1991 – 1998 33
Chart 21. Claims on Private Nonfinancial Enterprises/GDP 34
Chart 22. Claims on Households/GDP, 1995 – 1998 34
Chart 23. Assets of BNB Issue Department, July 1997 – March 1999 35
Chart 24. Liabilities of BNB Issue Department, July 1997 – March 1999 35
Chart 25. Current Account/GDP, IVQ 1996 – IVQ 1998 36
Chart 26. Trade Balance/GDP, IVQ 1996 – IVQ 1998 36
Chart 26A. Interest Payments on Foreign Debt/GDP, IVQ 1996 – IVQ 1998 37
Chart 27. Capital Account/GDP, IVQ 1996 – IVQ 1998 37
Chart 28. Real Effective Exchange Rate 38
Chart 29. Government Foreign Debt, 1997 – 1998 38
Chart 30. Net Portfolio Investment/GDP, IVQ 1996 – IVQ 1998 39
Chart 31. FDI/GDP, IVQ 1996 – IVQ 1998 39
Chart 32. Net Credit From IMF/GDP, IVQ 1996 – IVQ 1998 40
Chart 33. Changes of BNB Foreign Reserves/GDP, IVQ 1996 – IVQ 1998 40
Chart 34. EMBI+, Bulgarian and Venezuelan Brady Bond Indices, 1996 – 1999 41
Chart 35. Brady and ZUNK Bonds Indices, Dec. 1997 – Feb. 1999 41
Chart 36. 'Stability Indicators' of the Currency Board – I, 1997 – 1999 42
Chart 37. 'Stability Indicators' of the Currency Board – II, 1997 – 1999 42
Chart 38. 'Stability Indicators' of the Currency Board – III, 1997 – 1999 43

Chart 1

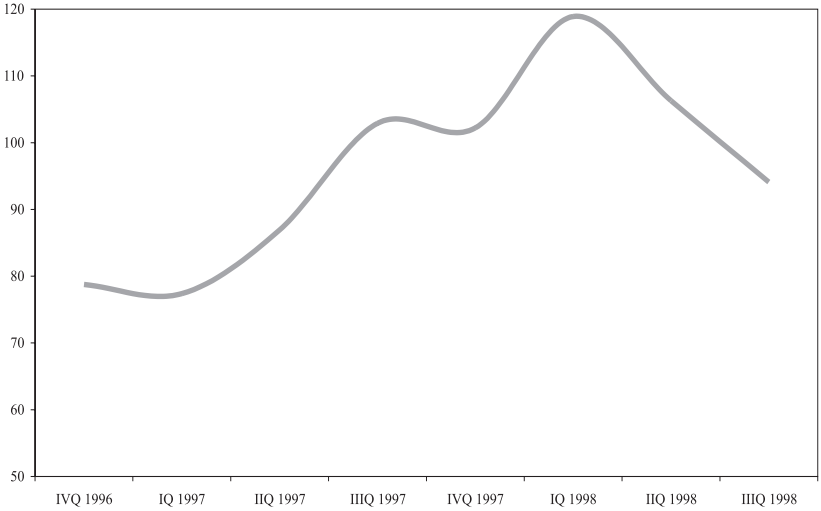
REAL GDP GROWTH, 1992 -1998



Source: National Statistical Institute.

Chart 2

REAL GDP GROWTH, IV Q 1996 – IIIQ 1998
(the same quarter of the previous year = 100)

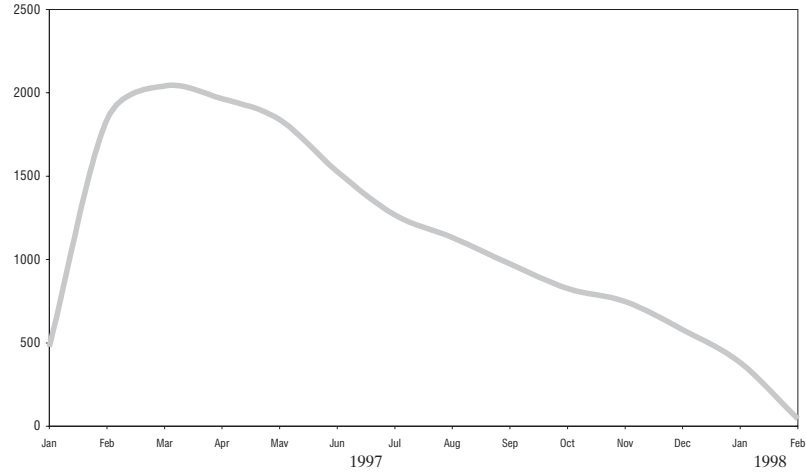


Source: National Statistical Institute.

Chart 3

CONSUMER PRICES INFLATION, DECEMBER 1996 – FEBRUARY 1998

(on an annual basis) **(%)**

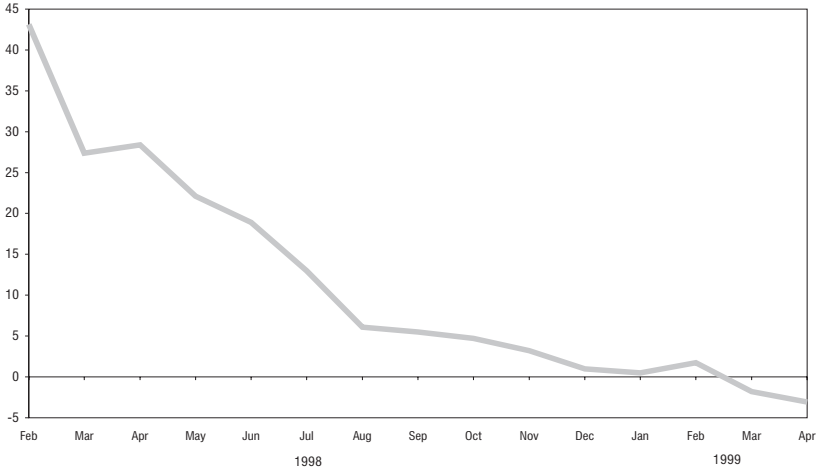


Source: National Statistical Institute.

Chart 4

CONSUMER PRICES INFLATION, FEBRUARY 1998 – JANUARY 1999

(%)

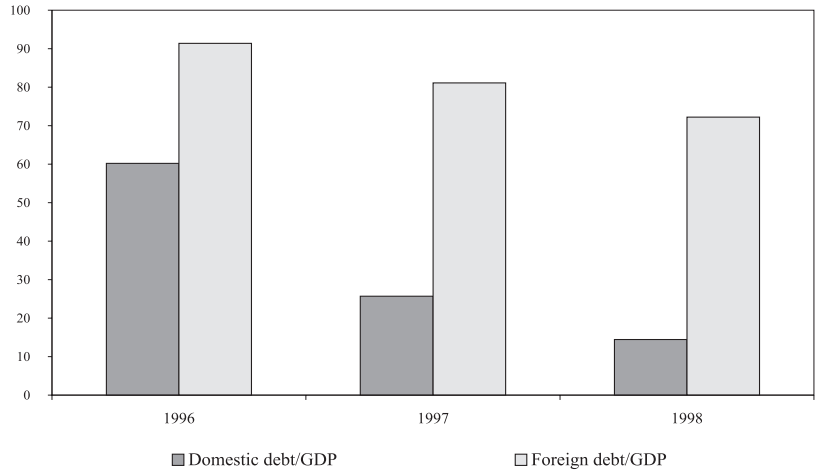


Source: National Statistical Institute.

Chart 5

GOVERNMENT DEBT/GDP, 1996 – 1998

(%)

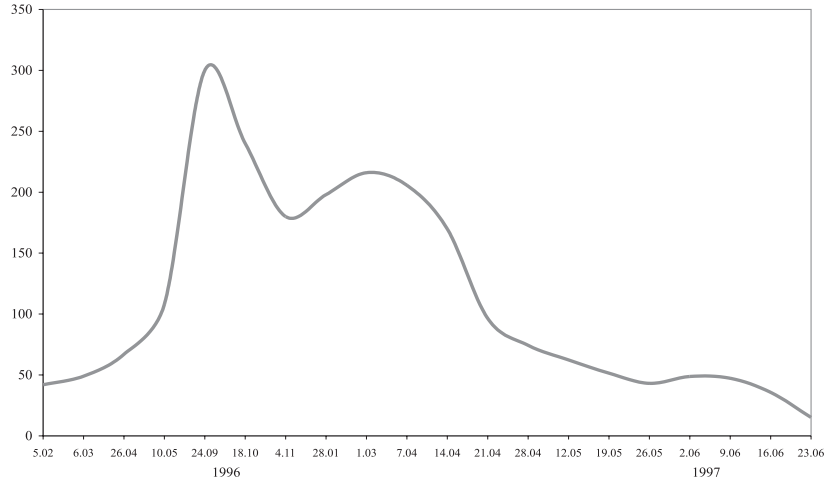


Source: BNB, Ministry of Finance.

Chart 6

ANNUAL BASE INTEREST RATE, FEBRUARY 1996 – JUNE 1997

(%)

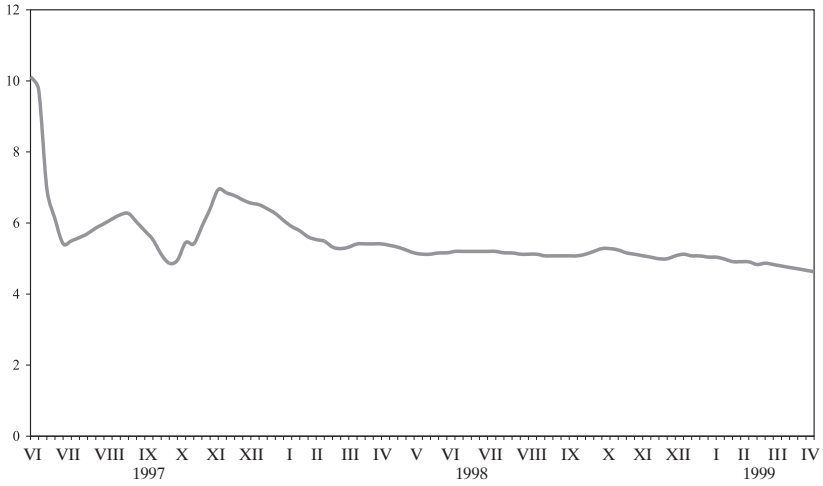


Source: BNB.

Chart 7

ANNUAL BASE INTEREST RATE, JUNE 1997 – JANUARY 1999

(%)

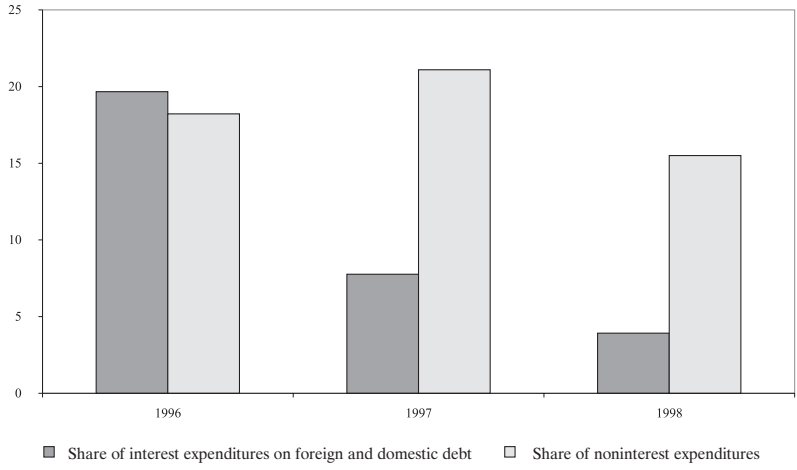


Source: BNB.

Chart 8

EXPENDITURES OF THE GENERAL GOVERNMENT BUDGET/GDP, 1996 – 1998

(%)

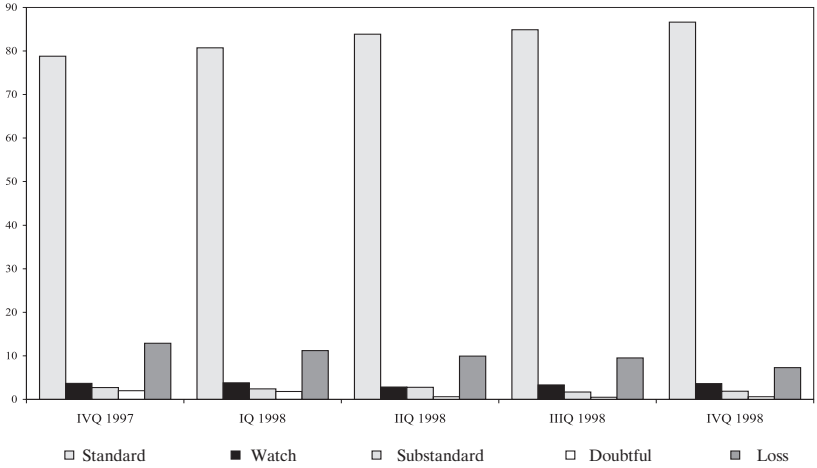


Source: BNB, Ministry of Finance.

Chart 9

CREDIT PORTFOLIO OF THE BANKING SYSTEM, IVQ 1997 – IVQ 1998

(%)

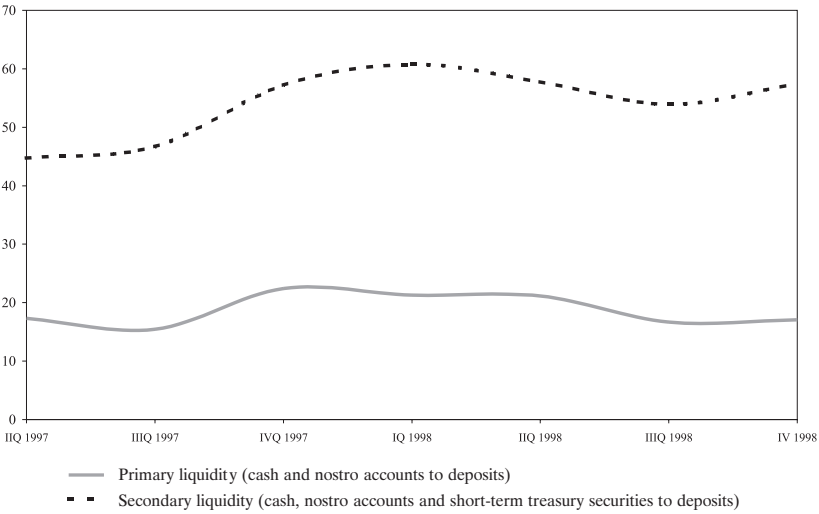


Source: BNB.

Chart 10

LIQUIDITY OF THE BANKING SYSTEM, IIIQ 1997 – IVQ 1998

(%)

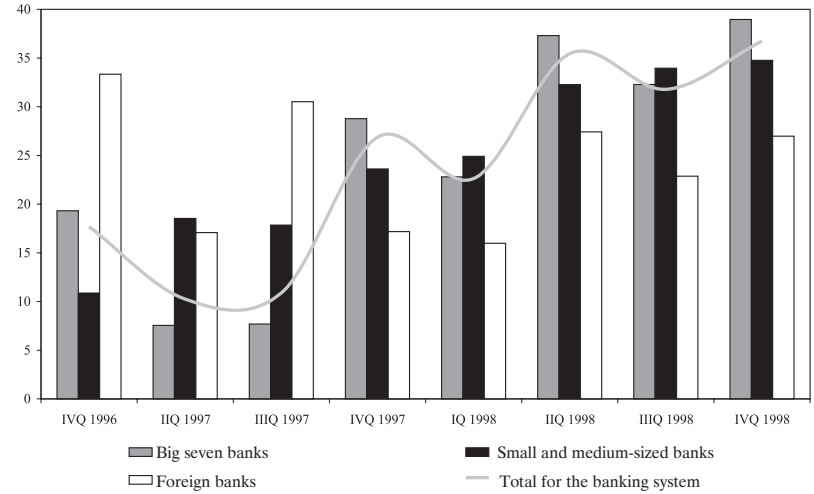


Source: BNB.

Chart 11

CAPITAL ADEQUACY RATIOS, IVQ 1996 – IVQ 1998

(%)

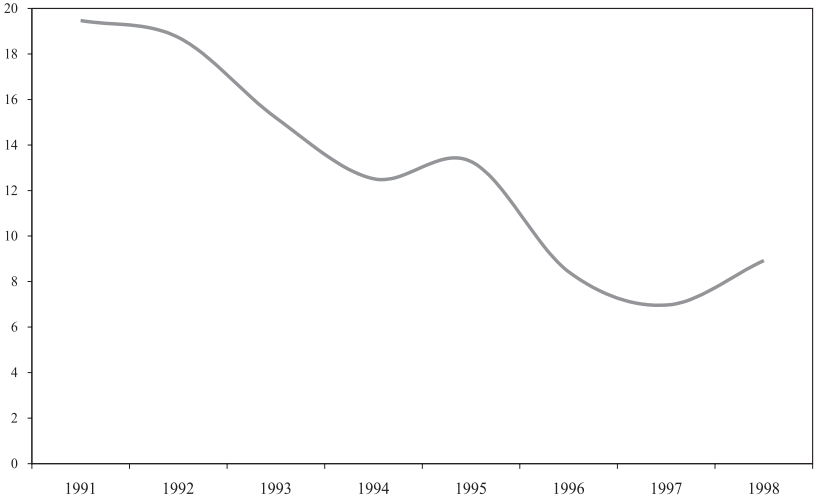


Source: BNB.

Chart 12

RESERVE MONEY/GDP, 1991 – 1998

(%)

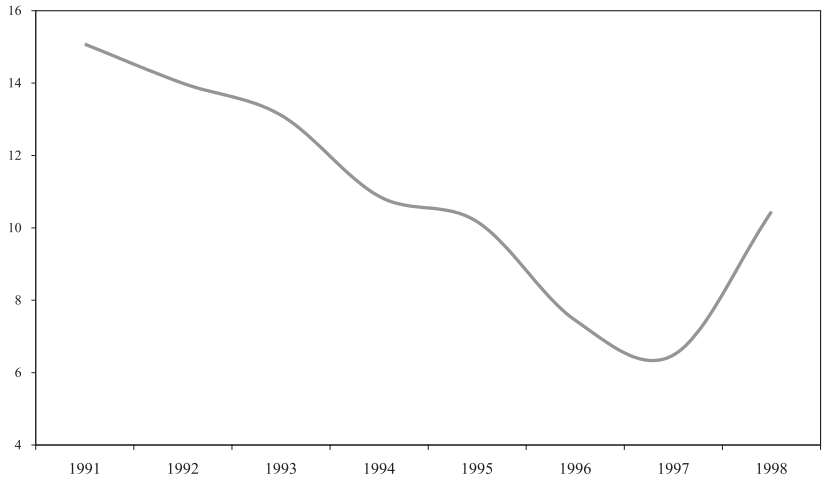


Source: BNB.

Chart 13

M1/GDP, 1991 – 1998

(%)

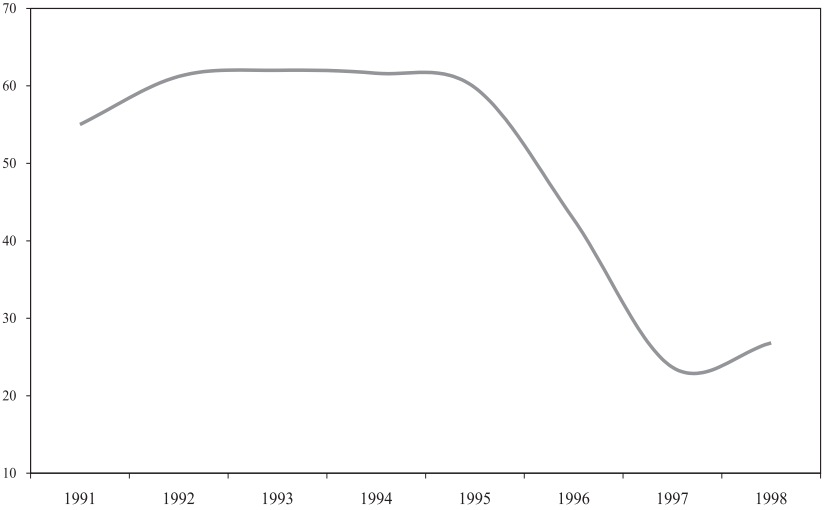


Source: BNB.

Chart 14

M2/GDP, 1991 – 1998

(%)

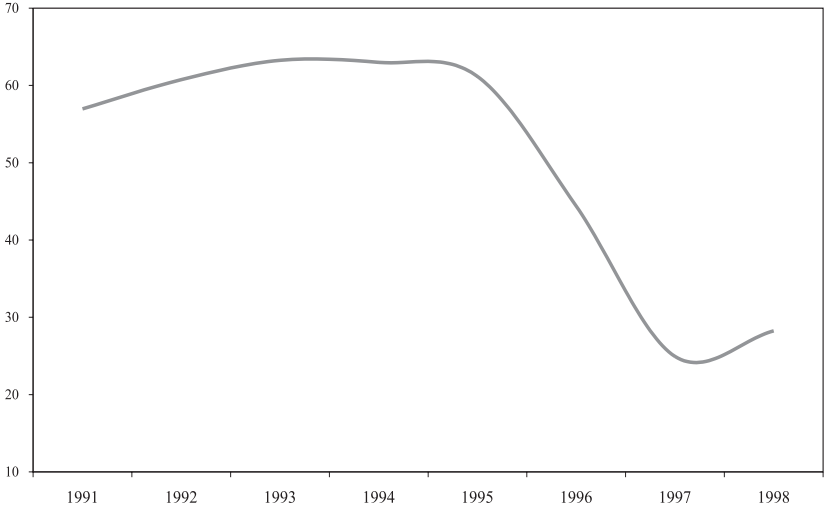


Source: BNB.

Chart 15

M3/GDP, 1991 – 1998

(%)



Source: BNB.

Chart 16

FOREIGN CURRENCY DEPOSITS/ TOTAL DEPOSITS
1991 – 1998

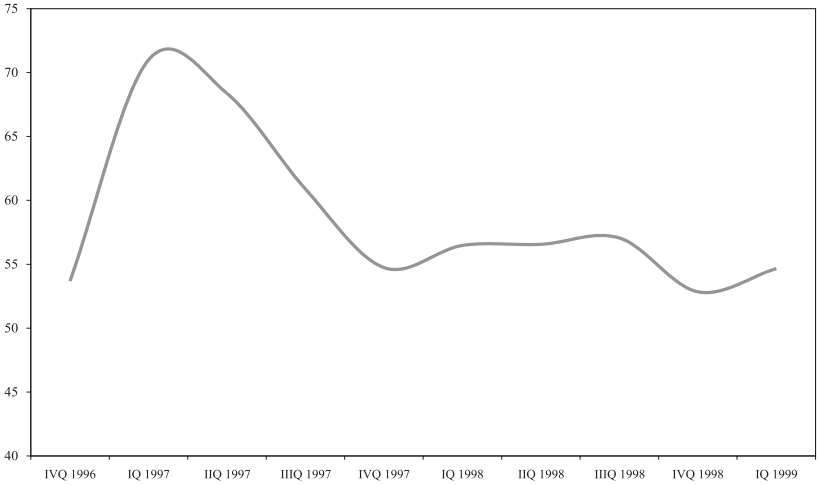
(%)

Source: BNB.

Chart 17

FOREIGN CURRENCY DEPOSITS/TOTAL DEPOSITS, IVQ 1996 – IVQ1998

(%)

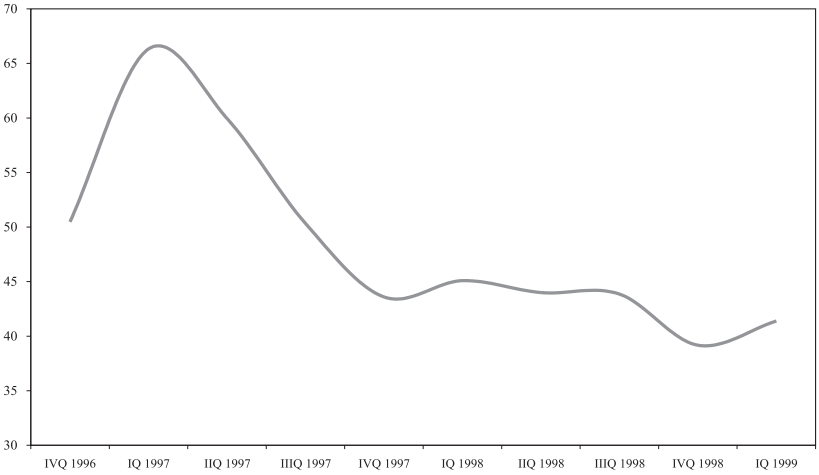


Source: BNB.

Chart 18

FOREIGN CURRENCY COMPONENT OF M3, IVQ 1996 – IVQ 1998

(%)

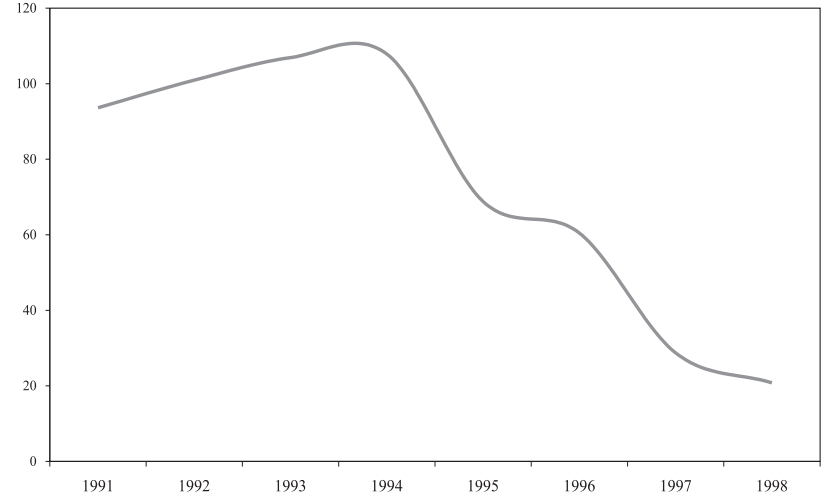


Source: BNB.

Chart 19

DOMESTIC CREDIT/GDP, 1991 – 1998

(%)

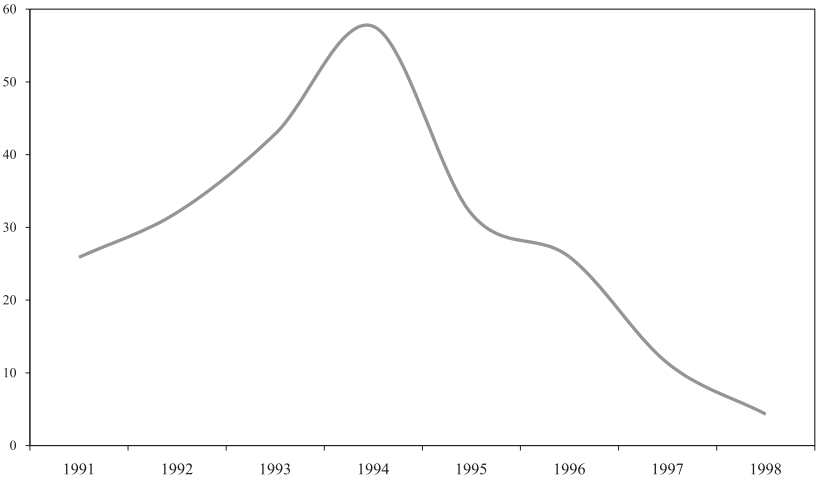


Source: BNB, National Statistical Institute.

Chart 20

CLAIMS ON GOVERNMENT/GDP, 1991 – 1998

(%)



Source: BNB, National Statistical Institute.

Chart 21

CLAIMS ON PRIVATE NONFINANCIAL ENTERPRISES/GDP

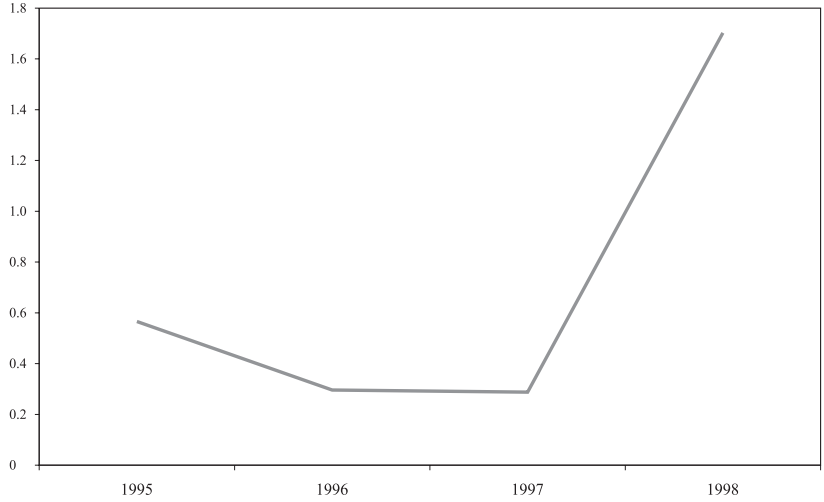
(%)

Source: BNB, National Statistical Institute.

Chart 22

CLAIMS ON HOUSEHOLDS/GDP, 1995 – 1998

(%)

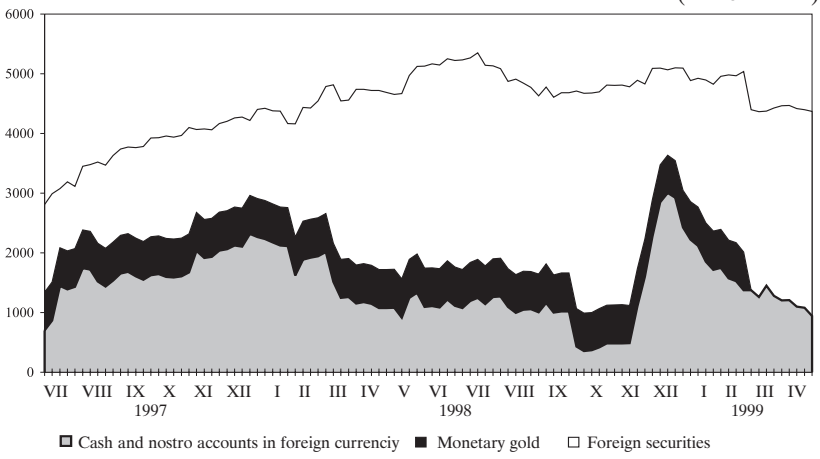


Source: BNB, National Statistical Institute.

Chart 23

ASSETS OF BNB ISSUE DEPARTMENT, JULY 1997 – MARCH 1999

(million DEM)

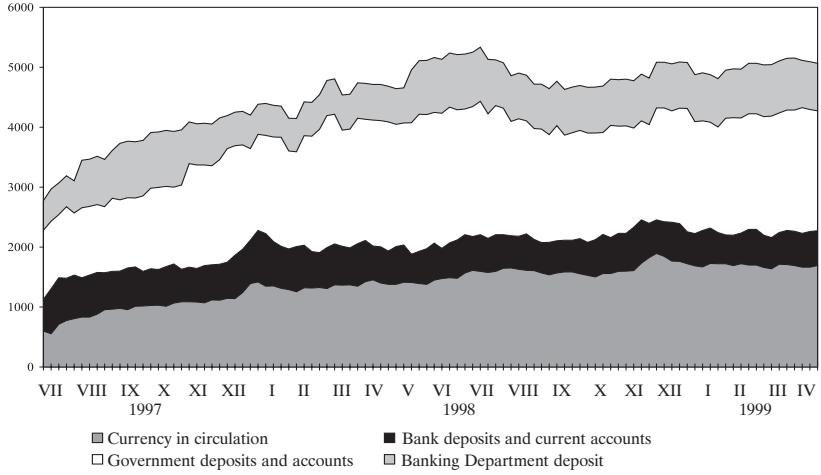


Source: BNB.

Chart 24

LIABILITIES OF BNB ISSUE DEPARTMENT, JULY 1997 – MARCH 1999

(million DEM)

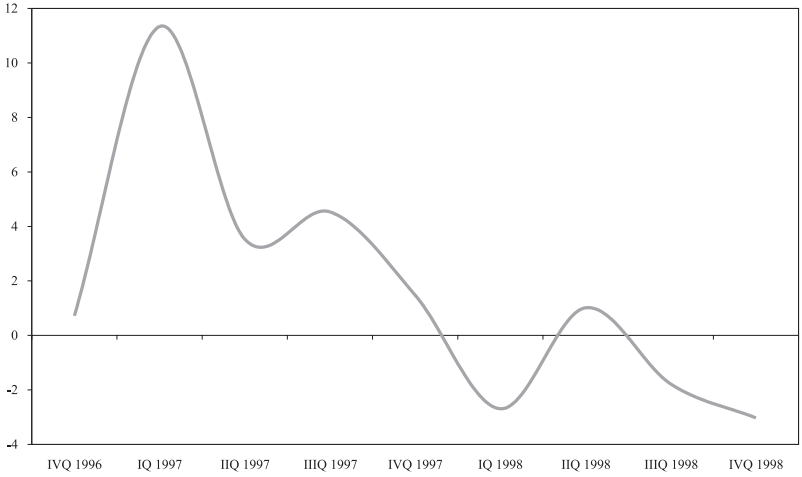


Source: BNB.

Chart 25

CURRENT ACCOUNT/GDP, IVQ 1996 – IVQ 1998

(%)

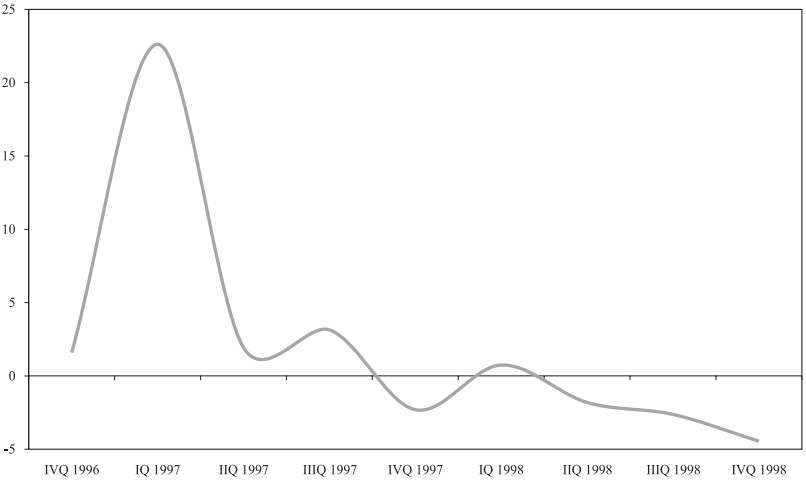


Source: BNB, National Statistical Institute.

Chart 26

TRADE BALANCE/GDP, IVQ 1996 – IVQ 1998

(%)

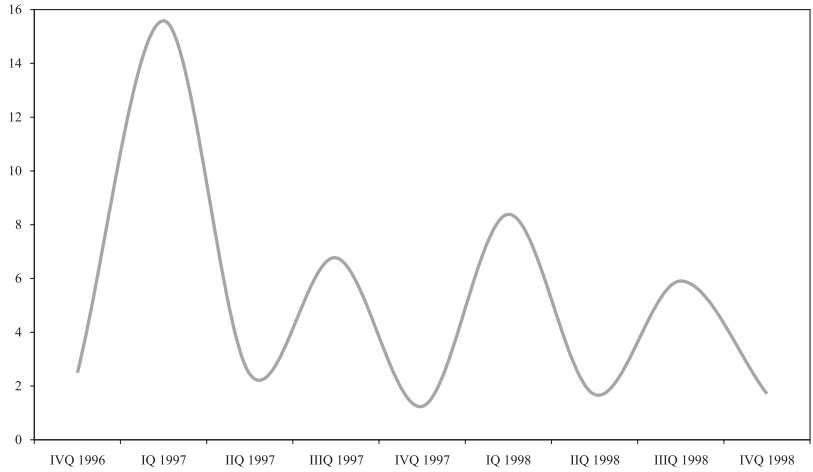


Source: BNB, National Statistical Institute.

Chart 26A

INTEREST PAYMENTS ON FOREIGN DEBT/GDP
IVQ 1996 – IVQ 1998

(%)

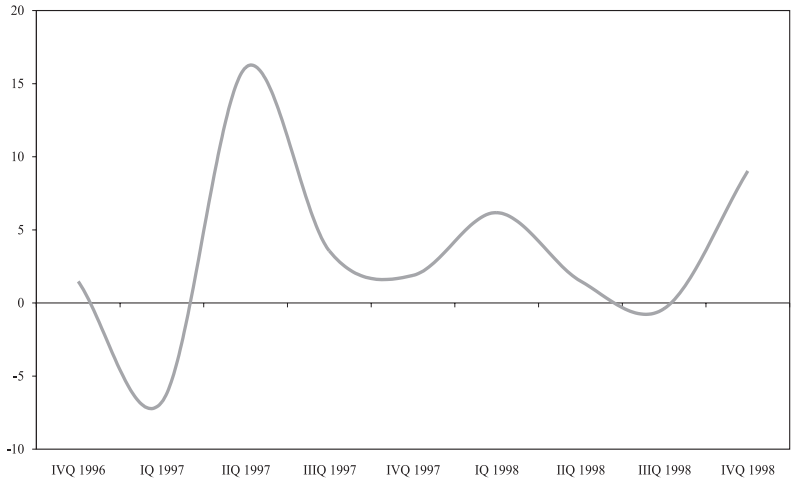


Source: BNB, National Statistical Institute.

Chart 27

CAPITAL ACCOUNT/GDP, IVQ 1996 – IVQ 1998

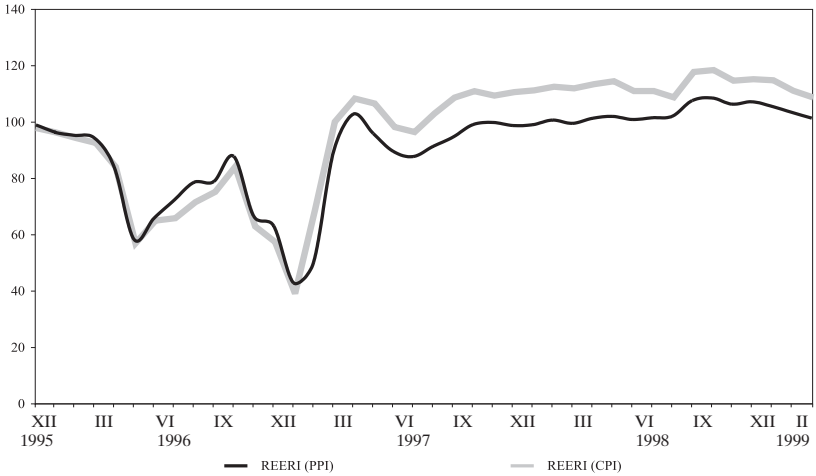
(%)



Source: BNB, National Statistical Institute.

Chart 28

REAL EFFECTIVE EXCHANGE RATE
(December 1995 = 100)

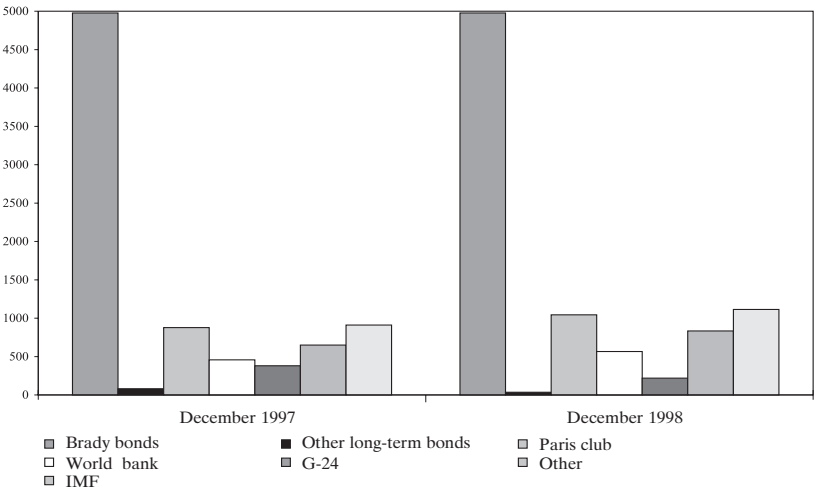


Source: BNB.

Chart 29

GOVERNMENT FOREIGN DEBT, 1997 – 1998

(million USD)

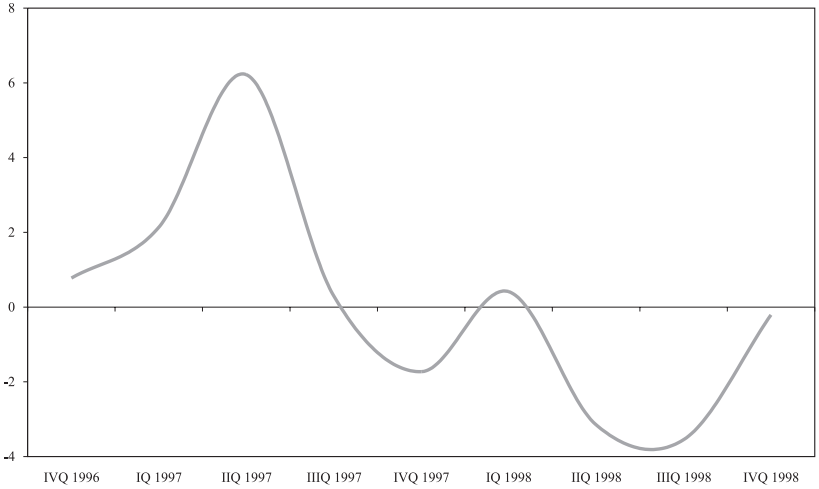


Source: BNB, Ministry of Finance.

Chart 30

NET PORTFOLIO INVESTMENT/GDP, IVQ 1996 – IVQ 1998

(%)

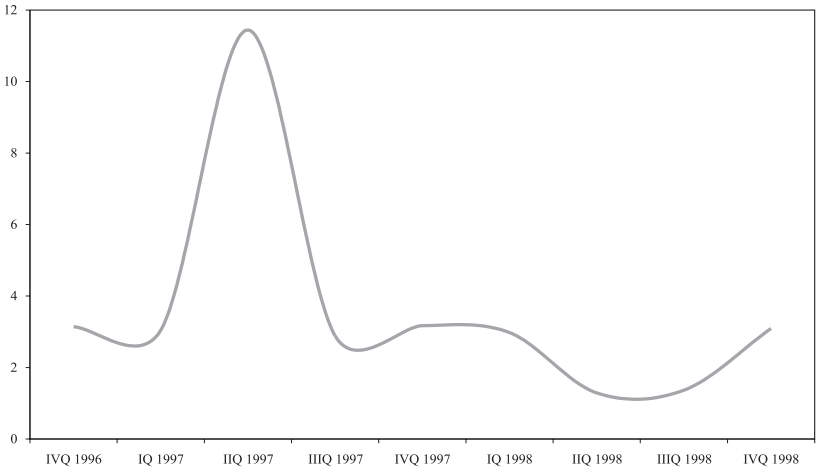


Source: BNB, National Statistical Institute.

Chart 31

FDI/GDP, IVQ 1996 – IVQ 1998

(%)

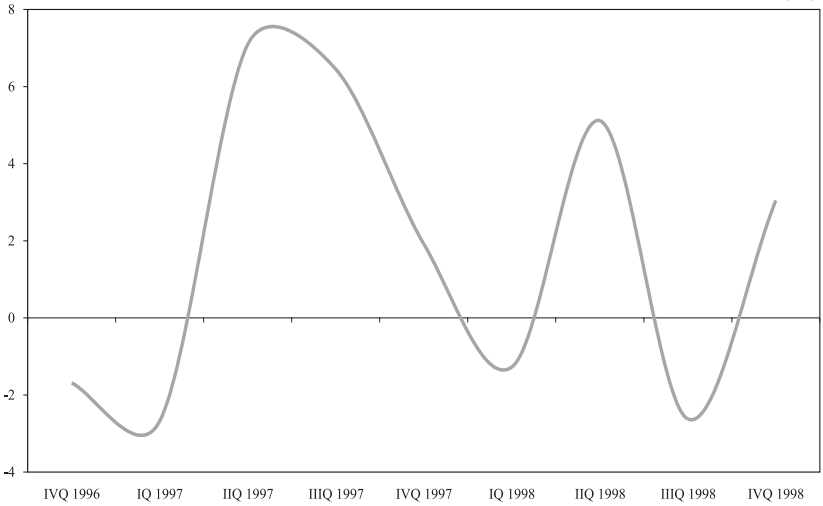


Source: BNB, National Statistical Institute.

Chart 32

NET CREDIT FROM IMF/GDP, IVQ 1996 – IVQ 1998

(%)

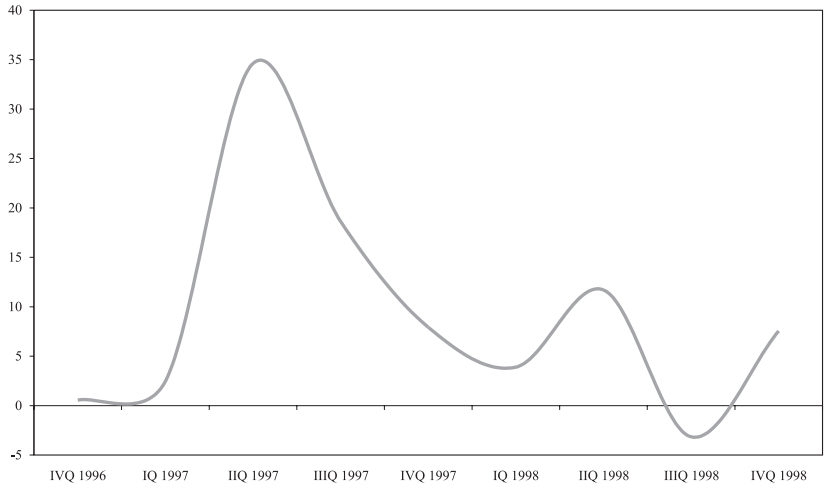


Source: BNB, National Statistical Institute.

Chart 33

CHANGES OF BNB FOREIGN RESERVES/GDP, IVQ 1996 – IVQ 1998

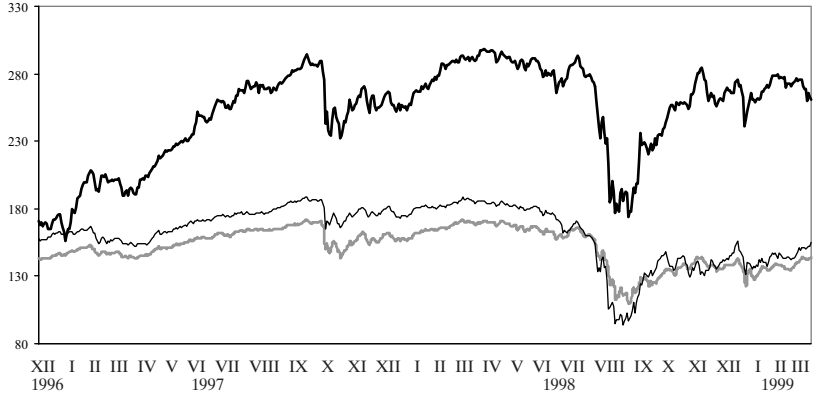
(%)



Source: BNB, National Statistical Institute.

Chart 34

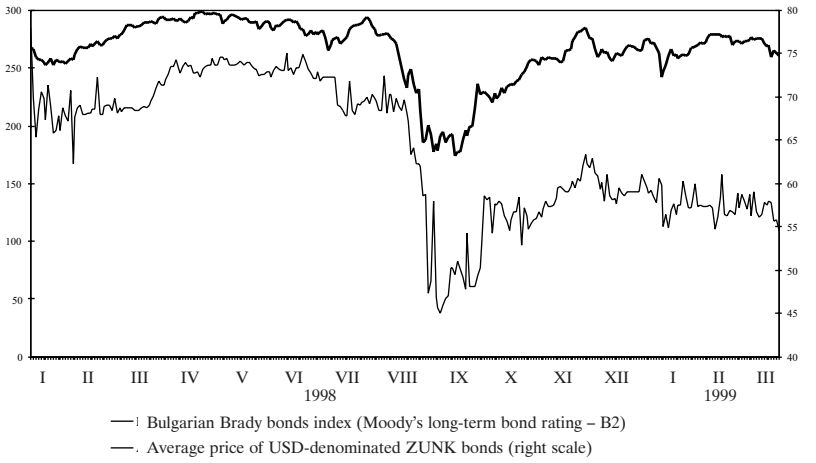
EMBI+, BULGARIAN AND VENEZUELAN BRADY BOND INDICES, 1996 – 1999



Source: J. P. Morgan.

Chart 35

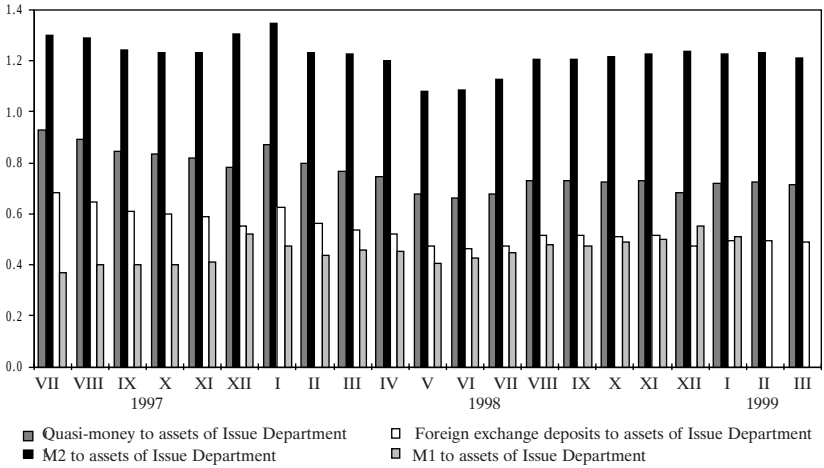
BRADY AND ZUNK* BONDS INDICES, DECEMBER 1997 – FEBRUARY 1999



** USD-denominated long-term government bonds issued to settle nonperforming loans of state-owned enterprises.*
Source: J. P. Morgan.

Chart 36

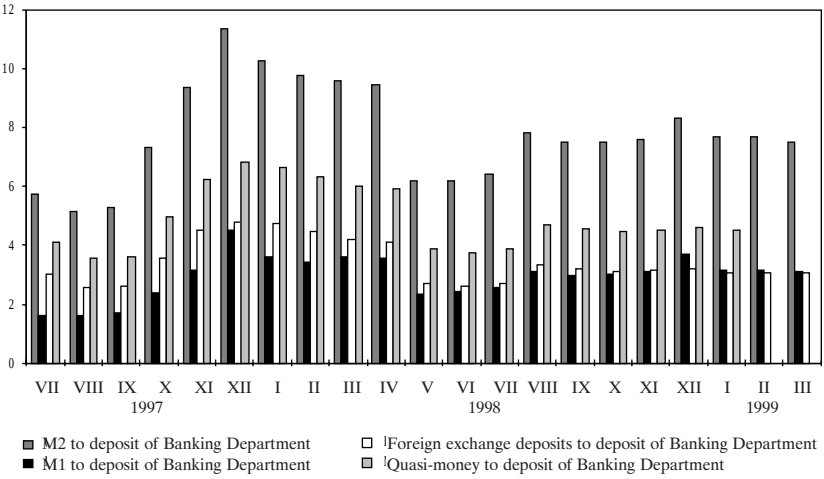
'STABILITY INDICATORS' OF THE CURRENCY BOARD – I
1997 – 1999



Source: BNB.

Chart 37

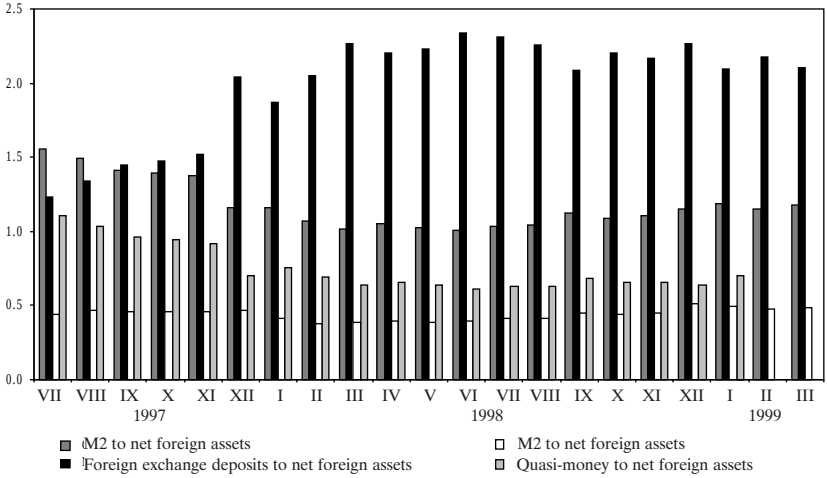
'STABILITY INDICATORS' OF THE CURRENCY BOARD – II
1997 –1999



Source: BNB.

Chart 38

'STABILITY INDICATORS' OF THE CURRENCY BOARD – III
1997 – 1999



Source: BNB.

DISCUSSION PAPERS

NOW AVAILABLE:

	PRICE PER COPY		
	Bulgaria	**Europe**	**Rest of the World**
DP/1/1998 The First Year of the Currency Board in Bulgaria Victor Yotzov, Nikolay Nenovsky, Kalin Hristov, Iva Petrova, Boris Petrov	BGL 7,900	EUR 6.5	EUR 10
DP/2/1998 Financial Repression and Credit Rationing under Currency Board Arrangement for Bulgaria Nikolay Nenovsky, Kalin Hristov	BGL 7,900	EUR 6.5	EUR 10
DP/3/1999 Investment Incentives in Bulgaria: Assessment of the Net Tax Effect on the State Budget Dobrislav Dobrev, Boyko Tzenov, Peter Dobrev, John Ayerst	BGL 7,900	EUR 6.5	EUR 10
DP/4/1999 Two Approaches to Fixed Exchange Rate Crises Nikolay Nenovsky, Kalin Hristov, Boris Petrov	BGL 7,900	EUR 6.5	EUR 10
DP/5/1999 Monetary Sector Modelling in Bulgaria, 1913 - 1945 Nikolay Nenovsky, Boris Petrov	BGL 7,900	EUR 6.5	EUR 10

FOR CONTACT:

BULGARIAN NATIONAL BANK
Publications Division
1, Al. Battenberg Sq.
1000 Sofia
BULGARIA

Telephone (+ 359 2) 9145 1351, 9145 1271, 981 1391
Fax (+ 359 2) 980 2425, 980 6493