MINISTRY OF ECONOMIC DEVELOPMENT

AGENCY FOR ECONOMIC COORDINATION AND DEVELOPMENT

The Bulgarian Economy: Structural Problems and the Economic Crisis in the First Six Months of 1996

Semi-Annual Report

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ISSN 1310-327-X

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1. The Macroeconomic Stabilisation/Structural Adjustment Relationship

The interdependence between macroeconomic stabilisation (a shift to a non-inflationary growth) and the structural adjustment of the economy, is by definition, enhanced under periods of radical economic transformations. On the one hand, inflation, growth and money supply dynamics comprise the environment in which economic agents are constrained to formulate their decisions. Consequently, the very „survival" and development of economic structures is largely contingent upon the changes, occurring in the macroeconomic surroundings. On the other hand, macroeconomic stabilisation presupposes the presence of viable economic entities, subject to internal and external equilibrium requirements.

The success of any package of measures targeted at reforming the economy (programmed evolution) relies heavily on the strict co-ordination between macroeconomic policies and the pace of changes at the microlevel (organisational, institutional, behavioural and sectoral).

The economic difficulties in 1996 are a natural outcome of the underlying rift between macroeconomic policies and structural processes, as clearly demonstrated by the divergence between market-oriented monetary and fiscal policies and the persistent non-market behaviour of the economic agents in the banking and real sectors (soft budget constraints). The 1996-1998 period will be thus inevitably marked by accelerated structural reforms (in particular enlarging the scope of hard budget restraints), gradual macroeconomic stabilisation and relentless pursuit of adequate macroeconomic policies. And vice versa, provided the first phase has been successful, the 1999-2005 period can be regarded as a time of structural and technological development, given a relatively stable macroeconomic environment. AECD forecasts make a clear-cut distinction between the two periods.

2. Main Constraints to Economic Growth

2.1. General Problems

The low utilisation of production capacities, natural resources (land) and rampant unemployment under early (by international standards) retirement age, clearly demonstrates that one of the basic problems of the Bulgarian economy is the demand constraint, including foreign demand and external market access. At the same time, the continuous economic decline and the low levels of investment in the period after 1989 has engendered a deterioration of supply characteristics, i.e. a demand-growth-oriented policy cannot in itself be suitable. Moreover, the hefty losses generated in the state owned industrial sector and banks' negative net worth point to the existence of resource allocation problems, i.e. the use of the available stock of capital and labour force is inefficient.

Thus, the problems concerning the volume and structure of supply and demand, as well as the price mechanisms of resource allocation can only be solved by identifying concrete structural constraints and outlining well-timed measures, targeted at their surmounting. The mechanisms of market regulation (foreign exchange, interest rate, monetary and fiscal policies) should therefore be compatible with the institutional changes (normative basis), privatisation, the improvement of strategic controls in the state sector and organisational mutations (consolidation, increased share and role of small- and medium-sized enterprises, liquidation, new management structures, re-organisation of the state apparatus, etc.), training of personnel.

Furthermore, the overall structural re-organisation should be subordinated to the parameters and dimensions of the socio-economic model, we are intending to achieve by the end of the period (2005). The national consensus on Bulgaria's integration into the EU presents an additional point of reference for the government's policy pursuit. The strategy for restructuring should thus be primarily targeted at promoting a system of well-timed measures, which will bring the Bulgarian economy into line with the major EU requirements, bearing upon macroeconomic indicators, sectoral structure and standards, competition, internal legislation, etc. In respect to this, Bulgaria's White Paper highlighting important aspects of the approximation of the national legislation to EU law as well as the concepts,

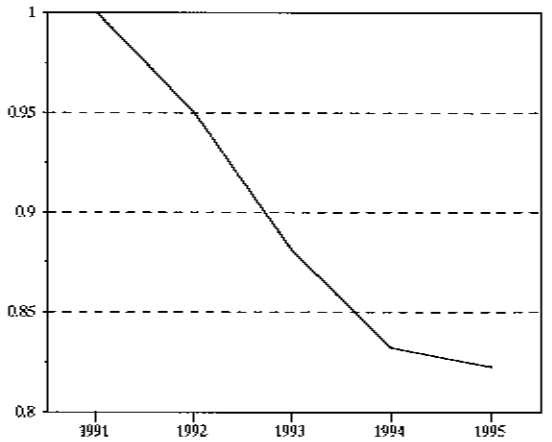
underlying the answers to the EU Questionnaire for Bulgaria, should be considered an inherent part of the strategy for structural development of the Bulgarian economy.

2.2. Internal and External Demand Constraints

Economic growth is a strategic precondition of the achievement of any consistent set of objectives of the medium-term structural policy. Consequently, lifting the barriers impeding GDP growth should be at the core of the economic strategy of the country.

As graph 1 clearly indicates, domestic demand has been characterised by a continuous downwards trend since the outset of the economic reform. It is in this respect that Bulgaria sharply differs from the other CEECs. There has been a notable shrinkage in investments and government capital formation, in particular.

Domestic Demand Dynamics

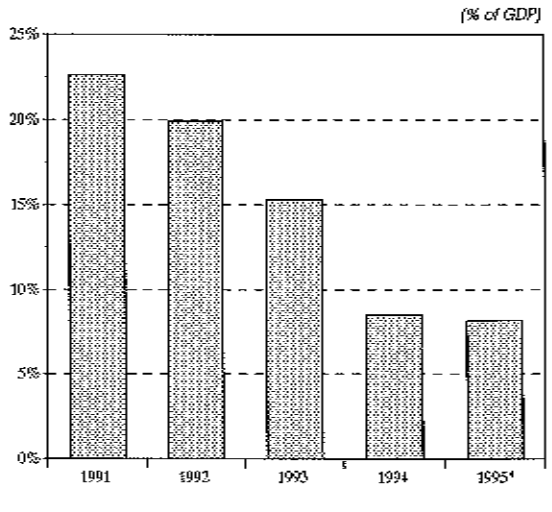


Graph 1

Source: NSI

The delay in investment activity, as illustrated by graph 2, had to do with contraction in the rate of saving (see graph 3). Another important reason for the low investment activity in Bulgaria was related to the restricted inflow of foreign financing and foreign direct investments in particular, implying that either a current account surplus or a slight deficit had to be maintained. Thus, despite the rise in the saving rate in 1995, the current account surplus, amounting to about 2% of GDP, did not allow for an increase in the expenses on fixed capital formation.

Investments

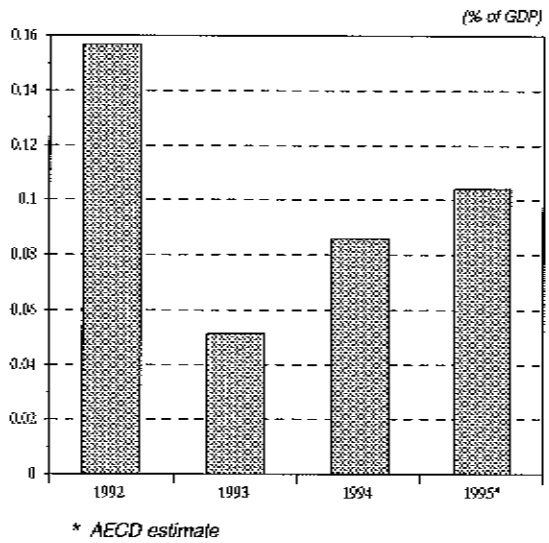


* AECD estimate

Graph 2

Source: NSI, AECD

Savings

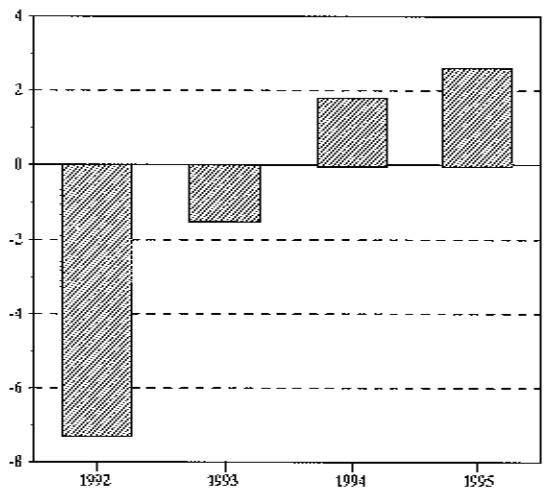


Graph 3

Source: NSI, AECD

As econometric research in the AECD implies, savings are in turn a function of the instability of the banking system. Put in more precise terms, the low saving rate is an outcome of the unstable real interest rates and sharply fluctuating foreign exchange rate. At the same time, the natural propensity to save in Bulgaria, i.e. the hypothetical saving rate prevailing under full confidence in the banking system and macroeconomic policies of BNB and the government, is rather high, ranging between 25-30%, thus attaining the saving rate level in the most dynamic world economies.

GDP Dynamics



Graph 4

Source: NSI

Obviously, there are two main directions, in which growth should be accelerated -firstly, by decreasing the unpredictable fluctuations of the foreign exchange rate, interest rate and liquidity of the banking institutions. And secondly, by creating conditions, favouring the inflow of foreign private direct investment and improved access to foreign financing of the balance of payments as a whole.

The structural measures, herein discussed, call for a more detailed analysis of the reasons behind the instability of the financial system and its relation to the real and fiscal sectors. The econometric simulations conducted by AECD analysts reveal that the majority of financial difficulties, suffered by the real sector have been caused to a large extent by mishandled macroeconomic policies, i.e. the microeconomic reasons - marketing strategy setbacks, credit rationing and the bulk of intermediaries at the „entrance" and „exit", etc., had played a relatively subordinated role.

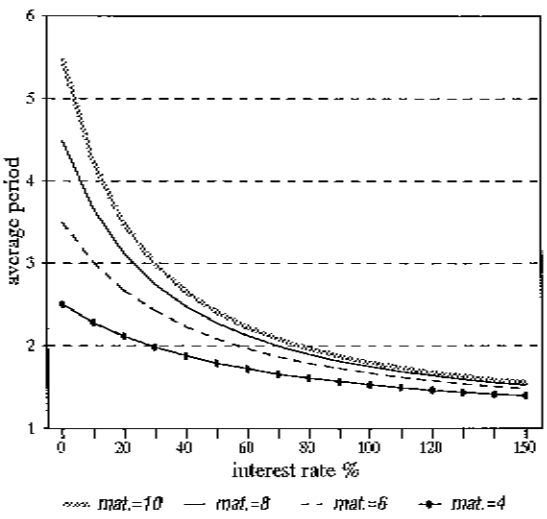
There are three macroeconomic factors, which have led to the deterioration of enterprises' financial conditions - high nominal interest rates; relative appreciation of the lev (or depreciation at rates lower than inflation) in certain periods; and instability of the nominal and real parameters of the financial system.

High nominal interest rate shortens the repayment period of credit, i.e. it sharply contracts the average duration of the loans extended (the so-called Fisher's effect).

This dependency is illustrated by graph 5. Nominal interest rates are measured along the horizontal axis. The average duration of a credit with contractual pay-back period of 4 to 10 years is registered onward the vertical axis. As we can see from the graph, along with the interest rate expansion, the average duration of a 10 years credit for example, contracts from five and a half years at zero interest to a year and a half at an interest rate of over 120%. In practice, at an interest rate above 100 %, only short-term crediting is possible.

Under high inflation, macroeconomic policy has to resolve an intricate dilemma. Low nominal interest will entail negative real interest rates and thus limit savings, while high nominal interest rate contracts the average duration of credits, ruling out the financing of long-term investments. There are two possible solutions. The first one draws upon Israeli experience in coping with sky-high inflation. It relies on the overall adaptation of the national legislation to the inflationary macroeconomic environment through the adjustment of prices, wages, credits, deposits and correction of amortisation schedules. Recently applied in Latin America, the second solution is based on a set of rigid measures, targeted at curbing inflation. All this can be achieved by maintaining a high level of the minimum required reserves with commercial banks or by a currency board, i.e. by tying money supply to foreign exchange reserves.

Average credit pay-back period



Graph 5

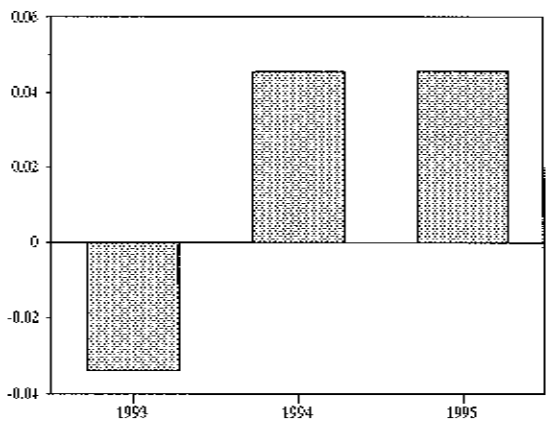
The adaptation of the national legislation to the inflationary macroenvironment is far from being a neat solution to the problems for it will diverge the nation from the Maastricht convergence criteria for a long period of time. The introduction of a currency board will require sizeable foreign exchange reserves, steady foreign financial aid and a clear-cut rigid fiscal policy.

The only realistic solution, then, amounts to the relentless pursuit of a flexible, but firm reserve monetary policy.

The computer simulations carried out in AECD, show that the gradual increase in the rate of the minimum required reserves, combined with well-timed and properly administered base interest rate (BIR) cuts, as well as with a moderate exchange rate depreciation may decelerate inflation to 1% on a monthly basis in the course of 5 to 6 months, thus giving way to a step-by-step decrease in the rate of the minimum required reserves.

The negative effect of the tough reserve money policy on liquidity in the banking system can be thus offset by lowering BIR and improving solvency in the real sector through implicit lengthening of the average duration of bank loans.

Monetary corrected deficit



Graph 6

Source: NSI, AECD

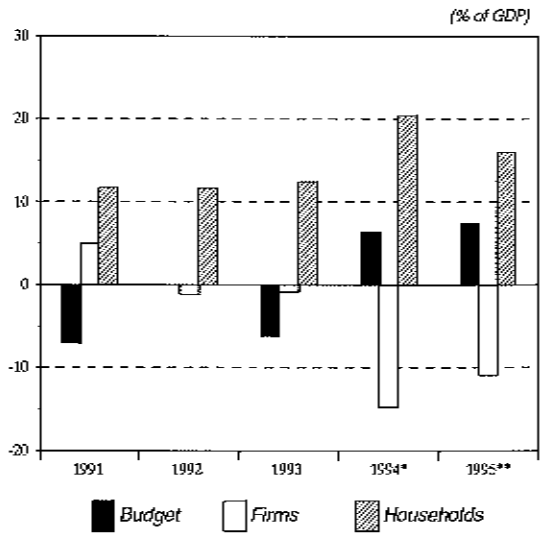
High nominal interest rate has its impact on the fiscal sector as well. Graph 6 illustrates the so-called monetary corrected deficit, excluding the distorting effect of high nominal interest rates on the structure of repayments. The monetary corrected deficit thus helps a considerable part of the expenditures on domestic debt servicing to be transformed into budget financing and not to influence current deficit. As the graph clearly indicates, instead of a deficit, the budget can run a cash surplus, provided the twisting effect of high nominal interest rates has been corrected. The neutralisation of the negative impact of the expensive domestic debt servicing on the budget may solve key economic and social problems brought about by the urgency for an artificial contraction of government expenditures. As a whole, macroeconomic

distortions have caused a 4-6% shrinkage in government expenditures, as a percentage of GDP, and slowed down growth by about one percentage point.

One of the reasons for the pronounced negative impact of domestic government debt on domestic demand is the official debt financial market mechanism imperfection. There are two main issues at hand:

- deficient competition under the existing system of primary dealers;
- incompatibility between the existing government debt financial instruments portfolio structure (the volatile and inadequately low level of discounted state bonds is illustrated by graph 8) and the structure of the associated risks (inflationary, forex, interest rate, systemic etc.)

Savings by sectors

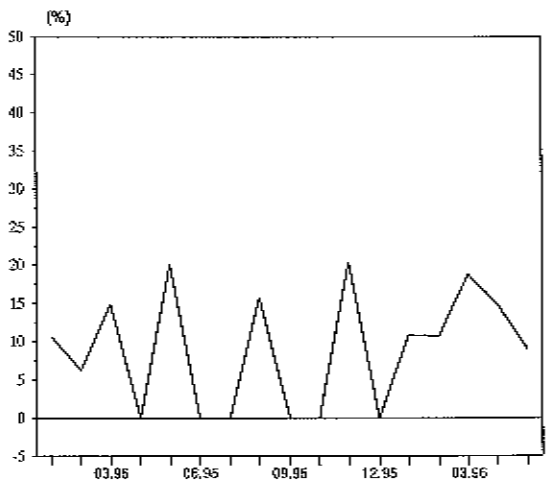


* Primary surplus is used
** AECD estimate

Graph 7

Source: AECD, NSI

Share of discount bonds in all bonds issued



Graph 8

Source: BNB, AECD

Alongside, the combination of high nominal and real interest rates and relative lev's appreciation makes the generation of losses in the real sector almost inevitable, especially in the export-oriented enterprises already suffering heavy losses. The measures, aimed at reducing losses at the microeconomic level (liquidation, isolation, privatisation or structural adjustment) are insufficient to offset the macro-generated deterioration of enterprises' financial positions.

The sharp increase in domestic government debt has gradually made both the state and households major savers. This is primarily related to the expensive servicing of domestic debt (11-12% of GDP), already mentioned. Given the strong constraints on the size of the final deficit, the substantial repayments made pre-

suppose the maintenance of a primary budget surplus. Together with the hefty amounts of transfers, the latter have led to an excess of government expenditures over government consumption. Savings within the consolidated government budget are almost equal to the current losses in the industrial sector. On the other hand, as it is well known, government debt is financed by the domestic capital market, without a zero risk premium being enjoyed.

This situation is indicative of distorted price structures and soft budget constraints prevailing in both financial and real sectors. Moreover, it allows for a transfer of the losses engendered in the real sector to the banking sector and subsequently to the budget under the appearance of a high primary surplus. Government expenditures are restricted mainly at the expense of government investment thus inducing an adverse impact on growth, infrastructure modernisation and overall economic restructuring.

The macroeconomic environment influences the financial state of the industrial branches in a different degree. The sectors most heavily affected by the macroeconomic environment are: oil processing and chemicals, construction materials, pulp and paper industry, ferrous and non-ferrous metallurgy. The industries particularly sensitive to changes in the interest rates are: ferrous metallurgy, electric power generation, coal mining and light industry. The depreciation of the Bulgarian lev has in turn favoured industries like ferrous metallurgy, pulp and paper industry, mining, construction materials and glass. And vice versa, industries such as the fur, leather and footwear industry, clothing industry and printing industry are heavily dependent on imported raw materials and negatively influenced by the depreciation of the lev.

The high-tech branches such as electronics, engineering and machine-building are relatively indifferent to the macroeconomic factors at work.

Therefore, the core of Bulgarian industry the energy- and raw material-intensive branches can initially be stabilised through a package of consistent macroeconomic measures (lowering interest rate levels and favourable foreign exchange rate). These should be subsequently followed by microeconomic measures aimed at reducing energy and raw-material intensity.

With the high-tech branches macroeconomic revival can only be achieved

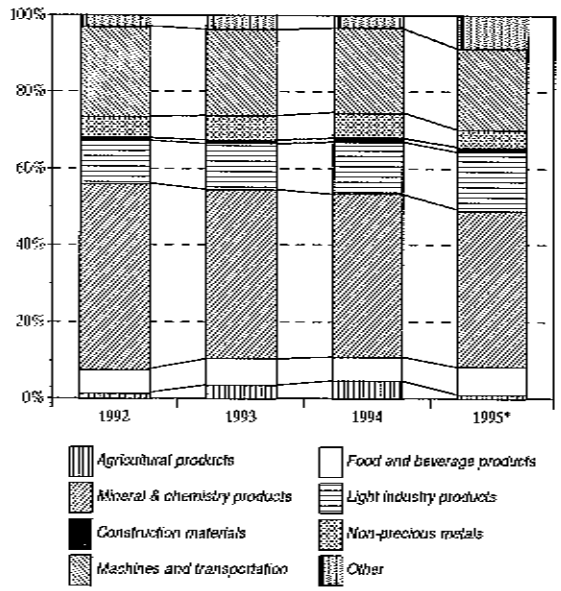
via financial aid, technology transfer, privatisation, strategic investors and the inclusion into national and international R&D projects.

As has already been pointed out, the current macroeconomic distortions are the main cause behind the negative financial results of the fiscal, banking and real sectors. The problem thus amounts to the synchronisation between the structural measures adopted by the Government and BNB and the overall macroeconomic framework dynamics. The economic rationale of such a framework should rely on the following short and medium term targets:

- base interest rate lowering and its maintenance below 40% on a 12-month basis; to that effect, an amendment to BNB Law, setting a maximum level of BIR should be adopted;
- closing the gap between the absolute and relative difference in the interest on the assets and liabilities in the banking system by applying measures at both micro (supervision) and macro (BIR lowering) levels;
- the government and BNB should reach an agreement as to the strict co-ordination between the targets and the instruments of the monetary, fiscal and foreign exchange policies;
- decreasing the expenditures on domestic government debt servicing through implementation of a risk consistent portfolio structure and improved management;
- a switch from a free float to a predictable depreciation of the national currency, which will limit the erratic fluctuations of the foreign exchange and interest rates, and finally revive savings; non-use of the foreign exchange rate as an anti-inflationary anchor for prolonged periods;
- binding interest and foreign exchange policies with a control on inflation in a way, stabilising the real interest rate on deposits and credits;
- a gradual decrease, especially in the period following 2000, of the primary budget surplus, aiming at the absolute and relative increase in the infrastructural government investments;
- the implementation of a comprehensive policy aiming at the stabilisation of the macroeconomic environment, the banking and financial systems and targeted, particularly, at the achievement of a 20-25% rate of saving as a proportion

of GDP and 18-22% investment rate by 2000-2005.

Exports structure



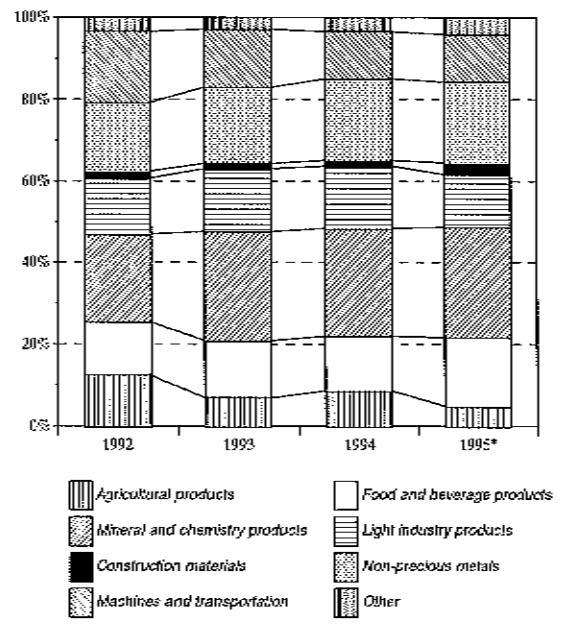
* Preliminary data

Graph 9

Source: NSI

The expansion of domestic demand volumes and the improvement of its' structure (higher investment share) is facing serious external constraints in terms of substantial foreign debt servicing and capital account problems. At the same time, external demand (export) generates impulses, which can give the economy additional impetus. An export-led growth, i.e. growth with which exports are the engine of growth of both investment and demand can be identified as an appropriate solution to the economic problems, especially in such a small open economy as the Bulgarian one. Such a solution is structurally consistent- a unit increase in exports, as a rule, leads to a 0.7 -unit increase in imports. Therefore, export-led growth does not impose any external constraints on the economy.

Imports structure



* Preliminary data

Graph 10

Source: NSI

External demand depends on the competitiveness of Bulgarian exports and the dynamics and foreign trade regimes in the major Bulgarian export markets as well. The structure of Bulgarian export has been relatively steady over the last 4-5 years. And yet, there have been changes related mainly to some cyclical factors and price changes. Innovation and technology have not so far influenced the structure and volume of exports considerably. Production costs and the foreign exchange rate, then, remain the key factors favouring the growth of export rev-

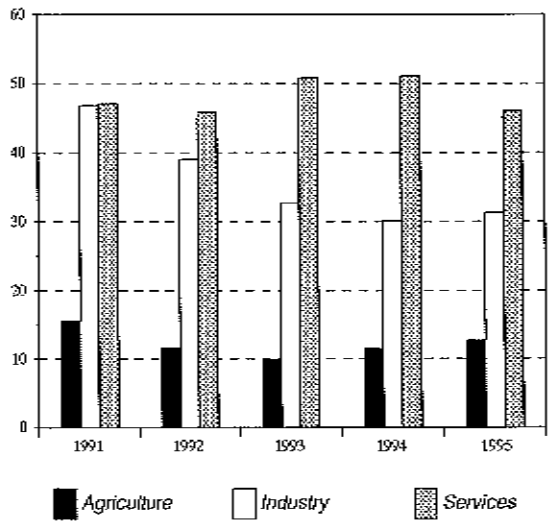
enues. The export shrinkage in early 1996 was mainly due to the sharp decline in industrial production, demand and prices in the major Bulgarian export markets in Europe.

The dependence of exports on cyclical factors generates secondary destabilising cycles in the Bulgarian economy. Having in mind the limited access of the country to the international credit and capital markets, the contraction of exports can hardly be offset by temporary foreign financing. The inevitable result is a shrinkage in both domestic demand and imports. The simultaneous reduction of both foreign and domestic demand leads to a re-allocation of resources (plus subsequent re-distribution of incomes) and creates conditions for inflation acceleration and further investment and consumption contraction. A way out from this type of interdependencies can be provided in a short-term perspective by measures aimed simultaneously at an increase of foreign exchange reserves and avoiding the real appreciation of the lev. In a longer perspective, the solution requires a free access to the international credit and capital markets and improved export structure.

2.3. Short-term constraints on growth, resulting from the structural reform package, agreed with the International Financial Institutions

The basic requirement of the IBRD, IMF and the EBRD is to complete a radical and comprehensive structural reform, seen as a key element of the country's macroeconomic stabilisation. By structural reform is meant the elimination of the biggest loss-making enterprises, acceleration of privatisation and healing the banking sector. On the macroeconomic side, it implies that the structural reform should be supported by a tough monetary policy and state budget deficit reductions. Put in more precise terms, the macroeconomic framework agreed

GDP Structure, by Sectors

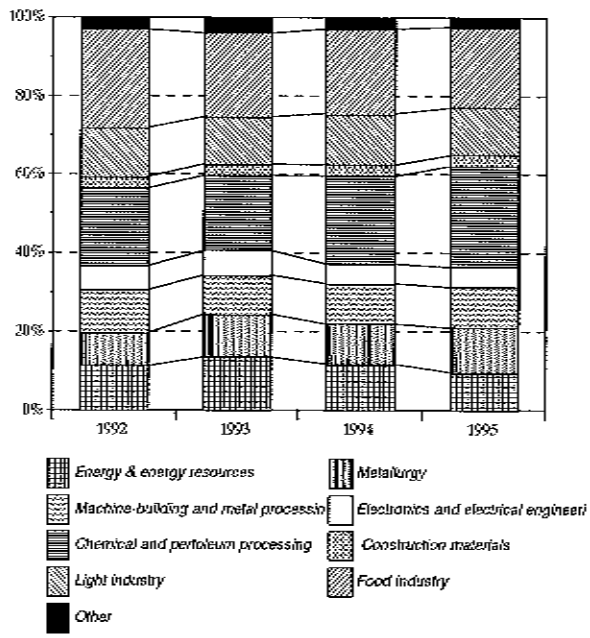


Graph 11

Source: NSI, AECD

with the IMF, provides for further lowering in the real money supply , a reduction in the non-interest government expenditures, as well as measures aimed at an increase of the primary budget surplus. In the short-term, the impact of these measures on the economy will bring about some shrinkage of domestic demand.

Industrial Output Structure



Graph 12

Source: NSI

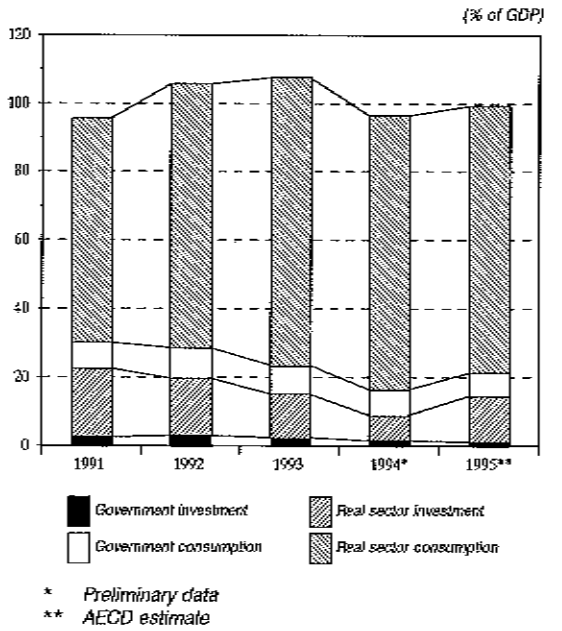
The structural measures negotiated with the IMF and the World Bank include the closure of the biggest state owned loss-makers in the industrial sector, financial isolation of part of the state firms undergoing financial difficulties, accelerated mass and cash privatisation, as well as stabilisation of the banking sector.

The losses of the enterprises on the liquidation and isolation lists comprised about 4.3% of GDP in 1995. In addition, 21.3% of the people employed in industry work in these enterprises. If we assume that the measures, related to financial discipline improvement reduce the losses in the state sector as percentage of GDP and the free resources are re-directed to boost investment , the structural measures will lead to a 2% increase in domestic demand, other things equal. At the same time, the adverse impact of high interest, monetary restrictions and contracting foreign demand will be much greater in magnitude than the positive re-allocative effect of the structural measures, especially in the second half of 1996 and the first half of 1997.

Initially, the structural measures in the banking system will produce a negative effect, especially in terms of confidence in the banking institutions. The inflow of official foreign capital through IMF, IBRD, EBRD and other forms of balance of payments support, is expected to stabilise the lev and the country's foreign exchange reserves, as an immediate result . Its positive effect on the real variables (higher domestic demand and investment in particular) as early as second half of 1997. In the final analysis, 1996 is very likely to witness negative growth of GDP.

The effect of the structural measures in privatisation is even harder to assess. The enterprises on the mass privatisation list account for 16.7% of the losses in the state-owned industrial sector. In the short-term, ownership indefiniteness may further undermine their financial positions. Market discipline positive results can be expected to become more pronounces by the end of 1997.

Domestic Demand Structure

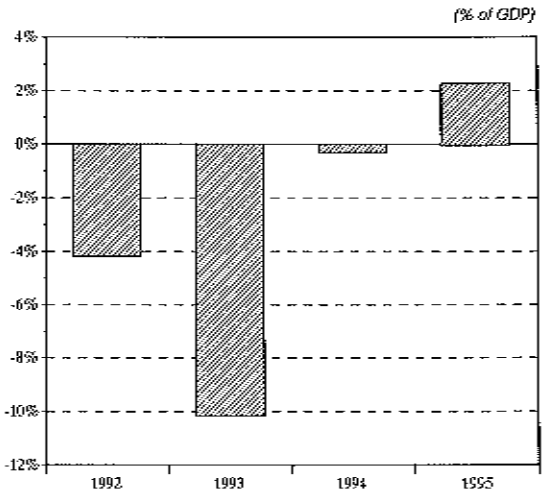


Graph 13

Source: AECD, NSI, National accounts

The losses of the state-run and private commercial banks comprise about 4-6% of GDP. Total banks' net worth amounts to 11-12% of GDP. Deposit insurance given, the measures related to the liquidation of the loss-making banks and the consolidation of the banking system will result in an increase in government debt and contracting domestic demand for money. The latter trend is brought about by the shattering confidence in the banking sector, after series of closures and bankruptcies. Both processes are provoking internal demand shrinkage.

Current Account Dynamics



Graph 14

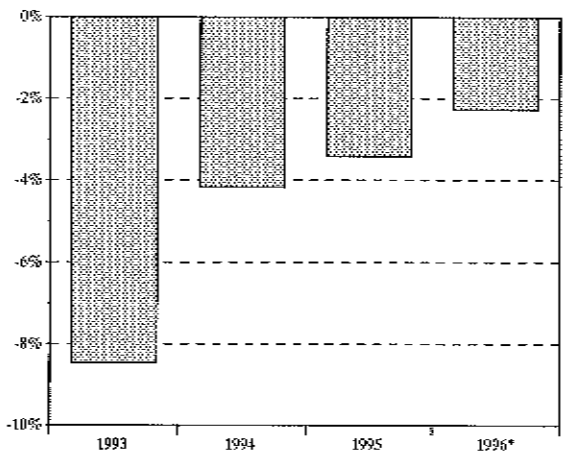
Source: BNB

An important part of the agreement with the IMF is the stipulation of energy price adjustment mechanism implementation. In the short-term, it is expected to influence negatively domestic demand, exports, inflation (an additional price increase of about 15%, according to AECD estimates) and the financial state of the real sector.

The view, that the primary cause behind the crisis-ridden Bulgarian economy in 1996, is the delay in the structural reform (close-downs of loss-making enterprises and sluggish privatisation) cannot be fully confirmed by the data available.

As graph 15 clearly indicates, the losses of the state-run enterprises as percentage of GDP are constantly diminishing, hitting their lowest level in early-1996, since 1993.

Losses, as Percentage of GDP



* First quarter of 1996.

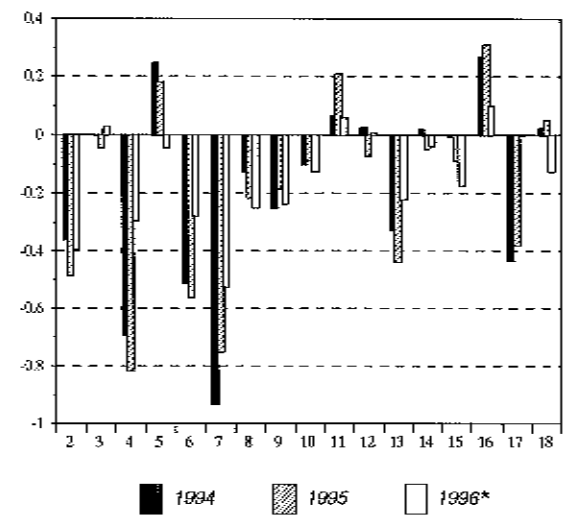
Graph 15

Source: NSI, AECD

Assessing the distribution of losses across branches, it is easily seen that they are more and more uniformly distributed (graph 16) (with the only exception of electrical engineering, which is excluded from the graph), i.e. the concentration of losses within the individual branches is decreasing. Additional estimates show that 30 to 80% of the losses generated in the state sector are a function of the macroeconomic variables (interest rate, foreign exchange rate, domestic demand).

The main conclusion is that the government should combine the measures agreed with IMF/IBRD with an all-embracing structural programme, handling short-term negative effects and foster the structural adjustment of the Bulgarian economy in a positive perspective. Apart from the macroeconomic policy targets, it should also promote a mechanism, guaranteeing the rational use of foreign financial resources, attract strategic foreign investors, provide through WTO membership and bilateral trade agreements relieved terms of access to foreign markets, encourage technological revival and give impetus to small- and medium-sized enterprises.

Losses as % of Value Added



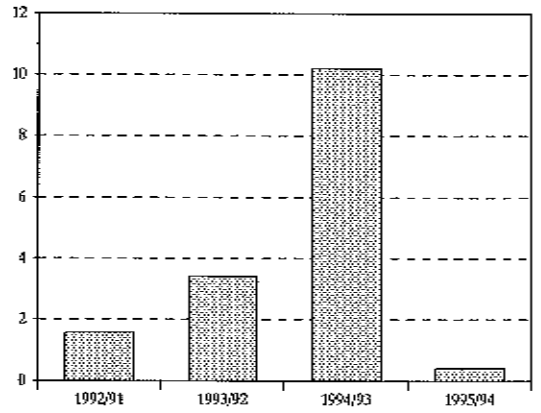
Graph 16

Source: NSI, AECD

The above assessment does not undermine the importance of the strict

implementation of all measures included in the structural reform package, agreed upon with the IMF, but stresses short-term constraints and some implicit simplifications of the current economic crisis interpretation. In fact, the fast and scrupulous execution of the 1996 stand-by agreement, is the only possible basis of confidence rebuilding and setting up a credible medium-term economic strategy.

Ratio between % Growth of GDP and Investment



Graph 17

Source: NSI, AECD

3. Constraints Imposed by Government Debt and the Banking System Crisis.

The indebtedness of the fiscal sector places heavy constraints on both domestic and external economic policies. Moreover, the political course of integration with the EU demanding strict compliance with the Maastricht convergence criteria in the long run, does not allow for an increase of both government debt and budget deficit. This is a new requirement to be taken into consideration in implementing the government's macroeconomic and structural policies.

Foreign debt servicing presupposes an outflow of funds, comprising 3-4% of GDP, on an annual basis throughout the period up to the year 2005. Financing foreign debt burden via current account surplus means delaying investment and technological restructuring. Furthermore, with a view to the strong impact of cyclical and random factors on Bulgaria's foreign trade, such a strategy will only add up to the high economic risk and fragility of economic growth.

Another policy scenario furthers an increase in foreign exchange reserves, partial refinancing of debt payments through an increased access to the international capital and credit markets and ensures a stable inflow of foreign direct investments.

As experience in the other CEECs shows, a capital account surplus ranging within 2-3% of GDP is fully feasible. At the same time, a stabilised exchange rate or a switch to a transparent adjustment mechanism of the exchange rate to

the rate of inflation (and/or other macroeconomic variables) will make the attraction of substantial amounts of short-term capital and the increase in foreign exchange reserves possible.

Restored confidence in the lev and international credit rating, as a step to the country's access to international capital markets, are the preliminary conditions of the policy scenario, based on foreign exchange and financial stabilisation.

Another advantage of the second variant is that it makes the country less dependent on official financing, as compared to the first policy variant. At the same time, the relatively high cost of the second policy scenario is offset by greater possibilities for growth and technological innovation.

Undermining investments and the internal capital markets, domestic debt poses even greater obstacles to growth. As has already been pointed out, the distorting effect of the high nominal interest rates and the absence of a zero risk premium on government securities are the main causes for this situation. Therefore, the programmed primary budget surplus, coupled with measures aimed at BIR lowering, better restructuring of government securities market, improvement of foreign and domestic debts management will gradually alleviate the constraints on growth, generated by the excessively high level of Bulgaria's indebtedness. The process can be further accelerated by cash privatisation via foreign currency and lev ZUNK-bonds.

From the specific point of view of servicing, domestic debt imposes a heavier burden than foreign debt due to foreign private and official creditors. Nevertheless, domestic debt is much more dependent on the economic policies of both the government and BNB. Hence, it proves to be more manageable, consistency of the applied measures given.

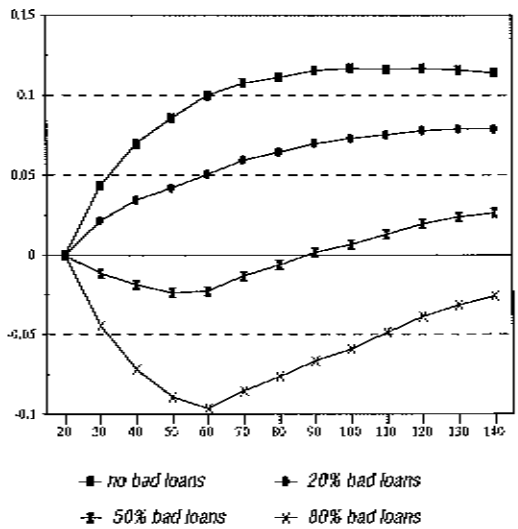
The total volume of non-performing credits and banks' negative net worth are hard to precisely assess because of the strong dependence on the inflationary macroeconomic environment and the arbitrary criteria of credit classification. And yet, even against the background of a major IMF requirement that banks with negative net worth should cease further credit expansion, it is clear that alike the heavy country's indebtedness, bad credits will push up inflation and thus corrode savings and further narrow down the possibilities for investment growth.

Transferring the burden from commercial banks onto the government and the Central Bank will come to no effect. In contrast with domestic debt, the solution to bad credits should rely on the co-ordination between macroeconomic stabilisation and the measures sustaining stabilisation at the microeconomic level - liquidation of insolvent banks, recapitalization and privatisation, consolidation and improved supervision, rigid legislation in case of default, enhanced judiciary, etc. The measures negotiated with the IMF and IBRD as well as the government's structural programme provide a way out of the crisis and a reliable basis of the gradual transformation of the banking system into an efficient intermediary between savings and investments.

The market of government securities is at present the only form of capital markets. In a longer perspective, the formation of a modern stock exchange and a regulated capital market are expected to boost trade with corporate securities. The protocol and technical aid agreement signed by the Bulgarian and French governments is expected to give initial impetus to the establishment of a national stock exchange. The full accomplishment of the project is expected to take place within a year and a half. It can be assumed that by the end of the period, conjectured financial market capitalisation growth will bring about an increase of savings by 2-3% of GDP and accelerate growth by 0.2 - 0.4%.

Liquidity in the banking system presents a serious problem. The liquidity crisis in late-1995 and early-1996 has been subjected to a separate in-depth analysis and computer simulations in the AECD. The only explanation for the coincidence of the reduced relative burden of the losses, generated in the state sector and BIR lowering in mid-1995 with the beginning of the acute crisis in the banking system amounts to the arbitrarily labelled „negative liquidity" effect, illustrated by graph 18.

Liquidity of the banking system



Graph 18

Source: AECD, NSI

The essence of the effect is as follows: Given a considerable difference in the levels of the interest rates on deposits and credits, the average duration of the assets is much shorter than that of the liabilities of the baking system, other things being equal (as illustrated by 18 curves indicating positive liquidity). Since high interest shortens the pay-back period of loans and thus generates bad credits, any prolonged maintenance of high BIR levels will force the banking system to shift to lower liquidity curves. Under a reduced inflation rate coupled with BIR lowering, the banking system operating in the conditions of hefty amounts of non-serviced credits (over 50%) will inevitably enter a state of negative liquidity, i.e. insolvency.

The effect itself is not brought about by any microeconomic reasons (insufficient supervision, inadequate credit policy). Rather, it is the automatic consequence of a specific deflationary phase of the country's macroeconomic development. The liquidity problems together with the losses generated in the state sector and the budget deficit are then a product of a specific macroeconomic dynamics and can be properly handled, adequate monetary and fiscal policies granted.

3.1. Efficiency of the Price System

The efficiency of the decentralised economies is largely dependent on the effect of relative price changes upon output structure. With some more complex and multi-sectoral economies such as the Bulgarian one, demand depends not only on the current changes in relative prices but on expectations for future periods as well. Current and forward prices tend, as a rule, to manifest unidirectional fluctuations. The financial system, allowing for the quick allocation of the free resources to the profit-making industries, therefore, plays an important role in ensuring an efficient correlation between relative prices and demand.

The Bulgarian currency's exchange rate, or the price of the national monetary unit plays a central role in the price system. The research carried out proves, that the so called „efficient market" hypothesis has to be refuted as far as it regards the Bulgarian forex market. The consequence is that economic agents with better access to information can systematically obtain speculative pecuniary incomes.

On the other hand, the exchange rate, incomes, consumer, energy and

output prices are interconnected and tend to reach long term equilibrium proportions. Markets, respectively the prices of the above mentioned groups of goods are also not perfect (efficient). The destabilisation of the exchange rate, for example, leads to erratic fluctuations of the system as a whole, thus creating new speculative opportunities. Given the upward elasticity of prices, the speculative situations are characterized by currency depreciation and high inflation.

The following regularities of the price structure can be observed:

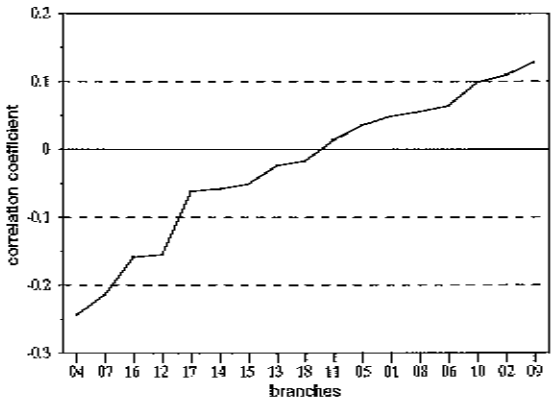
- the national currency's nominal depreciation and high inflation induce incomes purchasing power decline; the reverse process is observed under deflation;

- the equilibrium electricity price is about 2,5 cents per KWH; the preservation of the electricity price above this level for prolonged periods requires additional energy intensity reduction measures in industry, consumers sector and in the energy generation sector itself.

- given the existing dynamic characteristics of the price system, the anti inflationary policy has a real effect because it relieves real incomes and the real monetary savings.

The macroeconomic distortions already mentioned imply a very low efficiency of relative prices' allocative function (graph 19). The graph represents the order in which the processing industries are arranged according to the values of the coefficient of correlation between relative price changes in a given branch and the deviation of the output growth rate from the average rate in industry as a whole. Clearly, the correlation between the two characteristics is rather weak.

Correlation between industrial output change and producer prices



04. Ferrous Metallurgy(Incl. Ore-Mining);
07. Electrical and Electronic Engineering;
16. Printing Industry;
12. Glass and China Industry;
17. Food Industry;
14. Clothing Industry;
15. Fur, Leather and Footwear Industry;
13. Textile and Knitwear Industry;
18. Other Industrial Branches;
11. Pulp and Paper Industry;
05. Non-Ferrous Metallurgy(Incl. Ore-Mining);
01. Electric Power Generation;
08. Chemical and Oil-Processing Industry (Incl. Rubber Industry);
06. Mechanical Engineering and Metal Processing;
10. Timber and Wood-Processing Industry;
02. Coal-Mining;
09. Construction Materials Industry.

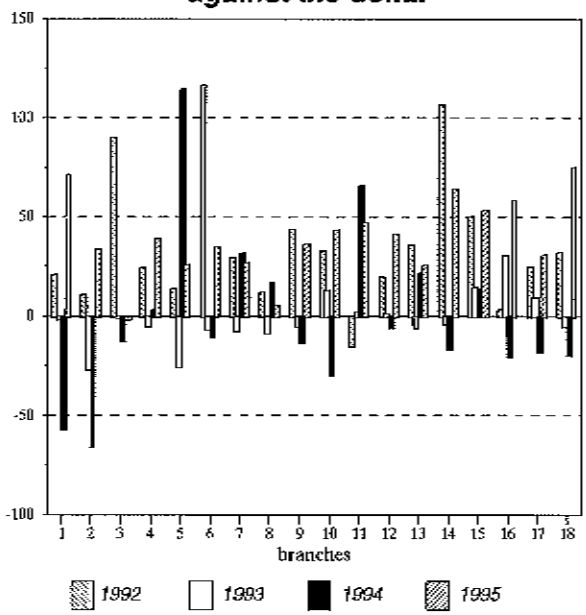
** Oil and Gas-Extraction excluded;*

Graph 19

Source: NSI, AECD - Entrepreneurial Business Surveys

With some branches (ferrous metallurgy, electronics and electrical engineering), the correlation between output growth and relative prices is negative, i.e. price-cutting „stimulates" production and vice versa, high prices in a branch lead to supply shrinkage. As for ferrous metallurgy, the explanation has to do with the non-competitive market structure and the bulk of intermediaries at the „entrance" and "exit" of the branch, thus levelling out the differences between the low domestic prices and the relatively high, especially in certain periods, international prices.

Deviation of sectoral annual price indices from the lev's exchange rate against the dollar



1. Electric Power Generation;
2. Coal-Mining;
3. Oil and Gas-Extraction;
4. Ferrous Metallurgy(Incl. Ore-Mining);
5. Non-Ferrous Metallurgy(Incl. Ore-Mining);
6. Mechanical Engineering and Metal Processing;
7. Electrical and Electronic Engineering;
8. Chemical and Oil-Processing Industry (Incl. Rubber Industry);
9. Construction Materials Industry;
10. Timber and Wood-Processing Industry;
11. Pulp and Paper Industry;
12. Glass and China Industry;
13. Textile and Knitwear Industry;
14. Clothing Industry;
15. Fur, Leather and Footwear Industry;
16. Printing Industry;
17. Food Industry;
18. Other Industrial Branches.

Graph 20

Source: NSI, AECD - Entrepreneurial Business Surveys

Given an adjustment of domestic prices to the international prices, the negative correlation coefficient in electronics and electrical engineering is mainly due to insufficient competitiveness in terms quality and technological level.

Either way, the markedly anti-market behaviour in the two branches calls for an immediate intervention on the part of the government. In the case of ferrous metallurgy measures should be mainly directed to the improvement of the competitive market structure. As for electronics and electrical engineering, the government should seek more elaborate strategies - a system of subsidies, public procurement, privatisation, foreign investment, participation of enterprises in international (EU and EUREKA) R&D projects.

As for construction materials, coal mining, timber industry, wood processing, machine-building, chemical industry, electric power generation and non-ferrous metallurgy, output has responded to relative price changes in the right way. How-

ever, the importance of the price factor is little, if any at all. The macroeconomic imbalances in the financial system and problems at the microeconomic level - soft budget constraints (electric power generation), limited resources (coal mining and timber industry) and marketing obstacles (machine-building) - are the major cause behind this discrepancy.

Overall, the period of reform has been characterised by a new price structure, other than that under the command economy. Prices in the tailoring, fur, leather and shoes and printing industries as well as in machine-building have outstripped prices in the other industries. Despite technological, financial and market problems, these branches have considerable growth potentials in the short-term.

Stabilisation and structural measures are then expected to enhance the efficiency of the market mechanisms applied. On the structural side, the labour-intensive (tailoring, fur, leather and shoes) and the high-tech branches (machine-building, electronics and electrical engineering) are expected to grow into the profit-making industries of the Bulgarian economy.

Furthermore, the adjustment of the farm-gate prices of the primary agricultural products to the international prices will revive agriculture and the food-processing industry.

Following the crisis in 1995-96, services (banking and finance in particular), will be able to recover and increase their relative share as early as 1998, despite the positive relative price changes over the 1992-1995 period.

3.2. Supply Barriers

The relatively low capacity utilisation (60-70%) and relatively high unemployment (11-16%), prevailing over the past 4-5 years have allowed for the relatively fast adjustment of supply to demand growth.

Nevertheless, the low degree of technological innovation and the wear-and-tear of capacities will make supply a barrier to growth, especially in the 2000-2005 period. All this attaches decisive importance to the intensification of investment activity, technology transfer, savings growth and the inflow of foreign direct investment in the medium-term.

Technological reconstruction gains in importance as there are greater prospects for the nation to consolidate its integration relations with the EU.

EU policies in this area are designed to encourage Western Europe to gain pace in high-tech, implement a competitive industrial strategy and other economic mechanisms which are supposed to create a nucleus of new viable sectors able to challenge the competitiveness of the other centres of the market economy. The main targets of the Green Paper industrial and technological policies run as follows:

- the implementation of a financial policy directed to enterprises with lasting economic results in the area of innovation. The establishment of a specialised market of technologies and innovations, similar to that in the USA.
- special policy directed to the medium-sized and large enterprises related to the creation and production of technologies;
- establishment of an appropriate administrative structure (with the assistance of the government, local authorities and EC regional funds) in a core of enterprises;
- a sharp increase in the financial resources for R&D, enlarging the network of professional centres.

The Green Paper lays down the guiding lines in the EU industrial strategies over the next twenty years. They include:

- capital investments in industrial infrastructure;
- professional qualification of work force at all levels;
- encouraging R&D potentials;
- orientation to the high-tech industries with relative advantages;
- development of market structures and institutions:
- restructuring of state enterprises;
- export stimulus.

Bulgaria's structural policies should therefore take into account the new European and global economic realities.

On the supply side, transaction costs, i.e. the costs having to do with sales, raw-material stocks and the change in the rights of ownership of physical and share capital have become an important restricting factor. The transaction

costs on land restitution and state-sector privatisation in industry are particularly high. Transaction costs consist not only of direct administrative expenses but also of the losses, generated by ownership uncertainty and enterprises' inefficient strategic control. The large spread between the interest rates on deposits and credits affects transaction costs as well.

Labour quality and quantity are essential supply components. With respect to the falling birth rate, emigration waves and negative population growth, the number of active workers is expected to go on the decrease. The only possibility for active labour quantity to increase, is to raise retirement age and perhaps, attract foreign work force.

The economy will then draw upon labour quality improvement. i.e. raising the level of education and professional qualifications; better health care; territorial distribution of the work force; increasing work force adaptability to changes in the macroeconomic environment; changing the degree and mechanisms of labour organisation; social security and pension funds; economic motivation and consistency of social response.

The different aspects of labour quality or human capital follow different patterns of development. Some of the characteristics (economic motivation, adaptability, territorial distribution) have undergone certain improvement. However, the bulk of labour quality parameters exhibits negative trends.

There is a clear-cut relation between labour quality and the expenditures on health care and education. Social and health-care legislation is another important policy instrument. Obviously, the government's capability to influence labour quality depends on the existing macroeconomic distortions and their correction.

Lifting supply barriers will be a two-phase process. Doing away with the negative impact of the volume and structure of domestic demand, and partially of foreign demand, will be crucial at the first stage. The low capacity utilisation, unemployment as well as the possibility for raising retirement age will allow for a relatively fast output adjustment. On the supply side, the major barriers at this phase (1996-2000) will have to do with the high transaction costs, resulting from the agricultural reform and privatisation.

During the second phase (2001-2005) the negative effect of transaction

costs will be gradually dying out, while the impact of some structural and technological factors and the significance of human capital will increase. Have macroeconomic policies been successful in overcoming the macroeconomic distortions (high interest, budget deficit, bad debts and decapitalization of the banking system) during the first phase, and especially have they been successful in increasing the rate of savings, supply will then become more flexible in meeting the heavy requirements of the international markets. This, in turn, will make the relatively high growth rate(forecast in end-period) feasible. ❑

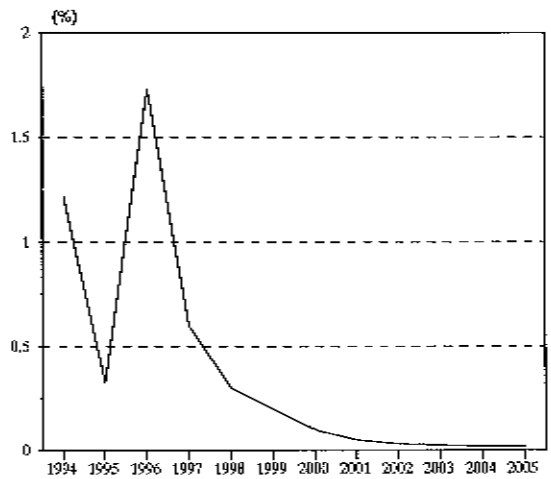
II. MACROECONOMIC STABILISATION (1996-2005)

AECD forecasts concerning inflation and economic growth are moderately optimistic, especially in the period following 2000. Forecasts rely on the realistic possibilities for the country to surmount the macroeconomic distortions and the positive effect of the structural measures applied in the medium term. As compared to November 1995 forecasts, the expectations for GDP growth in 1996 are rather low, equalling 0%, with a high possibility of negative growth, given a persistently high interest rate. Another reason is the sharp cyclical decline in the first quarter of 1996.

As in 1994 and 1995, export increase is expected to be the key source of growth in the 1996-2005 period. The price increase of imported gas and the structural constraints on some sensitive exports to the EU will, however, restrict growth.

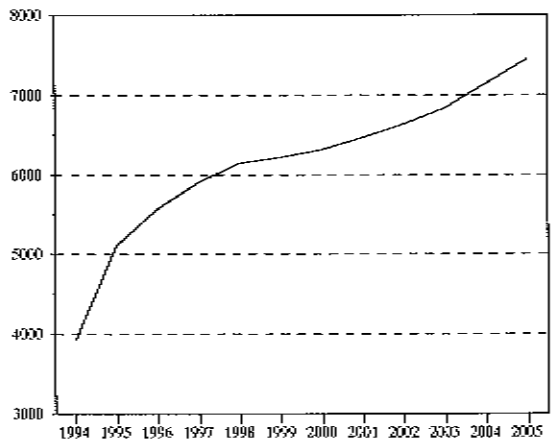
Due to the persistent primary surplus as a result of foreign and domestic debt servicing, public demand will not directly stimulate output growth by the end of the century. The intensification of investment activity and a pick-up in domestic demand by end-period are expected to produce a salutary effect on the country's economic situation. In respect to forecasts pointing to a relatively stable real exchange rate of the lev, imports are not expected to oust Bulgarian producers from the domestic market. In a regional aspect, the markets of the CIS

Inflation in end-yeat



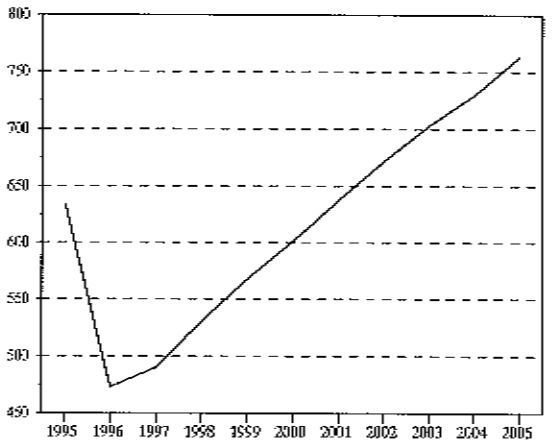
Graph 21 Source: AECD, NSI

Exports (million USD)



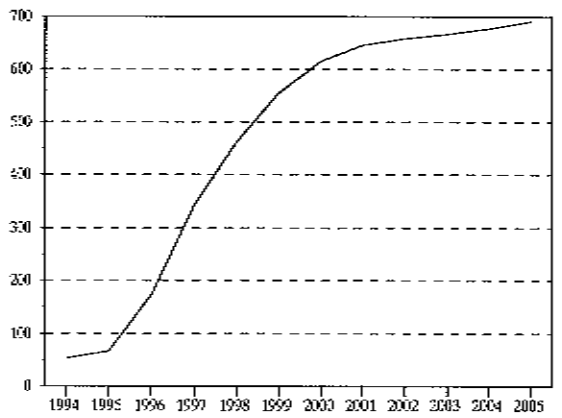
Graph 22 Source: AECD, NSI

Domestic demand (1995 prices)



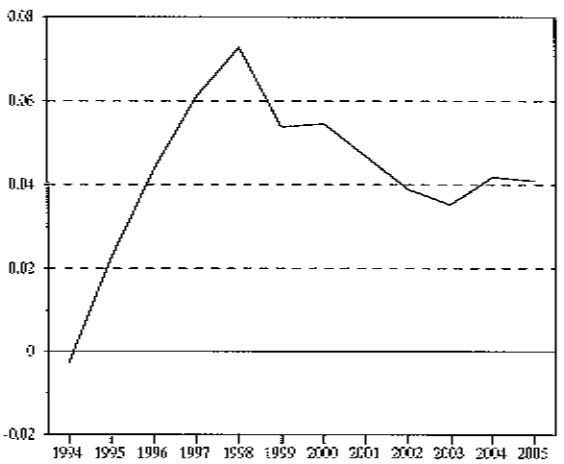
Graph 23 Source: AECD, NSI

Average annual exchange rate



Graph 24 Source: AECD, NSI

Current account (% GDP)



Graph 25 Source: AECD, NSI

countries, CEECs and the former Yugoslavian republics are expected to partially restore their weights within the structure of Bulgarian export. Almost all international forecasting centres point to economic revival in Russia and, hence increased demand.

The dynamics of the current and capital accounts is the key factor predetermining economic development and the consumption/investment ratio. Forecasts indicate that current account surplus will be maintained at the same relative level, i.e. export increase will be offset by the increase in the interest payments on foreign debt.

In contrast to end-1995, the 1996-2000 forecasts favour the maintenance of a balance of payments surplus due to the expected additional inflow of capital extended by the international financial institutions. The forecasts, however, do not give an explicit account of the possible inflows of short-term speculative capital and the transfer of proceeds due to the lack of reliable information.

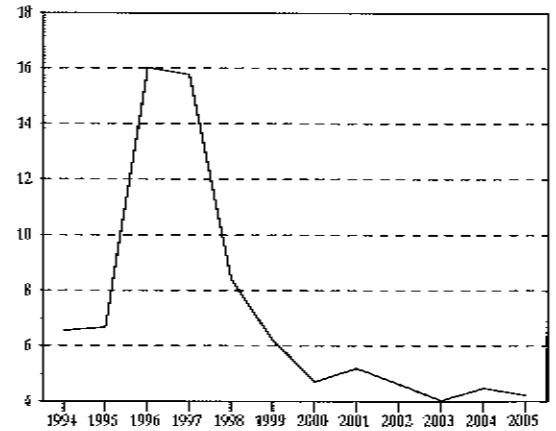
The overall volume of IMF and IBRD crediting is meant to cover the „cost" of the structural reform. The cost of the reform, in turn, approximates the size of the decapitalization in the banking system. The decapitalization in the banking

system is also assumed to be equalling the losses accumulated in the real sector. All these simplified hypotheses allow the problem to be reduced to easily manageable parameters.

The major problem, from the point of view of both the balanced budget and the impact of the fiscal sector on the real economy, consists in the heavy burden of domestic debt interest payments, amounting to over 10% of GDP. All this necessitates the maintenance of a high primary surplus in the 1996-1999 period, restriction of public demand and introduction of a high taxation rate.

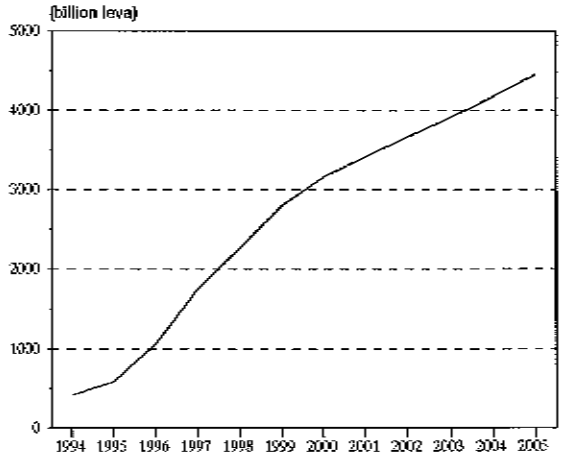
As far as monetary policies are concerned, money supply dynamics is expected to normalise, i.e. the real money supply shrinkage will be gradually replaced by deceleration and stabilisation of circulation velocity. All this is necessitated by the expected growing number of transactions in the capital markets upon entry into force of the Law on Securities, Stock Exchanges and Investment Companies as well as a result of the start-up of mass privatisation and the emergence of secondary capital markets. BNB is expected to continue its pursuit of strict reserve money policies as well as interest rate and exchange rate policies, adjusted to the real rate of inflation.

Government budget Cash deficit (% of GDP)



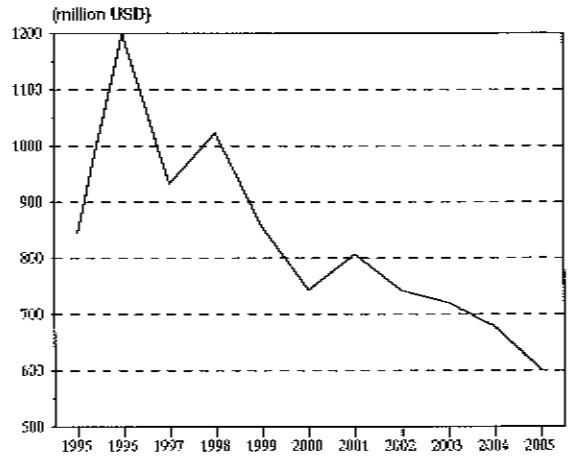
Graph 26 Source: AECD, NSI

Broad Money



Graph 27 Source: AECD, NSI

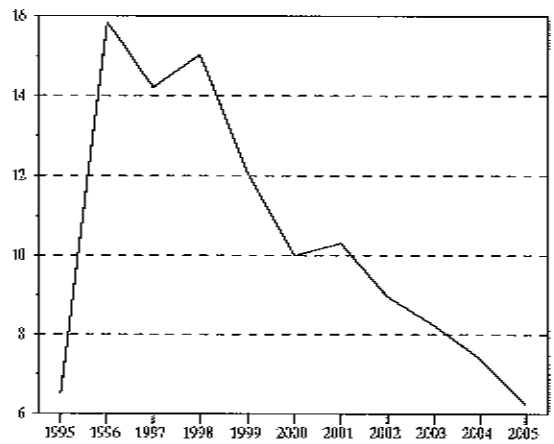
Foreign debt payments



Graph 28 Source: AECD, NSI

Foreign debt servicing requires that a relatively high rate of savings should be maintained (over 14-16% of GDP). After accounting for the inflow of capital, 4-5% will be allocated to foreign debt servicing, and about 9-10% to maintain minimum required investments. Growth acceleration and investment activity intensification call for either an increase in savings or a larger inflow of foreign direct investments. In the first case, a necessary preliminary condition is to guarantee a stable positive real interest rate on deposits and confidence in the lev and the banking system. In the second case, together with the stability of the national economy the consistent strategies in attracting foreign investment from privatisation and trans-European infrastructure projects will have a decisive importance. The rates of savings and investment are expected to rise, especially in the post-2000 period.

Foreign debt payments (% of GDP)



Graph 29

Source: AECD, NSI

Domestic savings growth is intimately related with government debt servicing and financing policies. At present the investments in government securities are bearing the highest yield. The other side of the coin is the soaring cost of domestic debt servicing (the total amounts of payments on the domestic debt are twice larger than the payments on the foreign debt, given the opposite ratio of the amounts on the principal). Considered against the background of capital market internationalisation, domestic debt financing in lev implies that government securities yield incorporates not only the risks of a deep political crisis and economic collapse coupled with another moratorium on foreign debt payments but foreign exchange risk related to possible depreciation of the national currency as well.

Adopting a strategy that will make domestic debt servicing less expensive means making progress in certain areas via a number of foreign currency-denominated instruments. The strategy is meant to lessen the burden of the budget deficit and thus open up a possibility for the budget to actually stimulate the

economy for the first time since the outset of the reform, raise the rate of savings and hence increase the financial resources for investment activities, avoid the negative effect of any further increase in taxation rates. In the final analysis, it implies higher growth and lower inflation. ❑

III. STRUCTURAL ASPECTS OF ECONOMIC DEVELOPMENT OVER THE 1996-2005 PERIOD

Generally speaking, it is the transition to a market economy that has set aside branches with a growing relative share (trade and finance) and sectors with decreasing weights within GDP structure (agriculture and the processing industries). Nevertheless, the processing industries have remained the driving force of the Bulgarian economy.

Within industry itself, there are branches with a very high output and export dynamics (chemical industry and metallurgy) and branches dominated by production decline or growth in its initial phase (machine-building including electronics and electrical engineering, the food-processing and light industries).

Therefore, the branches producing simpler intermediate goods manifest a faster adaptability to the requirements of the international markets, the latter being the major destination for the growing production volumes. At the same time, the fact indicates a shift to international specialisation in sectors with lower value added, lower incomes and higher energy- and raw-material intensity. Enterprises' indebtedness and bad credits in these sectors have, too, gone on the increase. This kind of specialisation allows only for temporary economic stabilisation and restricted incomes growth - closing the „scissors" between incomes levels in the developed and less developed countries means bridging the technological and structural gap between them. Sustained growth necessitates a second „wave" of market adaptability embracing the high-tech branches. Besides, there are all the favourable price conditions needed. And yet, the branches will be able to meet the international market requirements provided they have undergone prior technological restructuring, coupled with personnel re-qualification, additional investments, novel marketing strategies and steady channels of Bulgarian products. Moreover, any delayed recovery of the branches with a high value added will further lessen their possibilities for development.

In a macroeconomic aspect, the facilitation of the second specialisation „wave" should become a priority structural policy target. It can be achieved by improving

financial discipline in the banking and real sectors aimed at the re-channelling of the financial resources which are at present covering the losses generated in the inefficient industries to investments in modernisation and reconstruction projects; attracting foreign investments; providing stimulus and incentives to the small- and medium-sized businesses in high-tech; privatisation, financial relief for local and foreign investors included; government assistance in R&D; active participation in pan-European and EU structures aiding technology transfer and innovation financing; maintaining a stable macroeconomic environment in view to savings and investments; decreasing risk in the financial system; facilitating the access of Bulgarian exports to the potential markets of East European countries, etc.

More precisely, it is advisable to: administer and exert control on foreign investment programmes in electronics, machine-building, pharmaceutics and other high-tech branches subject to privatisation; establish a specialised institution meant to extend credits to small- and medium-sized enterprises; to promote a schedule for long-term export crediting in order to stimulate the export of investment goods; encouraging participation in the EUREKA Programme and EU technology programmes; additional incentives to foreign direct investments.

The development of the high-tech branches should rely on a modern infrastructure, especially in telecommunications and transport. It is therefore necessary to work out a long-term investment programme based on incentives promoted by the government in attracting investments from the international financial institutions and leading companies. Bulgaria's participation in the trans-European telecommunication and transport networks project has to be a key element of such a programme.

It should be emphasised that together with domestic investments, foreign direct investments will be an indispensable part of the second market specialisation „wave" in the period surveyed. As there are bright prospects for a peaceful solution to the Yugo conflict, political risk on the Balkans will diminish and thus revive economic interest in Bulgaria. On the other hand, as international research points out, another strategic acquisition of the country is the Europe Agreement establishing an association between EC and Bulgaria. From the point of view of the multinational corporations, this broadens the scope and potentials of export from a given country. □

IV. TECHNOLOGICAL DEVELOPMENT

Growth rate, the dynamics of living standards and the efficiency of sectors and enterprises are predetermined by the technologies applied and professional qualification of work force. In a microeconomic aspect, technological development undergoes the following stages:

- assessment of the technological parameters of a trend or a process (stage 1);
- technology choice suiting a given purpose (stage 2);
- technology adjustment to local economic environments and gradual improvement (stage 3);
- permanent technological modification in conformity with economic changes (stage 4);
- fostering innovative production processes at a firm level (stage 5);
- carrying out regular R&D projects at a firm level (stage 6).

The building up of the technological capacity of a stagnated economy condemns the bulk of firms to failure and compels them to resort to routine solutions (stage 1). One of the reasons is that some firms exhibit pronounced myopia to technology investment possibilities. Another more important reason is that due to stagnation, weak financial markets and undeveloped market mechanisms innovation investments prove unprofitable, i.e. stages 4, 5, 6 are unattainable.

Therefore, emphasis should be laid upon the building of technological capacity relying not on sheer imitation and hackneyed rules of profit maximisation but on forecasts which technology will prove more efficient for a longer period of time. These circumstances given, even the imitation of ready technological models turns out a wrong solution. According to expert estimates, imitation costs in the developed countries account for about 60% of the total innovation costs, which tend to increase due to the growing complexity and interdisciplinarity of research.

Notwithstanding the fact that an enterprise both builds up and generates

technological capacities, it cannot be regarded as a single phenomenon isolated from the economic environment and the related structures responsible for introducing innovations, information networks and infrastructure and institutions coordinating and promoting R&D. The national strategy aimed at avoiding the traps of equilibrium characterised by unqualified labour and overcoming technological stagnation is assigned a major role. This strategy determining in a greater degree the country's competitiveness is not the algebraic sum of innovation activities in enterprises. Against the web of relationships among institutions, the strategy has to conform to the evolutionary path of the country in such areas as science, technologies and education.

Another key problem of technological strategies and competitiveness is the strong correlation between the national technological basis and the inflow of foreign capital and technologies: the greater the country's own technological potentials the more favourable the choice between high- and low-tech foreign investments. And vice versa, countries with heavy foreign debts, low liquidity and high unemployment rates are practically forced to accept any form of foreign capital which they are allowed access to.

We can thus define the specific conditions determining a country's choice of technologies and its competitiveness. In the first place, these unrelated to scientific and technological policies prove decisive to the efficiency of the macroeconomic framework. High growth, growing rate of savings and investments, political stability, steady prices and price ratios, high employment and a balance of payments surplus fall in this category.

Other auxiliary institutional factors have to do with adequate legislation and favourable economic situation providing incentives to enterprising and initiative agents, hence innovations.

It is in this context that the access to high technologies is associated with intellectual property rights and loyal competition - national and international which will mobilise the nation's innovative potentials. Adequate infrastructure is also a fundamental condition of overall technological restructuring.

A second group of activities bears upon measures and institutions responsible for building up technological capacities. Education, be it formal or in-

formal, is decisive to the improvement of the country's technological basis available. Information services are assigned to agencies which gather data and offer analysis and forecasts about technologies, businesses, marketing strategies, finance, investment opportunities, the national and world economies.

There is also a third set of instruments designed to stimulate the technologically dynamic sectors as well as firms' innovation behaviour. The instruments in frequent use are as follows: licensing the production and export of high-tech products; extending foreign currency resources; providing access to fixed capital on preferential terms, investment subsidies, customs relief and incentives to technology transfer, interference on the part of the government to influence market prices. The authorities of the state-run agencies and enterprises can also support the innovation-oriented sectors and the development of new products.

The implementation of an active technological policy transcends the bounds of the purely market principle of *laissez-faire*. The different degrees of employment, output scale, intra-sectoral relations and growth potential within the industrial sector itself will inevitably lead to the implementation of a preferential policy meant to promote technological development. The new management model suggests that imperfect competition in certain cases when the market is totally dominated by a very small number of enterprises is the driving force behind trade.

There is a real danger of non-competitiveness due to two essential components of technological development: the risk and indefiniteness associated with the allocation of resources for R&D, often coupled with hazy final results. This factor stands out as the reason for the low level of high-tech research investments in Western Europe. Another reason is the inadequate profit firms get when developing new technologies under a free market economy. The inventions in a firm can be easily plagiarised via disloyal competition on the part of other firms which have made no investment in the innovation project. Thus, the firm covering technological costs does not take full advantage of its investments. The prospects prove quite discouraging, especially for small- and medium-sized producers eager to invest in new technologies in a market fully dominated by large firms benefiting from substantial credit resources. The adoption of a policy fostering credit preferences to smaller producers, therefore, becomes a must.

An important aspect of the transition economies is the integration of high technologies into their national industries. The introduction of leading technologies to low value added small- and medium-sized industries is an essential part of technology integration. The integration of new technologies into the traditional production models will ultimately affect labour productivity, incomes level and living standards. The problem, however, is reduced to the question whether modern laser and bio-technologies, optics and electronics, satellite communications and computer innovations can be incorporated in the traditional technologies and inherited organisation and production patterns in the developing countries with a prevailing number of small- and medium-sized producers and extensive agriculture. Risky and capital-intensive, the building up of technological capacities calls for a multidisciplinary approach to human resources. A current policy trend is thus focused on strategic partnerships with universities and colleges, autonomous research institutes and even competing firms. Strategic partnership is therefore assigned a double function to both share costs and risks and accumulate the „critical mass" of knowledge and experience needed for new technologies and thus raise the possibilities for creating an efficient, competitive and adequate scientific and technological basis of the economy. At the same time, efficient technological development offers a division between the strategic control of ownership and operative management.

With respect to this, the major technology policy target has to do with the transition of the bulk of enterprises in the industrial, agricultural and services sectors from phase 1,2 and 3 to phases 4,5 and 6.

The transition will be a stepwise process, following uneven branch dynamics. It can be arbitrarily divided into two stages - first, stabilising the country's macroeconomic environment and ensuring resources (by raising savings and investment rates) and second, establishing the information system needed, providing financial aid, creating co-ordination mechanisms and viable economic agents, attracting foreign investments.

The key instrument facilitating the economic transition to a technological development centres on the formation of viable economic agents able to make strategic decisions at the microeconomic level, coupled with a re-organisation of

the state apparatus at the macroeconomic level.

Strategic economic agents can be created only through privatisation, attracting strategic foreign investors, supporting small- and medium-sized businesses and restructuring state sector management.

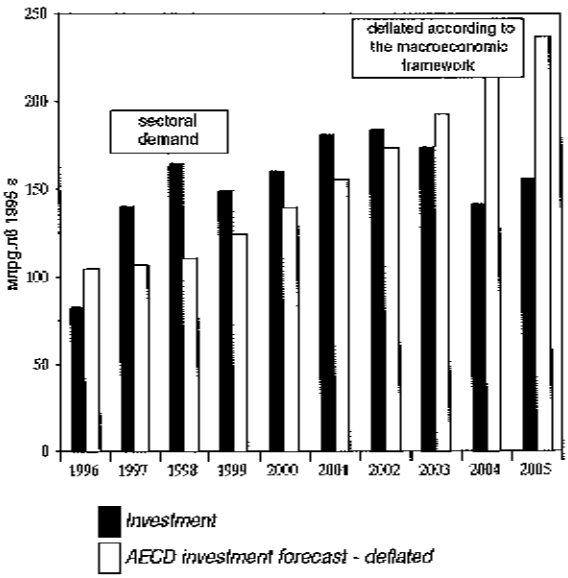
The re-organisation of the state apparatus has to be carried out along the following lines: establishing a specialised ministry or agency responsible for state ownership management in enterprises; reducing the number of sectoral and non-sectoral ministries and concentrating their functions on technology strategies in the corresponding sectors; tax relief of technology investments and human capital (tax exemption of expenses on R&D, licenses, etc.). ❑

V. THE INTERACTION BETWEEN THE MACRO- AND MICROECONOMIC LEVELS

AECD forecasts are based on the latest developments which came into being in the Bulgarian economy during the transition period. On the other hand, the data published by the sectoral ministries rely on enterprises' aggregate expectations and forecasts that contain useful additional information indispensable to economic analysis. Thus structured, economic analysis has a double effect. On the one hand, it allows for conclusions as to the additional restraints economic agents are forced to confront in effecting their plans. On the other, it opens up another possibility to particularise macroeconomic policy priorities.

Investments are the strategic guideline in balancing demand and supply of resources. Graph 30 shows the comparison between investments, as taken from AECD macroeconomic framework until 2005, and total investment, taken from the independent forecasts of the sectoral ministries. Two clear-cut stages come to the fore. Over the first period (1997-2002) investment demand forecast at the microeconomic level surpasses AECD estimates. The second period (2003-2005) manifests the opposite trend. Higher demand for investments at the microeconomic level in the first period can be explained with:

Investment demand
1996-2005 forecast



Graph 30

- decapitalization accumulated in the real sector;
- low savings rate;
- greater necessity for allocating resources for foreign debt servicing.

Clearly, there are two important macroeconomic conclusions - greater emphasis should be laid on the attraction of foreign investments and the stabilisation

of the financial system. It is also clear that over the next two years (1997-98) decapitalization in the real economy is unlikely to be overcome.

The conclusions about the 2003-2005 period are even more interesting. Alleviated foreign debt servicing, economic stabilisation and investment rate increase expected in the period surveyed will induce greater investment opportunities than anticipated by enterprises at present. All this will lay down the basis of a more accelerated structural and technological development.

Investment forecasts for the whole economy

%

	1996	1997	1998	1999	2000	2001	2002	2003	2004	20005
Investment:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
- incl. for technical innovation	48.37	45.59	43.20	45.79	43.08	39.53	40.06	39.34	49.06	46.70
- direct foreign	20.52	15.27	11.49	13.97	9.79	8.56	7.64	8.06	10.12	9.29
Investment by sources:										
- state budget	16.00	16.02	14.25	16.04	21.24	21.53	21.64	23.08	27.99	29.03
- own funds and credit	53.39	52.28	61.14	61.91	61.54	64.82	64.03	59.38	51.82	54.16
- foreign investment	23.54	24.69	20.57	18.11	17.43	13.65	14.33	17.55	20.18	16.82

table 1

From the point of view of investment resources, enterprises forecast a gradually growing share of the government budget and a contracting relative weight of foreign investment (see table 1). The share of self-financing and credit resources will remain practically unchanged. These forecasts are expected to remain consistent over time for the state is bound to restore its functions in carrying out an efficient economic policy. Also, demand for foreign capital will gradually diminish due to a decrease in foreign debt and an investment rate increase.

Overall, the comparison between forecasts at the macro- and microeconomic levels suggests a very high degree of coincidence which makes Part One conclusions compatible with the conclusions in Parts 2 and 3 of the structural reform programme. ❑

VI. THE BULGARIAN ECONOMY IN THE FIRST HALF OF 1996 AND PROSPECTS OVER THE NEXT 12-MONTH PERIOD

1. Recent Trends in the European Economic Region

In spite of the initial forecasts (EU, ECE, IMF estimates included), 1996 has seen a certain decline in some of the major macroeconomic parameters in the European economic area. GDP growth rate is expected to drop down to 1.5% in 1996 from 2.5% in 1995. Forecasts concerning Bulgaria's main trading partners in the EU - Germany, Italy, Austria, France and Great Britain - point to 0.5, 0.7, 1.8, 1.0 and 2.4% GDP growth respectively (EU data). GDP growth in the EU in the first six-month period of 1996 was only a bare 0.49%, on a year earlier. As compared to June 1995, industrial output in Germany dropped by 1.1%. Decline in France and Italy hit 0.5% (May) and 2,5 % (by May) respectively. Over the past few months German industry has been on the track of recovery. In the six months to June 1996 output increased by 12%. However, it has not yet reached its pre-crisis level. Economic slump is best seen in the Eastern provinces.

Overall, the second quarter of 1996 witnessed a certain improvement in the business situation in the EU, best seen in the rise in the stock exchange indices. In August the Bundesbank lowered the key interest rate substantially and thus stimulated growth and raised stock exchange trade volumes. At the same time, the package of restricting measures, taken by the German government and supported by Bundesbank in conformity with the Maastricht convergence criteria are expected to bring about a certain shrinkage of domestic demand.

The business situation in Bulgaria's trading partners on the Balkans - Turkey and Greece has been rather unstable. The latest trends, however, are quite promising.

As of May 1996 industrial output in Turkey increased by 15% on a year earlier. In Greece industrial output went up by 2.3%. Both countries, however, have registered a trade deficit of US$ 13.9bn and US$17.3bn respectively. Both economies have also run current account deficits. In the first six-month period of 1996 inflation in Turkey and Greece amounted to 82,9% and 8.6% respectively. As

a whole, the business climate in the two Balkan countries is favourable in terms of export opportunities.

Compared to 1995, the economic situation in the CEECs registered a certain decline due mainly to growth deceleration in the EU and Germany in particular.

In the first quarter of 1996 GDP growth in the Czech Republic dropped to 4.3% from 5.2% in 1995. Industrial output increased by 1.8%. Trade and balance of payments deficits amounted to US$ 4.6bn and US$ 2.2bn respectively in the first half of 1996. As a result of short-term capital inflow, the country's foreign exchange reserves, however, increased by US$ 4bn in the first six-month period of 1996.

The Hungarian economy is still crisis-stricken. GDP and industrial output contracted by 1 and 3.7% respectively in the first quarter of 1996. In the twelve months to May 1996 the country's trade deficit amounted to US$ 2bn, and the current account deficit reached US$ 1.3bn. Price inflation in June was by 23.6% higher on a year earlier. Nevertheless, the Hungarian forint is still relatively stable, registering real-term appreciation.

In respect with the forint's stability and more unfavourable foreign debt/export ratio, Hungarian experience should be regarded as an important contribution to macroeconomic policies in CEECs.

Compared to 1995, there was a notable slow down in GDP growth rate in Poland. GDP growth in the first five months of 1996 amounted to 4%, against 6% in 1995. Industrial output increased by 2.4%. Similar to the other two CEE countries, the Polish economy ran trade and current account deficits.

The decline in the Russian economy is still continuing. The first six-month period of 1996 saw a 6% drop in GDP. Industrial output registered a decrease of 10%. On the other hand, Russia has a large trade and current account surplus. The Central Bank's hard currency reserves rose by 147% in the first quarter of 1996. The country has made real progress fighting inflation and is expected to gradually overcome decline and return to growth.

The dynamics of the major indicators in the European economic area over the late-1995-first half of 1996 period can be summarised in the following way:

First, the EU economies and Germany, in particular, are halfway through

to recovery liquidating the stockpiles of inventories from the second six-month period of 1996. The second quarter of 1996 marked the begging of recovery.

According to the latest official German forecasts, GDP growth is expected to accelerate from 0.75% to 1% in 1996. The interest rate lowering, carried out by the Bundesbank will also contribute to the improvement of the economic climate.

Second, the economic decline in the EU has directly affected GDP and industrial output growth in the CEECs where economic indicators have been worsening in 1996. The Baltic countries, too, witnessed a deterioration of their trade and current account balances. Their current account deficits have been financed via capital inflows coming from speeded privatisation and the maintenance of high interest rate differentials meant to attract short-term speculative capital inflows. Russia, Slovakia and Bulgaria are the only exception to the model.

Third, the economic climate in Bulgaria's main trading partners (Germany, Italy, Greece, Yugoslavia, Macedonia and Austria) consuming nearly 50% of Bulgarian exports has improved since mid-1996.

Fourth, the patterns in which CEECs form and balance their economic exchange with the EU and the other developed countries are potentially unstable and vulnerable to changes in the business cycles and international capital movements.

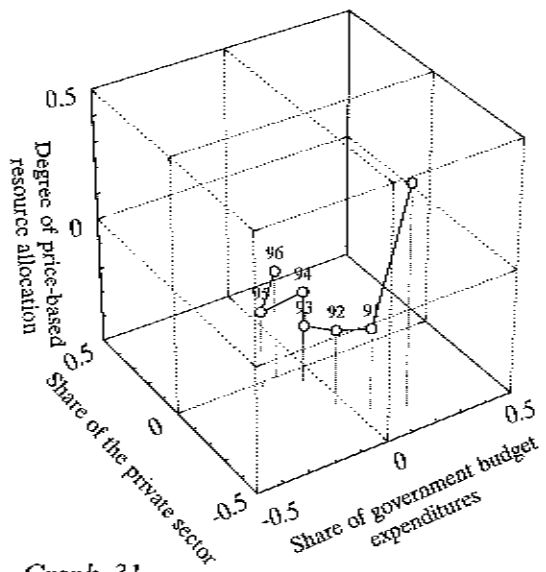
Fifth, despite problems related to external equilibrium, a sub-centre of economic growth is gradually emerging in CEECs. In respect to this, Bulgaria's membership in CEFTA may only have a positive effect on the nation's economy.

2. The Bulgarian Economy in Early-1996

As has already been pointed out in 1995 AECD Annual Report, the country's economic situation was characterised by a marked instability in early-1996. Any slight changes in the government and Central Bank's policies or shifts in the external economic environment may have non-proportionally large consequences on the main economic variables. Unfortunately, the majority of internal and external changes have put the economy on the wrong track.

Graph 31 illustrates the overall evolution of the Bulgarian economy in the transition period. It is a three-dimensional graph, reflecting changes in the private

sector, the role of the government (the budget) in resource redistribution and the efficiency of the market mechanisms. The indicators can fluctuate within the 0-100% range. However, they are represented as deviations from 50% (0,5). The centre of the cube in graph 31 thus represents an economy with a maximum degree of indefiniteness (50 to 50%), from the point of view of the private sector's share, the government's redistributive functions and prices as a factor for resources allocation.



Graph 31

As the graph indicates, the only parameter that has manifested a steady downward trend since 1990 has been the share of government expenditures in GDP. Private sector's growth has been relatively slow, and the degree of price-based resource allocation, as gauged by the stock inventories and foreign currency deposits/broad money ratio, allowing to properly assess confidence in the lev and the efficiency of the allocative function of domestic prices, has been rather unstable.

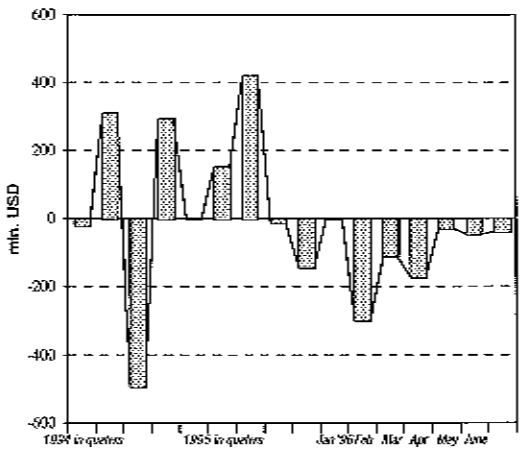
The Bulgarian economy in 1996 has been closest to the point of maximum uncertainty (entropy), for the shares of the private sector and government expenditures within GDP as well as the degree of price-based resource allocation have been simultaneously fluctuating around the 50%-mark. Such a situation given, the economy becomes hard to manage due to the high level of disorder. Only accelerated privatisation, inflation and foreign exchange rate curbing and solving foreign and domestic debt problems can take the economy away from the zone of maximun uncertainty.

The lev's exchange rate is the key economic parameter reflecting the confidence in monetary policies and the uncertainty in the relations with the international financial institutions as well as the state of the real economy, the balance of payments and the banking system. Graph 33 shows the lev's exchange rate

against the US dollar. As can be clearly seen, the lev has been spiralling down against the dollar plunging into continuous depreciation since April 1996. At the same time, BNB's foreign exchange reserves dropped by about US$ 600mn.

The trend outlined does not bear upon US$ 90mn worth of current account surplus in the first six-month period of 1996, according to preliminary BNB data. The surplus was registered despite the large foreign debt interest payments amounting to US$ 289mn. The current account surplus is indicative of a trade surplus as well as a positive balance on some payments related to services.

Balance of payments

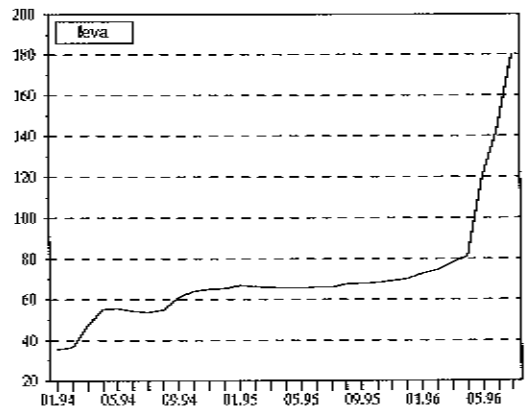


Graph 32 Source: AECD, NSI

The problems have been generated by the balance of payments deficit surpassing US$ 500mn. The deficit is primarily due to the hefty amounts of hard currency deposits withdrawn from commercial banks, i.e. the capital account deficit reflects the collapse of the confidence in the lev and the banking system.

It is difficult to make final assessments of foreign trade dynamics in the first half of 1996 because of the common practice of subsequent data adjustments.

Foreign exchange rate change
(leva / USD)



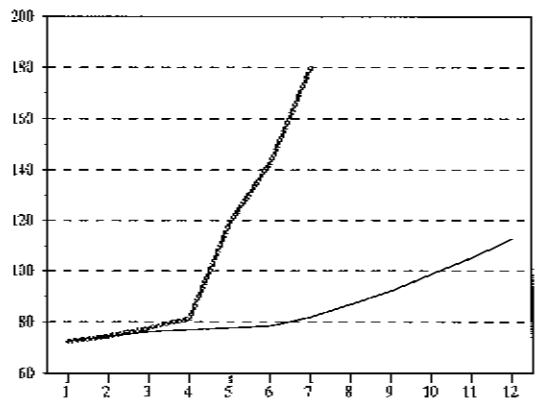
Graph 33 Source: AECD, NSI

It can be said though, that the dollar value of exports in the first quarter of 1996 was roughly the same as in 1995. Imports have fallen by approximately 11%. The second quarter was characterised by a decrease in both imports and exports, with a positive trade balance maintained. As a whole, the fall in the foreign sector is greater that the fall in domestic industry and GDP, which is indicative of a re-orientation of demand towards domestic products. This tendency, in turn, is a result of the devaluation of the lev. It implies that a stricter customs policy block-

ing the way of untaxed imports will have a considerable stabilising effect on the exchange rate.

It is difficult to quantify the loss of confidence in the banking system, as well as the liquidity problems of some of the banks and BNB buying or declaring other banks insolvent (Agrobusiness Bank, Bank for Agricultural Credit, Private Bank for Agriculture and Investment, First Private Bank, Mineralbank). It is obvious though that under such circumstances, and especially with the uncertainty of the IMF and IBRD negotiations on the new stand-by agreement, monetary policy gains in importance in avoiding the uncontrollable depreciation of the national currency.

Difference between effective and forecast exchange rates

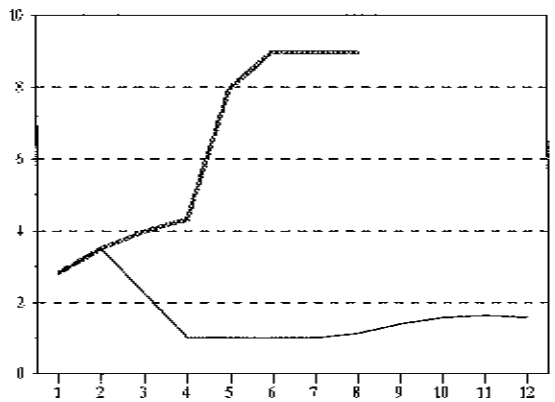


* *The forecast exchange rate is calculated at 1% monthly CPI*

Graph 34

Source: AECD, BNB

Difference between effective and forecast monthly BIRs



* *The BIR has been calculated at 1% monthly CPI*

Graph 35

Source: BNB, AECD

Graphs 34 and 35 present a comparison between the expected and actual exchange rate of the lev to the USD, as well as a comparison between the observed and computer simulated interest rate. The expected values are based on an econometric model developed at the AECD simulating a scenario in which BNB follows an inflation-minimising policy.

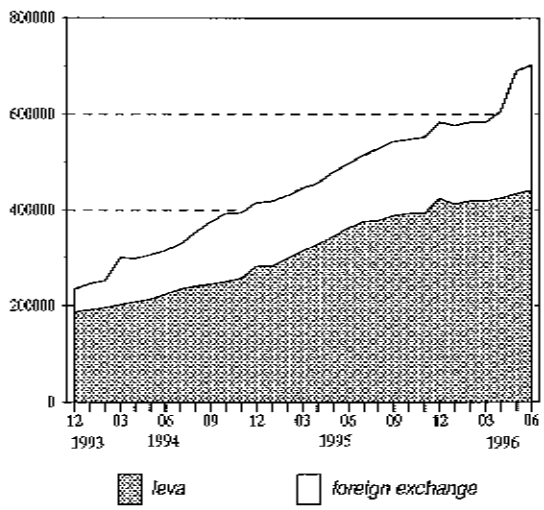
It is assumed that there are two major policy instruments available to the central bank - the minimum required reserves and the BIR. As can be seen from Graph 35, the BIR should have been lowered to 0.5% monthly since February. At the same time, the required reserves ratio should be a little higher than the actual one. Consequently, the required reserves could have increased to 11-12%.

This ratio is not considered high because actual reserves in January 1996 were above 12%, and therefore the increase would only compensate the decrease of

effective reserves brought about by expectations of high speculative profits from the lev's depreciation. As can be seen from Graph 34, if the BNB followed a strict anti-inflationary policy, the exchange rate could stabilise at around 110 lev per dollar at the end of 1996. This is close to the exchange rate forecast by the AECD in its 1995 Annual Report (114 lev/USD). The lower levels of inflation and interest rates can in turn reduce the burden on the real sector, thus cushioning the impact of the crisis in the banking sector and avoiding the rapid loss of confidence in the lev.

Despite the relatively low rate of increase of the lev component of broad money (see Graph 36), broad money as a whole has increased significantly since April 1996 due to the revalorization of the foreign exchange component. Fiscal policy, through the ratio of issued to matured government securities during the February-May period, has its contribution to the increase of the lev liquidity in the economy.

Broad money structure



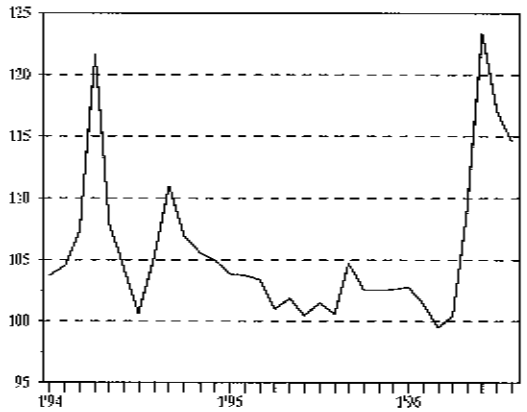
Graph 36

Source: AECD, NSI

The depreciation of the lev has led to an increase in the rate of inflation through high inflationary expectations. As can be seen from Graphs 37 to 40, the monthly rate of inflation increased rapidly, with government controlled and food prices growing a little slower. Nevertheless, over the period surveyed the lev's depreciation was higher than domestic inflation. As a result, the Bulgarian currency depreciated in real terms (i.e. the purchasing power parity exchange rate increased (see Graph 41).

The exchange rate and price level fluctuations in the first half of 1996 did not represent a normal relative price adjustment process because the deviations of the exchange rate and the main price level indices from their long-term equilibrium increased (see Graph 42). Moreover, the instability of the price structure at present is more pronounced than during the 1994 depreciation of the lev. The disequilibrium state of the price system is caused by an abrupt change in the structure of the lev and foreign exchange reserves and inventories held by economic agents who have expected speculative profits from the price differentials.

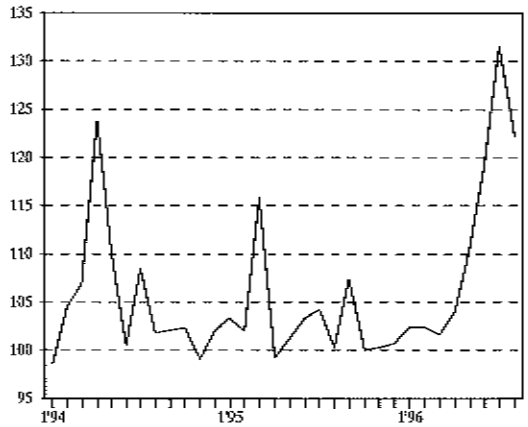
Consumer goods prices
monthly index



Graph 37

Source: AECD, NSI

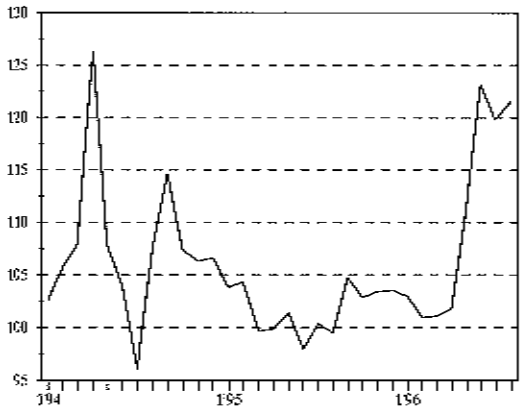
Monitored prices
monthly index



Graph 38

Source: AECD, NSI

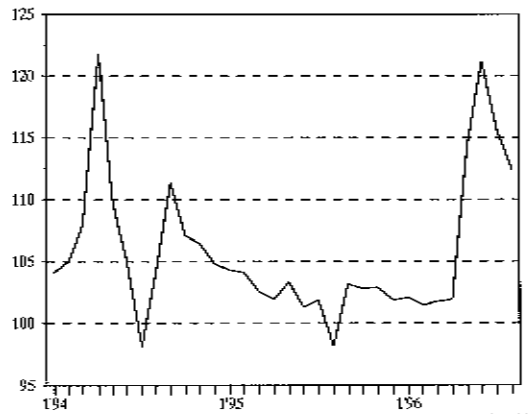
Food prices
monthly index



Graph 39

Source: AECD, NSI

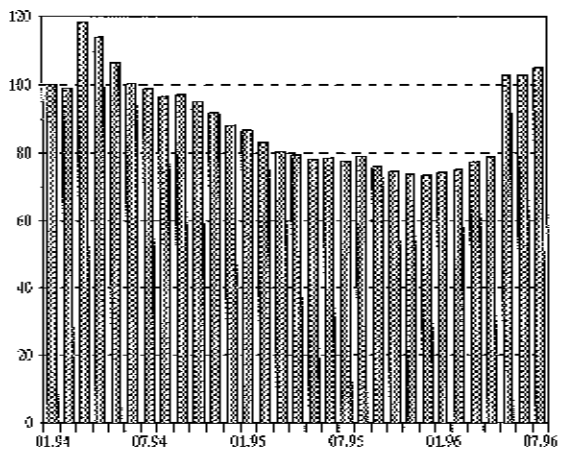
Core inflation
monthly index



Source: AECD, NSI

Graph 40

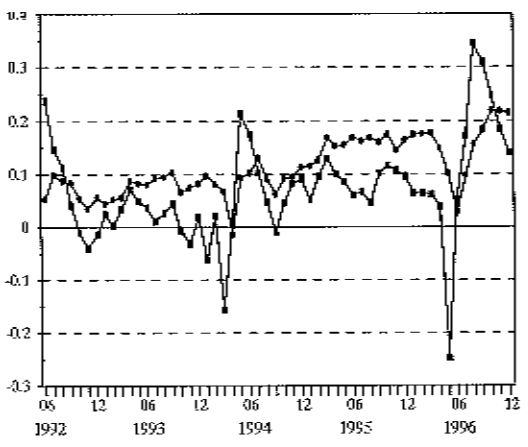
Real exchange rate index



Graph 41

Source: AECD, NSI

Deviation of observed from equilibrium

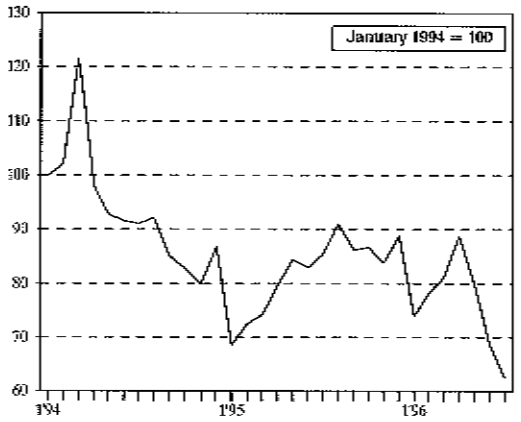


Graph 42

Source: AECD, NSI

Real household money income

(per capita of household, average)

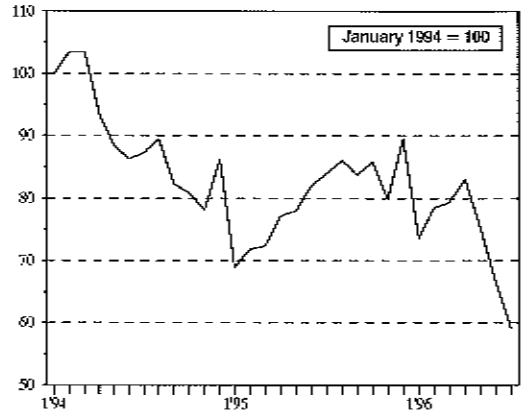


Graph 43

Source: AECD, NSI

Real wage

(per capita of household, average)

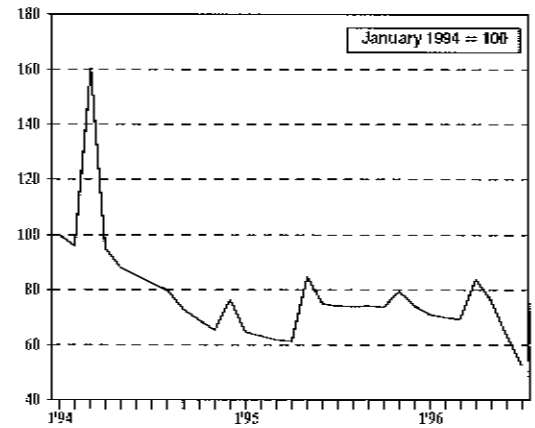


Graph 44

Source: AECD, NSI

Real pension

(per capita of household, average)

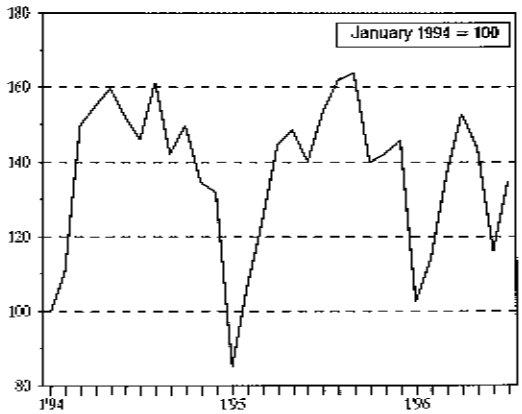


Graph 45

Source: AECD, NSI

Real income from independent economic activity*

(per capita of household, average)



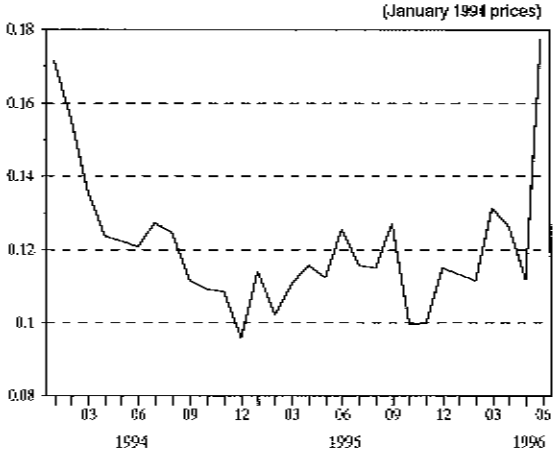
* Includes income from private enterpreneurship, property and household production.

Graph 46

Source: AECD, NSI

Share of wage bill within industrial output

(January 1994 prices)

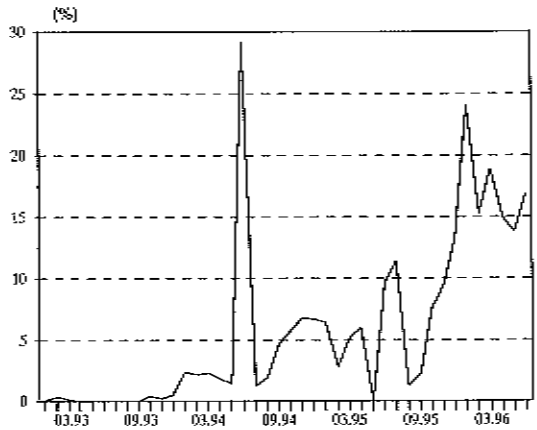


Graph 47

Source: NSI, AECD

Ratio between refinancing and pending payments

(%)

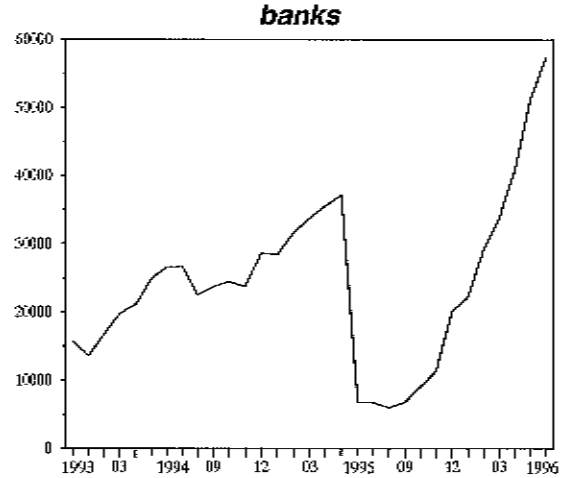


Graph 48

Source: AECD, NSI

In general, as can be seen from Graphs 43 to 45, an increase in the rate of inflation leads to decrease in real household incomes, real wages and salaries, real pensions and real income from private economic activity. Nevertheless, the share of labour costs within total unit production costs increased in the first half of 1996 due to the overall fall in production volumes and some seasonal factors (Graphs 42 and 47). Thus, the competitive position of Bulgarian producers manifested only a slight improvement regardless of the significant nominal depreciation of the lev.

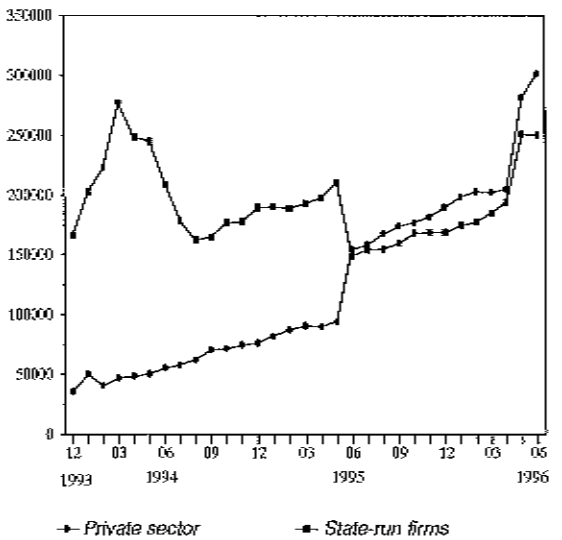
BNB leva refinancing to commercial banks



Graph 49

Source: BNB, AECD

Credit to the non-government sector



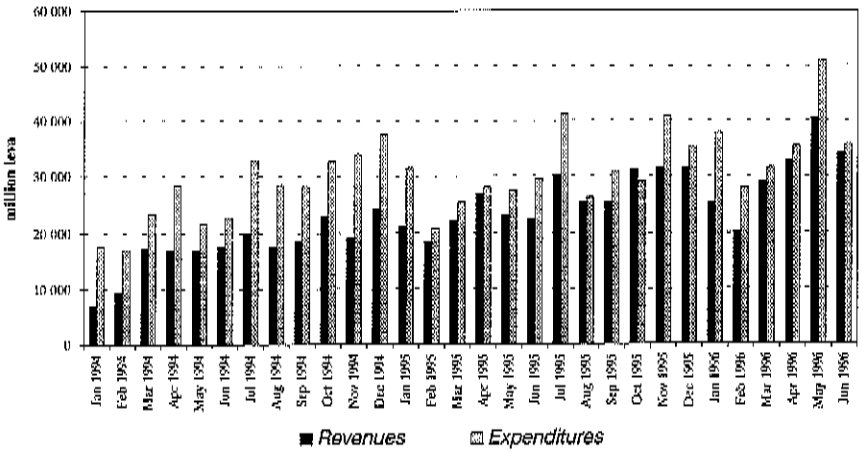
Graph 50

Source: BNB, AECD

1996 saw a significant widening of the gap between bank refinancing and inter-bank payment mechanisms. As it is shown on Graph 48, pending payments have exhibited a systematic increase as a share of refinancing since the beginning of 1996. At the same time, total refinancing has increased significantly (see Graph 49). The restrictions on the refinancing of troubled banks, imposed by the BNB, have obviously led to a lengthy period of blocking of settlement mechanisms which was offset by an increase in the refinancing of 'good' banks.

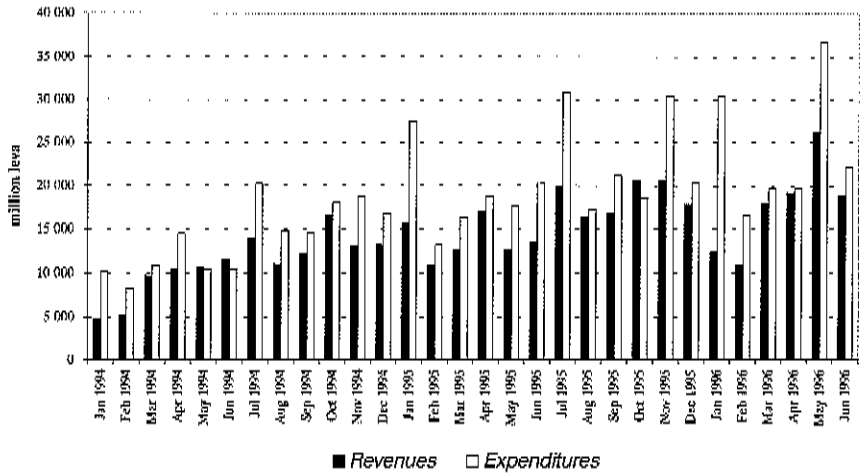
Therefore, postponing the structural reform (i.e. change of ownership, control, organisational structure and recapitalization of banks with liquidity problems) and its replacement with restrictions on refinancing has actually led to an increase of the liquidity of the economy, which in turn facilitated the depreciation of the lev. Under these circumstances (postponing the reform in the

Consolidated government budget revenues and expenditures
(monthly data)



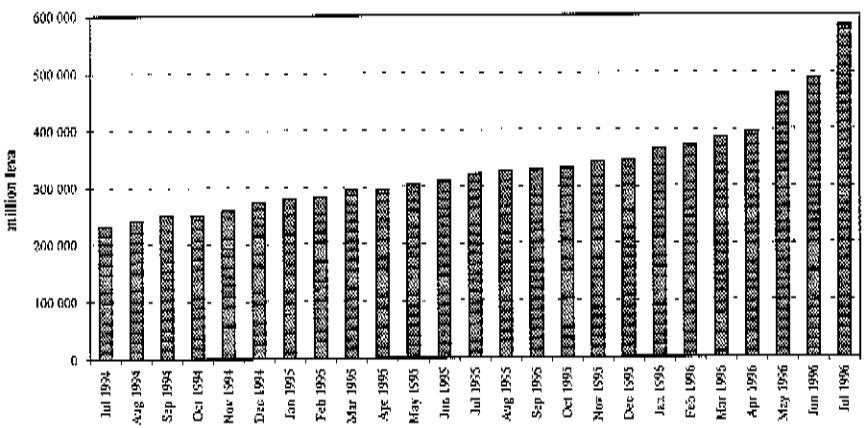
Graph 51

State budget revenues and expenditures
(monthly data)



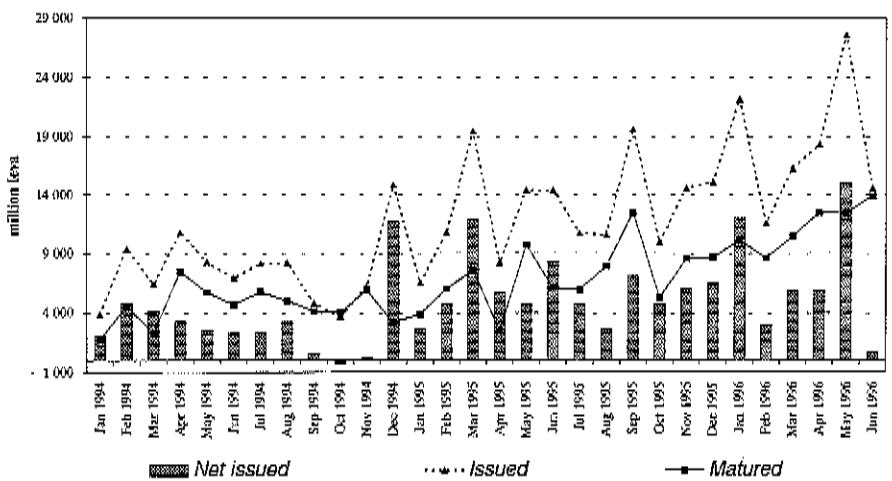
Graph 52

Domestic debt
(at end-of-month)



Graph 53

Government securities issued
(monthly data)



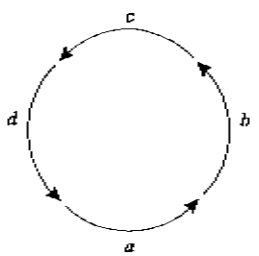
Graph 54

banking sector) it would have been much better if the BNB had placed the banks with liquidity problems under supervision as early as late 1995, without blocking the inter-bank payment system. The policy pursued by the BNB actually forced the 'good' banks to use refinancing to cover both their needs and compensate for the money they failed to receive because of the non-working payment mechanism. As a result, their own financial positions worsened.

The above mentioned suggests that the existing settlement mechanism cannot handle crisis-ridden situations. Therefore, it should urgently be replaced with a clearing system of the type used in modern capital markets where the central institution (in our case the BNB) is a party to each payment operation. It should be stressed that the inefficiency of the current payment system has caused significant problems in the real sector and emerged as one of the main bottle-necks of industrial sales in late 1995 and early 1996.

The increase in domestic credit in 1996 was primarily due to the increase in government liabilities on bonds issued to cover the transfer of household and company deposits to the State Savings Bank and the Bulgarian Post Bank. At the same time, for the first time since 1991 credit to the private sector is higher than credit to the public sector (see Graph 50). Public sector credit decreased in real terms in the first six months of 1996. On the contrary, private sector credit increased in real terms.

In the first half of 1996 both the consolidated government and state budget expenditures were higher than revenues. Hence, the government debt increase. The rate of debt increase became faster in mid-1996. The main reason for this was the increase of the BIR as of 10 May 1996. The increase in domestic debt has thus been financed primarily through issues of new government securities (see Graph 54).



a - recovery
b - expansion
c - overproduction
d - depression

Graph 55 *Source: Bank of Japan, Quarterly Bulletin*

Real sector dynamics is seriously influenced by cyclical factors. As can be seen from the comparison between Graph 55 and Graph 56, over the May 1995-April 1996 period the industrial sector had been forced to increase its inventories, i.e. there had been overproduction, caused by domestic and

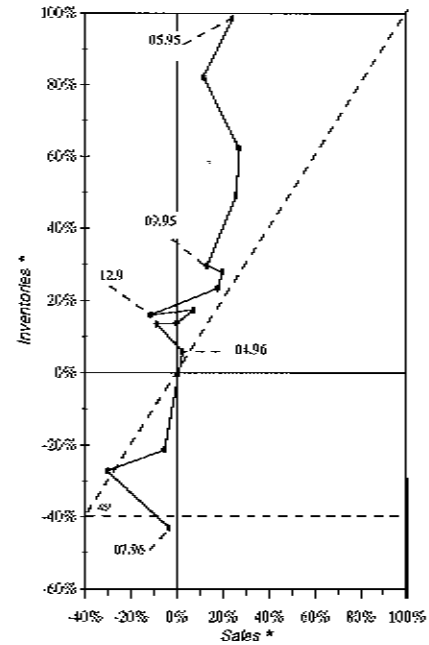
foreign demand problems. Normally, a cyclical evolution suggests that the economy enters a phase of contraction of inventories, followed by a return to recovery. Any further development will depend on foreign demand and the stimulating effect of the exchange rate depreciation on the export-oriented branches of production.

The labour-intensive branches of industry (such as the tailoring industry) are currently in a high-activity phase (see Graph 57). The high-tech industries (electronics, electrical engineering and machine-building) can be characterised by chaotic fluctuations but they also entered the recovery phase in early 1996.

The energy-intensive industries (metallurgy, chemical industry and oil-processing) entered the recovery phase in April-May 1996.

On the other hand, the new political and economic climate on the Balkans is generally favourable to the Bulgarian economy. The tendency towards increasing the volume and relative share of exports to the EU will continue due to the elimination of transport and telecommunication difficulties, and regardless of the cyclical downturn in Western Europe. An increase in transit transportation revenues can be expected as well. Also, there are certain possibilities for export expansion to the former Yugoslavian republics, including Bulgarian participation in the economic recovery programmes.

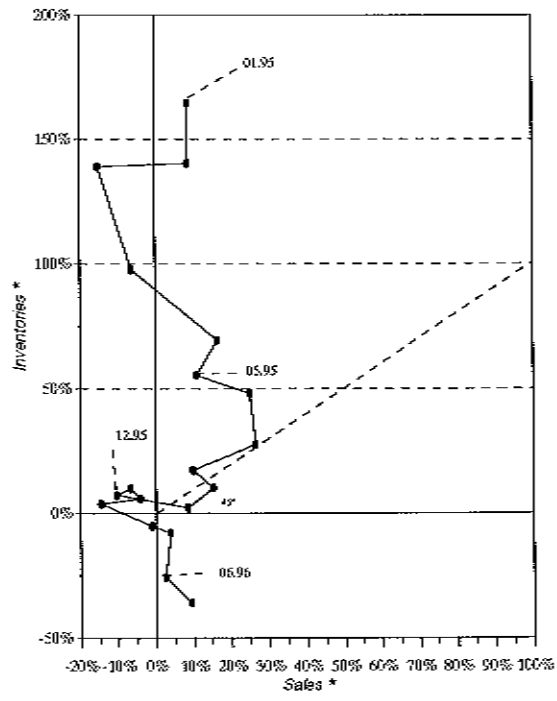
Industry, overall



* Percentage change over the same period of the previous year

Graph 55 Source: NSI, AECD

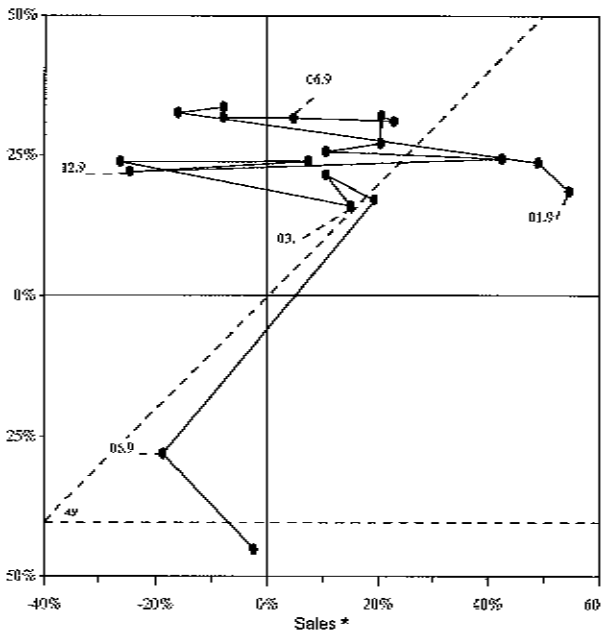
Labour-intensive sectors



* Percentage change over the same period of the previous year

Graph 57 Source: NSI, AECD

High-tech branches

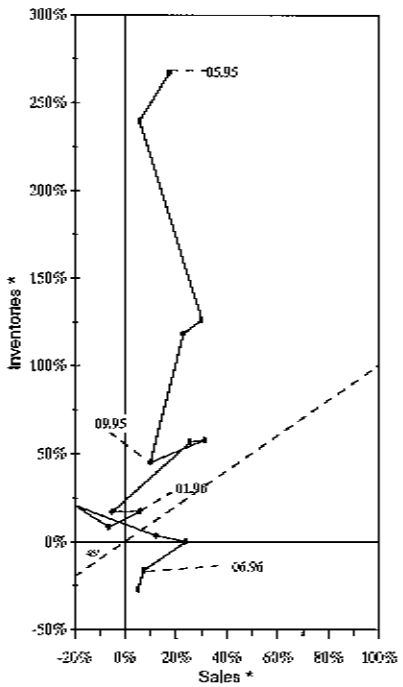


* Percentage change over the same period of the previous year

Graph 58

Source: NSI, AECD

Energy-intensive sectors



* Percentage change over the same period of the previous year

Graph 59

Source: NSI, AECD

Also, Bulgaria is making real effort to attract capital in order to modernise and enlarge the network of national transport communications, which are currently not suited to meet the demands of international traffic. On the other hand, re-establishing contacts with traditional suppliers of raw materials and energy resources in the former Yugoslavian republics means lessening export opportunities for Bulgarian oil products. The increase in metal, chemical and textile exports to the EU faces certain restrictions. In the first six-month period of 1996, business climate in Germany and some other EU countries deteriorated and thus further restricted export.

3. Prospects for the Second Half of 1996 and the First Half of 1997

Taking the exchange rate and high inflationary expectations under control is the major macroeconomic policy problem in the second half of 1996. The problem became more serious with the placement of nine banks under BNB supervision in late September and the uncertainty of the next IMF tranche. This uncertainty as well as the problems related to the import of grain, the growing government debt and the new price mechanism in the energy sector significantly hinder

the stabilisation effort.

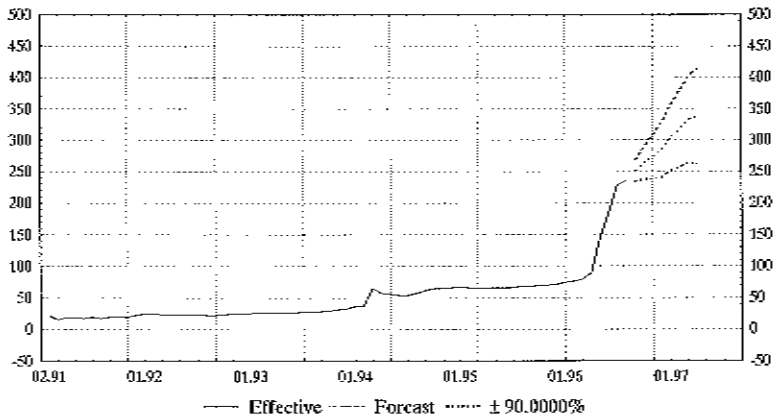
Having in mind the importance and urgency of those measures, inflationary expectations have a definitely short-term character, i.e. the expectations of high inflation in the short run are higher than those of high inflation in the long run. This structure of economic agents' expectations is illustrated on Graph 60. The fact that interest rates on long-term credits are roughly half of those on short-term credits (which is rarely true in other countries) reflects the expectations of economic agents that price increases in the short run will be more intense than in the long run.

Ratio between interest rates on long-term credits & short-term credits

Graph 60

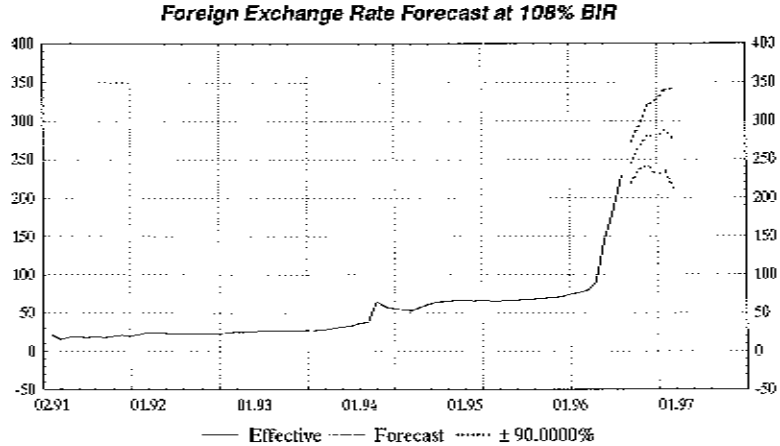
Source: BNB, AECD

Foreign Exchange Rate Forecast at 300% BIR



Graph 61

Foreign Exchange Rate Forecast at 108% BIR

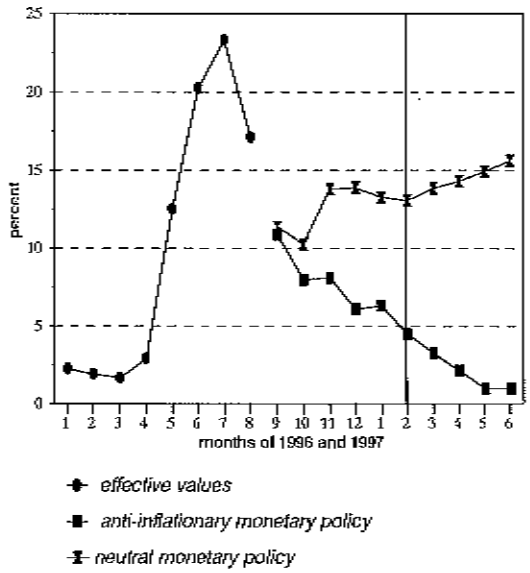


Graph 62

In this context, the 'breaking' of those short-term speculative expectations becomes one of the major monetary policy targets. Graphs 61 and 62 show AECD exchange rate estimates, based on a model which takes into account the relationship between the spot and forward exchange rates, as well as the relatively stable cyclical components, observed in the last few years.

Graph 61 shows the estimated exchange rate at a 108% simple annual interest rate, and Graph 62 shows the estimates based on a 300% BIR, effective since the end-September. It can be seen that the difference between the two cases is quite significant. Under 108% BIR, the exchange rate can be expected to stabilize at around 270 lev/USD by the end of 1996, and even to appreciate slightly in early 1997. And vice versa, given a BIR of 300%, only a slowdown of the lev's depreciation can be expected at the beginning of October and accelerated depreciation afterwards. An exchange rate well above 300 lev/USD can be expected in the beginning of 1997.

Monthly inflation



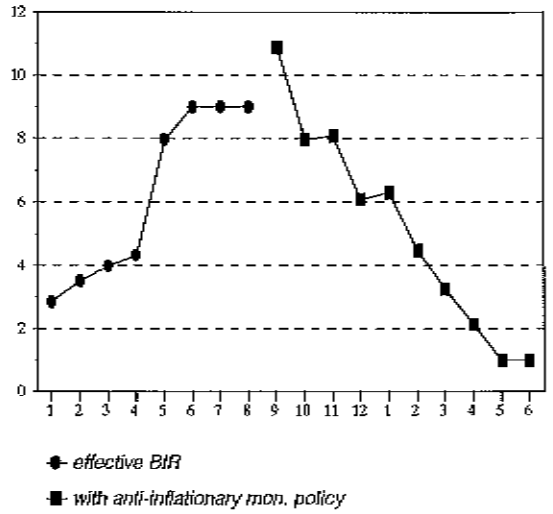
Graph 63 Source: NSI, AECD

It is noteworthy though, that in both scenarios the confidence intervals of the estimates widen significantly with time. Besides, past experience suggests that in principle the economy can enter a period of relative stabilization of the lev, under profitable interest rate differentials between the lev and the major western currencies. The problem at hand is to make sure that this differential exists at a low level of the lev interest rate, which is expected to guarantee a revival of the real sector of the Bulgarian economy. In this sense, the interest rate level of lev assets and liabilities directly depends on the stability of the exchange rate which closes the chain of relationships.

Under these circumstances, the interest rate policy cannot in itself be an efficient instrument of exchange rate stabilisation, and therefore of stopping high short-term inflationary expectations. Additional policy instruments are necessary.

In our case, such instruments are clearly the required reserves ratio and the autonomous increase of foreign exchange reserves. The latter is only possible through the inflow of foreign capital (IMF, IBRD, G-24, etc.), as well as through privatisation with the participation of strategic foreign investors.

Effective and forecast monthly BIR



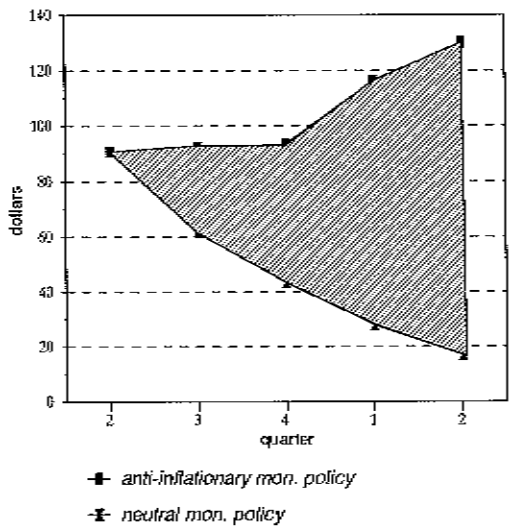
Graph 64

Source: BNB, AECD

Given the extreme complexity of the economic situation, simple forecasts are not feasible. Graphs 63 to 67 represent two possible scenarios. The first one assumes an adaptive monetary policy, i.e. monetisation of the emerging deficits. The second scenario relies on a tight monetary policy that takes control over the increase of the money supply primarily through a required reserves policy and the creation of favorable conditions of BIR lowering. As can be seen on the graphs, under an adaptive policy, the inflation rate will be around 15% at the end of 1996 and the beginning of 1997. An uncontrollable depreciation of the lev is possible as well. Under the second scenario, it is possible to lower the monthly inflation rate to 1% by mid-1997 and stabilize the exchange rate at around 230 lev per USD. In any case, creating favorable conditions fostering BIR lowering has to be at the core of an anti-inflationary policy.

Dollar average wage

(quarters of 1996 and 1997)



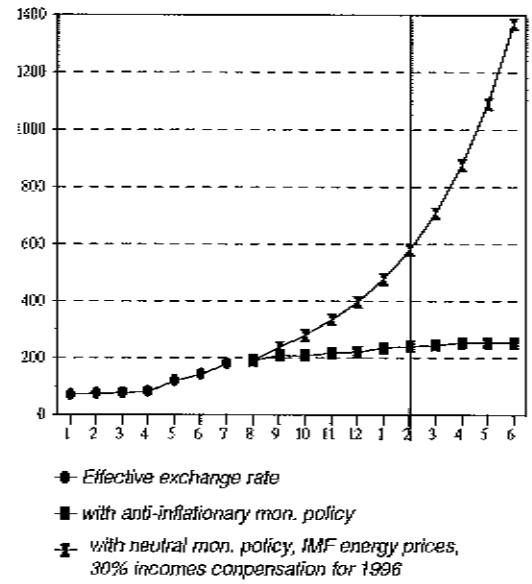
Graph 65

Source: NSI, AECD

Control over inflation has three aspects bearing upon incomes and price structure. A temporary decrease of the price of electricity to 2 cents per KWH over the January-March period of 1997 can ease substantially the stabilization policy pursued without destabilizing the price structure. Apart from that, the stabilisation of the exchange rate and the decrease of the inflation rate will have a

significant social effect in the context of the increased dollar value of salaries and wages.

Effective and forecast exchange rate

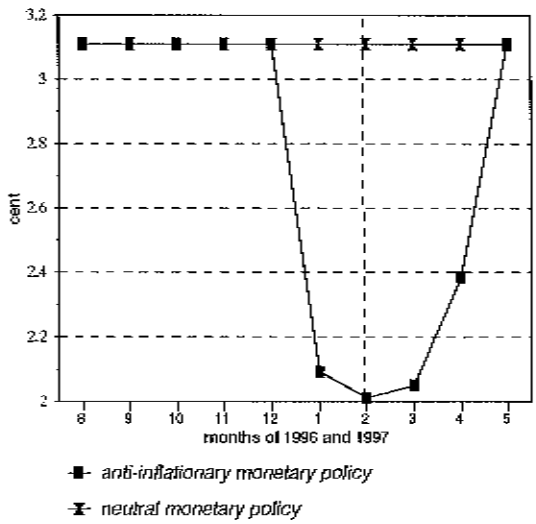


Graph 66

Source: BNB, AECD

The management of the domestic and foreign debts will be of particular importance to the nation's economy. Maintaining the BIR at 300% until the end of 1996 will lead to additional interest payments on the domestic debt of about 47.5 bn lev. The overall effect will, however, be far grater due to the nominal increase of the debt and the interest payments after the end of 1996. Preliminary figures show that in October alone domestic debt will increase by 95 bn lev if the base interest rate remains at 25 per cent per month. It is obvious that the shock BIR can hardly be endured by the fiscal sector for more than a month. What's more, even if the initial additional costs seem insignificant (another 2.9 bn in October), any debt increase will have a severe long-term negative impact.

Price of 1 kWh



Graph 67

Sorce: NSI, AECD

The impact of the high interest rate on the real and banking sectors is similar to the negative effect on the fiscal sector. There is a real possibility of a rapid increase of bad loans and deterioration of the financial state of otherwise stable financial institutions. In addition, inter-bank settlement can be obstructed.

Graph 18 highlights several other conclusions. Given the high level of bad loans in the banking system, the transition from high to low interest rate levels (in the context of an active deflationary policy of the type modeled at the AECD)

may follow two scenarios:

First, prior structural reform in the banking sector aimed at decreasing the share of bad loans in the banks' credit portfolios (also called bank re-capitalisation). Under this scenario, the government may undertake re-capitalization financing, provided the central bank is committed to a systematic BIR lowering. Consequently, the fiscal sector will make up for the re-capitalisation costs through a less expensive domestic debt servicing and increased tax revenues (due to an expansion of economic activity).

Second, if the re-capitalization process is not feasible prior to BIR lowering, a deflationary policy will inevitably worsen liquidity in the banking sector. What's more, the banking system will have to go through a lengthy period of high refinancing and strong supervision on BNB's part. A key element of the scenario is the strict pursuit of a restrictive reserve money policy and controlled, but sufficient for maintaining the liquidity needed, level of refinancing. Gradual restructuring, privatisation and re-capitalisation of the banking sector are indispensable parts of the scenario.

The 1996 crisis of the banking sector is a consequence of the policy mix of stabilisation and structural measures that did not follow any of the above scenarios. A major conclusion regarding the late-September measures of the BNB, is that these measures are sustainable for the government budget only on the condition, that deflationary measures (including lowering of the BIR) will follow shortly.

In 1997 Bulgaria will have to make 518 mn dollars worth of interest payments on the foreign debt and additional 280 mn in principal repayment (excluding operations with the IMF). These amounts fall shot of the current account surplus forecast by the AECD (270 mn dollars).

Therefore, the only available sources of capital account deficit financing are foreign resources through the IMF and other institutions, as well as the expected capital inflows from cash privatisation. Attracting short-term financial resources from the international capital markets will be possible in the second half of 1997, provided Bulgaria has consolidated its relations with the international financial institutions and put the bakes on the exchange rate's upward movements. Foreign debt payments will throw the domestic capital markets in a turmoil

that can only be controlled through a policy of BIR cuts.

The dynamics of the real sector will depend primarily on the changes in the foreign market's environment and the financial sector's crisis. In addition, industry will be influenced by the pace of cash and mass privatisation, and the agricultural sector - by climatic changes and the land reform.

The inner logic of industry's cyclical development suggests a transition from the first phase of recovery (i.e. cutting production at a lower pace than the decrease of inventories) to the second phase - expansion of production while cutting inventories. It seems logical to expect a steady growth, i.e. a period of increases in both production and inventories. The negative impact of the banking sector's crisis on the real sector's recovery, however, is hard to predict.

The negative impact of the crisis will include:

Maintaining a high interest rate level and a significant differential between interest rates on banks' assets and liabilities.

Shortened duration and insufficient volumes of credits.

Maintaining a significant level of problematic credits.

Low level of savings and investment.

High risk associated with all types of payment mechanisms blocking the normal intra-economy exchanges.

This influence may push the industrial sector back to the crisis phase (i.e. cutting production at a higher pace than the decrease of inventories). A real-sector's crisis will further exasperate the already aggravated state of the banking system and the government budget. Thus, lowering BIR while, following a tight anti-inflationary policy becomes even more important.

It can be expected that the influence of the foreign sector will be positive, because Germany and the other EU and CEE countries are expected to enter the upturn phase of their business cycle by mid-1996. In general, the devaluation of the national currency leads to an increase of the physical volume of exports. In Bulgaria, however, high inflation and the banking system crisis do not allow for changes in the terms of trade in order to boost exports.

The financial hardships will have a definitely negative impact on the agricultural sector, due to their coincidence with autumn field activities. Insufficient

financial resources and high interest rates significantly hinder autumn sowing, thus generating hardships in 1997. Therefore, hard-currency credits (amounting to about 100-200 mn USD) must be provided to the agricultural sector. Also, stable hard-currency prices of agricultural products should be guaranteed.

In general, a negative or at best zero GDP growth rate can be expected in 1996, and, if the banking crisis is overcome in time, a positive GDP growth rate can be projected for 1997. ❑

SUPPLEMENT

MACROECONOMIC SUMMARY TABLE 1996-2005r.

	UNITS	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
GROWTH AND INFLATION													
GDP current prices	bn.lv.	543	871.4	1502.14	2868.21	3999.40	4987.93	5805.43	6410.80	6906.79	7383.43	7877.09	8403.28
-investments	bn.lv.	40.7	65.4	180.26	344.19	479.93	648.43	812.76	961.62	1105.09	1255.18	1417.88	1596.62
consumption	bn.lv.	503.2	797.2	1268.16	2429.82	3396.25	4195.63	4836.58	5268.94	5599.58	5903.69	6210.48	6532.32
GDP real growth	percent	1.4%	2.6%	0.0%	2.0%	3.0%	4.0%	4.0%	4.2%	4.4%	4.6%	4.8%	5.0%
Consumer price index													
- average	percent	92.0%	66.6%	90%	109%	44%	25%	15%	7%	4%	3%	2%	2%
- end of period	percent	122.0%	32.9%	173%	60%	30%	20%	10%	5%	3%	2.5%	2.0%	2%
Implicit GDP deflator	percent	79.1%	56.4%	72%	87%	35%	20%	12%	6%	3%	2.20%	1.80%	1.60%
BALANCE OF PAYMENTS													
Current account	mln. USD	-202.3	-52	303	270	288	302	322	401	406	441	471	501
Trade balance	mln. USD	-16.8	132	307.00	276.00	266.00	259.00	253.00	279.00	307.00	337.00	367.00	397.00
exports	mln. USD	3935.1	5390	4942.00	5238.00	5571.00	5933.00	6323.00	6739.0	7182.0	7654.0	8126.0	8598.0
imports	mln. USD	3951.9	5258	4635.00	4962.00	5305.00	5674.00	6070.00	6460.0	6875.0	7317.0	7759.0	8201.0
Services (net)	mln. USD	-359.5	-316	-143.00	-149.00	-125.00	-108.00	-87.00	-39.00	-66.00	-66.00	-66.00	-66.00
Receipts	mln. USD	1341.5	1584	1566.00	1665.00	1783.00	1893.00	2008.00	2121.0	2241.0	2375.0	2509.0	2643.0
Payments	mln. USD	1701	1900	1709.00	1814.00	1908.00	2001.00	2095.00	2160.0	2307.0	2441.0	2575.0	2709.0
of which interest due	mln. USD	455	614	533.00	518.00	516.00	499.00	477.00	454.0	476.0	456.0	460.0	460.0
Transfers	mln. USD	174	132	139.00	143.00	147.00	151.00	156.00	161.0	165.0	170.0	170.0	170.0
Capital account *	mln. USD	29	241	-121.00	972.00	-404.00	-148.00	9.00	-73.00	36.00	-33.00	132.96	170.31
Medium and long term loans (net)	mln. USD	-333	-119	-248.00	11.00	-281.00	-220.00	-64.00	-297.00	-190.00	-260.00	-184.60	-158.70
disbursements		143	67	220.00	290.00	255.00	285.00	300.00	250.00	250.00	250.00	180.00	150.00
amortization due		476	185	468.00	279.00	536.00	505.00	364.00	547.00	440.00	510.00	364.60	308.70
Export credits extended (net)	mln. USD	263.1	292.6	294.00	20.00	21.00	22.00	23.00	24.00	26.00	27.00	27.00	25.00
Foreign direct investment	mln. USD	105.4	82	600.00	1350.00	200.00	200.00	200.00	200.00	200.00	200.00	290.56	304.01
Other capital	mln. USD	7.8	-15	-767.00	-409.00	-344.00	-150.00	-150.00	0.00	0.00	0.00		
Cost of DDSR	mln. USD	-716	0										
DDSR resources from IMF/IBRD		226	0										
Official BOP support (G-25)	mln. USD	202	0	70.00	36.00	0.00	0.00	0.00	0.00				
Overall balance	mln. USD	-375	430	252.00	1278.00	-116.00	154.00	331.00	328.00	442.00	408.00	603.96	671.31

Financing	mln. USD	375.0	-430.0	-252.00	-1278.00	116.00	-154.00	-331.00	-328.00	-442.00	-408.00	-603.96	-671.31
Change in reserves (increase -)	mln. USD	-343	-234.6	-324.00	-1419.00	187.00	-13.00	-114.00	-51.00	-316.00	-376.00	-576.96	-654.31
Obligations deffered	mln. USD	658	65	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Use of IMF credit (net)	mln. USD	162	-240.2	69.00	138.00	-74.00	-146.00	-221.00	-280.00	-129.00	-35.00	-30.00	-20.00
Change in arreats	mln. USD	-102	-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Oficial reserves (incl.gold)	mln. USD	1311	1546	1868.00	3287.00	3100.00	3113.00	3227.00	3278.00	3594.00	3970.00	4546.96	5201.28
(in months of imports)	mln. USD	3.0	2.8	3.86	6.30	5.55	5.21	5.04	4.82	4.95	5.12	5.53	5.97
(% of GDP)	mln. USD												
Current account	percent	-2.02%	-0.40%	3.53%	3.21%	3.34%	3.36%	3.42%	4.04%	3.87%	3.98%	4.05%	4.12%
Non interest current account	percent	1.70%	4.33%	9.74%	9.38%	9.31%	8.92%	8.49%	8.62%	8.41%	8.10%	8.01%	7.90%
FISCAL SECTOR													
Domestic debt - end of the year													
- base interest rate	bn.lv.	84.9	129.4	254.10	654.99	1026.24	1322.85	1615.11	1884.33	2393.40	2841.42	3274.19	3744.34
- bad loans obligations	bn.lv.	26.4	24.9	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60
- bad loans obligations denominated in dollars	mln. USD	1808	1808	971.10	971.10	971.10	971.10	971.10	971.10	971.10	971.10	971.10	971.10
Debt on government protection of deposits				500.05	900.94								
- in leva	bn.lv.			16.20	20.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00
- in dollars	mln. USD			61.20	61.20	61.20	61.20	61.20	61.20	61.20	61.20	100.00	100.00
Interest expenditures	bn.lv.	70.7	122.6	465.79	586.15	548.64	531.19	439.86	405.70	406.36	399.53	392.79	400.83
- internal debt	% of GDP	11.8	11.3	26.65	15.50	9.85	7.04	4.25	2.82	2.41	2.36	2.28	2.38
- external debt	% of GDP	1.2	2.8	4.35	4.93	3.86	3.61	3.33	3.51	3.47	3.05	2.70	2.39
Interest expenditures	% of GDP	13.0	14.1	31.01	20.44	13.72	10.65	7.58	6.33	5.88	5.41	4.99	4.77
Primary surplus	bn.lv.	35.0	64.4	122.67	256.37	334.25	367.41	290.27	192.32	207.20	221.50	157.54	168.07
-% of GDP	percent	6.4	7.4	8.17	8.94	8.36	7.37	5.00	3.00	3.00	3.00	2.00	2.00
Overall deficit	bn.lv.	35.6	58.2	343.12	329.77	214.39	163.78	149.59	213.37	199.16	178.02	235.25	232.76
-% of GDP	percent	6.6	6.7	22.84	11.50	5.36	3.28	2.58	3.33	2.88	2.41	2.99	2.77
Financing													
external	bn.lv.	-2.7	-11.6	-57.77	-41.47	-82.23	-128.48	-119.63	-295.69	-248.87	-254.74	-234.90	-213.32
internal	bn.lv.	38.4	69.8	400.89	371.24	296.62	292.26	269.22	509.07	448.02	432.77	470.16	446.08
-bank	bn.lv.	33.7	60.7	360.80	297.00	222.46	204.58	127.15	170.70	139.41	115.71	141.15	139.66
-non-bank	bn.lv.	4.7	9.1	40.09	74.25	74.15	87.68	142.07	338.37	308.61	317.05	329.00	306.43
MONETARY SECTOR													
Broad money	bn.lv.	418	584	1293.67	2327.81	2773.99	3653.75	3905.40	4442.00	4551.22	5062.62	5194.01	5747.76
- leva	bn.lv.	282	425	905.57	1629.47	1941.80	2557.62	2733.78	3109.40	3185.85	3543.83	3635.81	4023.43
- foreign exchange	bn.lv.	136	159	388.10	698.34	832.20	1096.12	1171.62	1332.60	1365.37	1518.78	1558.20	1724.33
Velocity		1.30	1.49	1.60	1.58	1.57	1.55	1.54	1.54	1.54	1.54	1.54	1.54
Net foreign assets	bn.lv.	-131.7	-10.3	77.18	662.72	566.63	574.39	646.99	680.41	889.45	1141.80	1536.63	1993.17
Net internal assets	bn.lv.	549.7	594	1216.49	1665.09	2207.37	3079.36	3258.41	3761.59	3661.77	3920.81	3657.38	3754.59
Domestic credit	bn.lv.	543.2	628.5	1216.49	1665.09	2207.37	3079.36	3258.41	3761.59	3661.77	3920.81	3657.38	3754.59
Government	bn.lv.	276.7	269.4	630.20	927.20	1149.66	1354.24	1481.40	1652.09	1791.50	1907.22	2048.37	2188.03

Non Government	bn.lv.	266.5	359.1	586.29	737.89	1057.71	1725.12	1777.01	2109.50	1870.27	2013.59	1609.01	1566.56
Other assets (net)	bn.lv.	6.5	-34.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				39.03	25.73	26.45	34.59	30.61	32.91	27.08	27.27	20.43	18.64
Base interest rate	percent	64%	56%	175%	62%	32%	22%	12.0%	7.0%	5.0%	4.5%	4.0%	4.0%
Interest on FX deposits	percent	5.0%	5.0%	6.5%	6.0%	6.0%	5.0%	5.0%	4.0%	4.0%	3.0%	2.0%	2.0%
Fisher criteria		0.6	0.5	1.58	0.53	0.25	0.16	0.07	0.03	0.01	0.01	0.02	0.02
Exchange rate													
average	leva per 1 $US	54.1	67.2	175.00	341.32	463.25	555.45	616.95	646.04	658.38	666.34	677.74	691.03
end of period	leva per 1 $US	65.5	70.7	270.00	412.64	513.86	597.05	636.85	655.23	661.53	671.16	684.32	697.74
Reserve money	bn.lv.	85.0	128.4	272.35	485.21	572.49	746.59	790.11	889.77	902.62	994.10	1009.81	1106.40
Multiplicator		4.9	4.5	4.75	4.80	4.85	4.89	4.94	4.99	5.04	5.09	5.14	5.20

**** IMF estimation are used***

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