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## EQUILIBRIUM IN AN OPEN ECONOMY\*

Equilibrium in the transition economy of Bulgaria is discussed on the basis of the IS - LM - BP model, and the conditions affecting its variables are identified. An approach in macroeconomic policy is offered, through which it is possible to make the economic mechanism more market-oriented.

The factors affecting the formation of the IS, LM and BP curves are analyzed. It is argued that in order to overcome disequilibrium in the economy, a suitable instrument can be the mixed monetary-fiscal policy, suggested by the concept, known as the Mundell-Fleming model. Neither of those policies, applied individually in order to cure the unbalanced economy is able to offer a solution, while the two of them used simultaneously, can produce such an effect that deficiencies in either of them can be offset by the other, since in order to counteract internal disequilibrium, an expansive fiscal policy will be used, and in order to counteract the external disequilibrium - a restrictive monetary policy.

JEL: F41; F43

### Background

The level of openness of any economy is usually measured through the import-export/Gross Domestic Product ratio. Intrazonal trade is excluded from the Eurozone figures. If we were to take that into consideration for the individual countries, then the above ratio would greatly outstrip the figures in the last row of Table 1.

Table 1

Trade in goods for the regional zones expressed as a percentage of GDP  
(1995 - 1998 averages)

Countries	Eurozone		Japan		USA	
	Export	Import	Export	Import	Export	Import
Other developed countries	4.6	3.7	0.8	0.9	2.6	2.8
Emerging markets	6.0	5.3	4.8	4.0	3.6	5.0
Asia (excl. Japan)	1.3	1.6	3.9	2.8	1.5	2.7
Economies in transition	1.7	1.3	0.1	0.1	0.1	0.1
Latin America	0.7	0.5	0.4	0.2	1.5	1.7
Other countries	2.3	1.9	0.4	0.9	0.4	0.5
Total	16.6	14.3	10.4	8.9	9.7	12.8

Source: Eurostat and IMF.

\* This article is an adapted version of the paper given by the author at the conference entitled "The Economy of Bulgaria. The challenges of the transition", which took place on November 2nd 2001 at the National Palace of Culture.

Table 2

Bulgarian Export and Import in rel. to GDP (%)

Year	Export	Import	Average
1997	48.5	48.4	48.5
1998	35.1	40.9	38.0
1999	32.0	54.3	38.1
2000	40.2	54.3	47.3

Source. *Sotirova, E.* The monetary policy of BNB after 1990 (dissertation).

The equilibrium in an open economy can be analyzed on the basis of the model IS - LM - BM, which incorporates into a system the commodity, monetary and currency markets. The relation between the interest rate and the national product by way of investment demand, which in fact is the determinant of the commodity market, is represented by the IS curve. Its negative slope suggests that a decline in interest rate leads to a rise in investment and consequently in the national product.

Interest rate is, on its part, dependent on the money supply volume. The demand and supply of money have an effect on it as well as on the level of the national product. In the model the above relation is expressed through the LM curve. It shows the balance of the money market achieved through the interaction between the interest rate and the national product. The positive slope of the curve shows that if the interest rate increases, the demand for money meant for the purchase of financial assets goes up, whereas the available supplies of money in public possession is relatively decreasing and the prices as well as the national product go up.

In an open economy the position of the curves IS and LM is affected by the status of the balance of payments. In the model it is illustrated by the BP curve, sometimes denoted as FE (foreign expenditure), which synthesizes the dynamics of the country's capital and commodity inflows and outflows. The curve's position is also determined by the interest rate and the national product. A change in the country's interest rate leads to a change in the direction of the capital flow. A rise in inflow means a rise in foreign capital inflow, which leads to a positive balance in the capital section of the balance of payments, a respective decrease in inflow would lead to outflow of foreign capital.

When changes in the level of national product occur, the export/import flow ratio also changes along with the current account balance, since changes in national product are just another manifestation of fluctuations in the aggregate revenue level. Changes in interest rate and national product in an open economy lead to changes in the balance of payments and the position of the BP curve, which, on its part affects the curves IS and LM.

## Equilibrium in an Open Economy

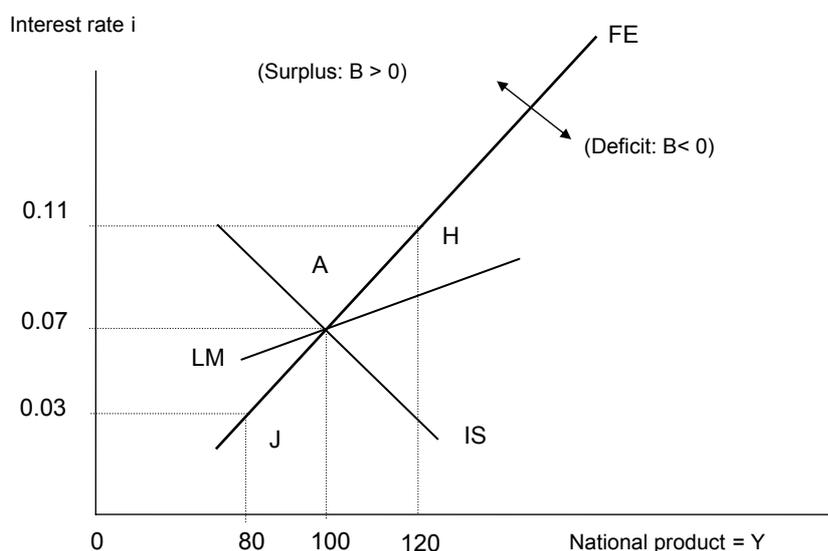


Figure 1. Equilibrium in an open economy, represented through the IS - LM - BP model

Source. Lindert, P, T. Pugel. International economics. New York, 1992.

Figure 1 illustrates the interaction of the three markets - the commodity, the monetary and the currency markets, i.e. the equilibrium in an open economy. The model is a reflection of empirically tested and theoretically substantiated functional relations. The IS curve is shifted to the right whenever there is an increase in export (E), investment (I), or government expenditure (G), because the increase in those extras requires a higher level in national product (Y). If there is an increase in import (M), savings (S), or taxes (T), it is shifted to the left, since the former are deducted from the aggregate revenue. The LM curve is shifted to the right whenever there is an increase in internal monetary supply, since each level of interest rate requires a corresponding level of income in order to satisfy transactional money demand. In the case of an opposite dynamic flow of monetary volume it is shifted to the left, which can be neutralized through cuts in transactional money demand. The BP (FE) curve is shifted to the right whenever there is an improvement in the current balance of payments (increase in export or a decrease in import, rise in the exchange rate). The shift to the left indicates the opposite dynamics of export, import and the exchange rate.<sup>1</sup> The above variables determine the dynamics of an open economy, the effectiveness of growth and the level of consumption.

<sup>1</sup> Keith, P. International Finances. London, 1992.

## **The effect of the Bulgarian transition on the variables in the model**

### *The formation of the IS curve*

The actual interest rate on demand deposits is, as a rule, a negative quantity, or a quantity close to zero. In 2000 it was 0.30%. This can be no motive for the formation of credit resource or, as a result, investment funds. Inflation disables the effect savings have on accumulation and shifts the orientation of commercial banks towards conservative policy, a manifestation of which are the great margins in interest rates on deposits and credits. For instance, in 2000 the margin was 14 points. That means that interest rate does not regulate the investment process and the balance of the commodity market. Another manifestation of conservative banking due to reasons having to do with the interest rate is the outflow of credit resource abroad. Over 30% of that resource of commercial banks is exported and serves foreign economies. Their assets abroad outweigh their foreign liabilities more than twice, they minimize the risk connected with low returns and do not function as *real financial intermediaries*. This becomes clear if you look at their bank asset data. In 2000 the commercial banks' receipts from financial institutions amounted to 40%, while the securities in their working portfolio - to 11%.<sup>2</sup>

The interest rate is set according to the profitability of quarterly state securities, and the purpose of the latter is to help raise funds to finance the budget deficit. Therefore it is regulated not by the market, but by the fiscal policy (the state). The presence of the IMF in Bulgarian economy also largely affects the monetary market.

The above peculiarities of the interest rate lead to the conclusion that its behaviour is not market - oriented, since its level and dynamics are not the pure result of competition between financial intermediaries. This deforms the IS curve and the internal microeconomic balance, the purpose of which is to function in conditions of full resource utilization and stable prices, ensuring production growth and conditions for external equilibrium. That does not mean equalizing the various balances of the items on the balance of payments. The goal of the external equilibrium is much more complex. One priority could be the unbalanced capital or current account, which requires a greater volume of import or export, or a greater or smaller inflow of capital.

### *The formation of the LM curve*

The currency board rules determine the supply of money and the monetary policy. The nominal anchor of the lev renders the supply of the monetary market dependent on the state of the balance of payments and most importantly on the current account balance. The monetary volume will depend on export receipts, the

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<sup>2</sup> BNB. 2000 annual report.

elasticity of export supply and import demand, capital inflow and outflow with respect to the country, the state of the foreign debt and the currency reserve as well as some other variables having to do with the openness of the economy.

The fixing of the exchange rate determines the range of the type of monetary policy, which monetary institutions are unable to conduct. The currency board system limits the above possibility but does not exclude it altogether. The important thing is to subordinate the monetary policy to the fiscal policy, i.e. to government expenditure.

What are the advantages of the fixed exchange rate of the lev and monetary supply and what opportunities is our macroeconomic policy denied? A common opinion among the public is that the financial stabilization is the offspring of the currency board. If we look at it more analytically, we would interpret it as a long-term phenomenon, which induces growth and can be translated into the language of the ordinary consumer. If it does not render itself into higher income, real economic growth and a decreasing level of unemployment, does our being correct payers to our foreign creditors make any difference? Poverty is on the rise, the quality of life is going down and those two are pretty obvious.

Here are some "academic" considerations: tight domestic market due to insufficient consumer demand; unpaid salaries both in the budgetary sphere and in the real economy; uncollected taxes and customs duties, stable foreign debt and a critical level in its servicing; a minute or null actual interest rate on deposits; alarming deficits in districts' budgets alongside with a fiscal reserve in the national budget with the previous government; considerably higher annual rate of inflation compared to that of Germany (despite the bondage of the lev to the mark, which should bring the rates closer); lack of a capital market.

All these, together with the description provided at the analysis of the circumstances in which the IS curve is formed, have lead us to the conclusion that *the interaction between the commodity market and the monetary market does not create the conditions for internal equilibrium, required in order for the economic growth to be effectively influenced by the openness of the economy.*

#### *Conditions in which the BP curve is formed*

The current account of the balance of payments features most of all a deficit, which, in principle, should not be associated with ineffective influence over economic growth. The balance may be formed by the predominant share of investment goods in import, which has a positive effect on the economy. There do exist such periods in the economic history of Bulgaria, but the situation is different during the period of transition. The negative balance of the current account is formed not only by reduced import volume, but also by increased export, which is evidence of the unfavorable structure of the country's export - import flow. Considerable changes in the geographical structure of the country's foreign trade are pretty obvious (Table 3).

Table 3

Geographical structure of Bulgaria's export and import (%)

Regions	Export		Import	
	1991	2000	1991	2000
CEEC	57.7	20.9	48.5	37.4
OECD	26.2	67.8	32.8	53.1
incl. EU	15.6	51.2	20.7	44.1
EFTA	3.3	1.3	7.8	1.3
Arabic countries	8.3	2.3	4.5	1.3

Source: NSI; Foreign Trade.

Table 3 shows the high speed of changes in the geographic structure of our foreign trade. The economy's inertness, however, has not let us carry out such important changes in commodity inflow and outflow for a period of ten years. There is no time for market adaptation, something that is required even by dynamic economies featuring highly elastic demand and supply. With such radical changes in the structure of trade inflows and outflows with respect to Bulgaria, the openness of the economy favours the drain of national income and resources meant for economic growth.

The increased share of the inflow and outflow with respect to Europe is a positive phenomenon, because in this way the country gets in touch with a demanding and highly technological market. This is of certain importance for the future, but it also raises problems for the current period. There arises the issue whether the tempo, with which we changed the geographic structure of import and export, has not lead to the loss of economic wealth - an indicator, which is used to measure the benefit brought around by the openness of the economy. For a period of that length it is almost impossible for import and export to be formed on the basis of a market assessment of competitive advantages. The structural characteristics of import and export are not based on a well - designed marketing strategy and are very often chaotic.

The withdrawal from the Arab market, that of the developing countries, Russia and the CIS can hardly be called a well-planned move. The lost benefit is huge, and the price we would have to pay in order to restore some of the previously existing market niches based on promising competitive advantages is too high. In this respect the export of cigarettes, wine and food to these countries is quite indicative. Before 1990 our export to Arab countries amounted to 1,2 bln. USD and now it only amounts to tens of millions of USD. The trade deficit with Russia this year is expected to be over 1 bln. USD against the positive balance in the mid-90-ies of the previous century.

Another characteristic of import and export is the change in the structure of the goods (Table 4). An important trend is the rise in the export of goods featuring low processing requirements and the rise in the import of foodstuffs.

Table 4

## Dynamics of import and export structure in Bulgaria (in %)

Categories of goods	Import		Export	
	1992	2000	1992	2000
(0) Foodstuffs and livestock	13.1	5.9	5.4	4.5
(1) Beverages and tobacco	10.5	3.2	2.3	0.7
(2) Raw materials (non-food)	10.4	5.9	5.1	5.5
(3) Mineral fuels and lubricants	6.7	14.8	37.6	26.8
(4) Animal and vegetable fats	0.4	0.2	0.1	0.3
(5) Chemical products	12.6	11.6	9.2	9.4
(6) Machinery, equipment and transport vehicles	17.9	9.6	12.7	18.7
(7) Miscellaneous ready-made goods	10.8	21.3	21.3	24.9
(8) Consumer goods	0.0	1.6	0.0	3.8
(9) Other	17.6	25.9	6.3	5.4

Source. NSI, 2000, 16-20.

The change in the elasticity coefficient of export supply and export demand affects the formation of the BP curve and the openness of the economy. Changes in export and import structure lead to a substantial decrease in price elasticity both ways, which does not let them adapt effectively to changes in the conjuncture on the international market. It is hard for us to derive any export structure competitive advantages from changes in international prices, and as far as import is concerned, it is hard to find alternative substitutes for the goods which have become more expensive, but are needed for our economic growth. Our trade partners adapt to the low acquisition power of our domestic market, by offering low-quality goods. This is only natural at the existing level of gross income per capita (Table 5).

Table 5

## GDP per capita based on parity exchange rates (doll.)

Countries	1994	2000
Bulgaria	5.019	5.170
Croatia	5.960	7.120
Czech republic	12.130	13.150
Hungary	8.380	11.190
Poland	6.050	8.800
Romania	5.550	5.850
Slovakia	7.260	10.240
Slovenia	11.520	15.590

Source: OECD, Eurostat.

The information in Table 5 shows how unfavourable the position of Bulgaria in the CEEC zone is according to the domestic market acquisition power indicator. This inevitably slows down growth and reduces the benefit brought about by the openness of the economy.

In order to assess the competitive advantages of a country in international trade, the indicator terms of trade is used - the export/import price ratio, which can be also expressed as the ratio between export receipts and import expenditure. If we disaggregate the above using the criteria like labour intensiveness, energy intensiveness, technology intensiveness, capital intensiveness and apply the standard trade classification, we will notice that labour-intensive goods featuring low relative prices prevail in export, while in import the greatest share is that of the capital-intensive goods featuring higher prices. This shows a tendency towards unfavourable values of the indicator (Figure 2).

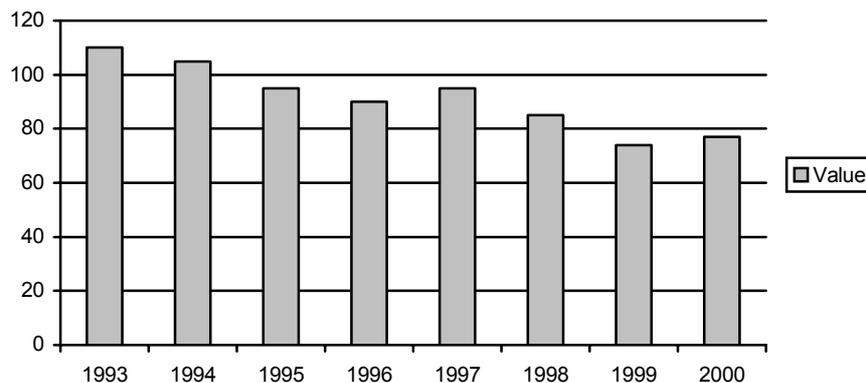


Figure 2. Dynamics of the terms of trade indicator

It falls below 1, which is an expression of unfavourable macroeconomic tendencies. It lets us measure trade effectiveness on equivalent commodity groups and arrange industries according to their level of competitive advantages.

The analysis of the information on flows in international trade shows that the market mechanism doesn't indicate which branches can be marked as priority branches. One thing is clear - the prevailing part of our export consists of energy-intensive and material-intensive goods, which feature low added value and insufficient competitiveness. This tells us that trade openness of the economy reveals new channels for national income drainage, especially when subsidized energy-intensive and material-intensive items are exported. The above conclusion is based on the fact that metals and jobbing done in the sewing industry represent a substantial share of trade with Europe.

With respect to trade in goods according to industry origin, grouped into export-oriented and import substitutes, we could assess the information from the current

account of the balance also in view of the way it affects the allocation of resources among the branches. It would be good if that process shifted resources from production of low effectiveness to highly effective one. However, that is not so, although judging by the pro-European characteristics of the geographical structure of import and export we are to expect the above effect. One example is the deployment of foreign capital mainly in the mining industry - heavy chemicals (Sodi - Devnya), non-ferrous industry (MDK - Pirdop), cement industry (Batanovtsi, Dimitrovgrad, Zlatna Panega). In the processing industry so far this holds true only of brewing as well as articles made of porcelain and kaolin. There is no substantial direct investment in high-tech branches - instrument-making, information services, pharmaceuticals.

If we include into the analysis the influence of the indicator "terms of trade", with which we would be able to assess to what level foreign trade has turned into a channel of unequal exchange, we could draw the conclusion that it is a factor for the so-called immiserizing growth. The latter can also be caused by ineffective protectionist policy, for instance, if customs duties have not been optimized in accordance with the general rule - duties should go up along with the rise in the level of processing of imported goods.

In order to be more precise in the formation of the BP curve it would be useful to take a look at the indicator "*crossindustry* and *inter industry* origin of the traded goods". In the first case we trade in finished branch goods depending on the comparative advantages the country has in the respective branch. Such kind of trade represents an outdated model. Its modern version would feature complementing components belonging to complex end-products from the same branch, which explains why developed countries simultaneously import and export goods of a given branch.

There is a simple formula for computing the interindustry trade - the export/import difference over their sum is subtracted from one -  $IIT = 1 - (\text{Sum of } X - M / \text{Sum of } X + M)$ . It shows that the interindustry trade index represents a number between zero and one. Towards the end of the 80-ies the share of that kind of trade was as follows: USA - 51%, Canada - 55.7%, Germany - 65.5%, France - 72.3%, Great Britain - 68.8%.<sup>3</sup>

The interindustry character of foreign trade is its modern trajectory, because that is what makes the economies of the trading countries complementary along with all the advantages of specialization, economies of scale, production costs, the absorption power of the market and resource mobility. The concept "agriculture, tourism, textile - priority branches" is no longer plausible. For this country the index of interindustry foreign trade is hard to encompass statistically. That shows that its structure is ineffective. However, it can hardly be any different, having in mind the current production structure.

When analyzing the capital account on the balance of payments we should first and foremost remember the textbook dictum stating that, as a rule, international corporations do not transfer substantial financial flows to their branches abroad, but

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<sup>3</sup> Lindert, P., T. Pugel. Op. cit., p. 97.

rather technology and know-how. A common explanation of their motive for foreign direct investment is the advantage brought about by a monopoly or oligopoly.

Simplistic as it may sound, the above statement provides an answer to the question why "strategic investors" have not yet opened counters routing cashflow towards Bulgarian economy. It is possible to find such a niche in power engineering. Quite indicative of that is the interest huge international corporations show towards the Gorna Arda cascade, the Maritsa Iztok complex, The Varna thermal power plant, the nuclear power plants, some hydrostations and the oil refineries. Bulgarian power engineering, along with its associated transfer, distribution and transportation infrastructure is gradually becoming the focus of monopolistic competition among American, Russian, German, British and French corporations.

The capital account of the balance affects the macroequilibrium in terms of maturity structure of the country's capital inflow and outflow. Foreign investment in Bulgaria represents a great part of the short-term securities, that is why changes in financial assets' profitability cause shifts in their movement. At the same time the relative stability of our investments abroad practically renders labour excessive and reduces its selling price, because of the fall in potential employment. In effect our currency reserve also serves foreign economies.

There is an analogy between the effect of capital exchange and trade. Profits and losses are incurred by importers and exporters from countries exchanging capital, in much the same way as surplus is formed with producers and consumers at the import and export of goods.

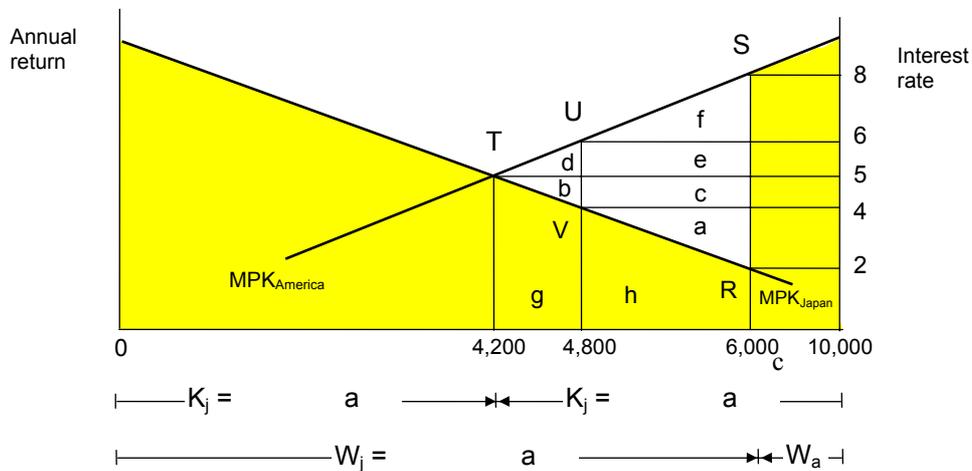


Figure 3. Profit and loss in international capital lending

Source. Lindert, P., T. Pugel. Op. cit., p. 567.

On the abscissa in Figure 3 there are set the values of the borrowed capital in two hypothetical countries - Japan - a lender and America - the borrower. If all the funds of

Japan were invested in its own economy, the return on real assets would go down to point R (2%), while in America, where there is capital shortage, it would stay high, in point S. The world product is represented by the gray area allocated between the two countries under the curves of the marginal capital product.

As a result of international capital mobility from Japan to America, competition levels off the marginal return in point T at 5%. Both countries feature economic agents incurring losses as well as profits. In America the losing ones are along the MRC curve between point S and point T. Those who reported profits at 8% return, are now incurring losses, because it has gone down to 5%, and those who did not have the opportunity to invest, are now doing so at a level of 5%. In Japan those who were incurring losses by investing in their own economy at 2% return are now making profit thanks to the loan to America at 5%. Those are on the MRC curve between point R and point T. Hypothetically Japan's profits equals America's losses. However, that would depend on the elasticity in the demand and supply of the internationally loaned capital, the level of capital scarcity or surplus, as well as the tax and monetary policies of the two countries.

If we apply those standard theoretical dependencies to the current situation in Bulgaria, keeping in mind the direction and the dynamics of capital inflow and outflow with respect to the country, we would be able to draw essential conclusions concerning the effect the capital account of the balance of payments has over economic growth. Taking into account the anomaly - we need foreign capital on the one hand, while Bulgarian lending funds serve foreign economies on the other, and compare the amount of capital we have exported to the amount of foreign capital here, we can draw the conclusion that the benefit from capital inflow is smaller than the loss, caused by the outflow of Bulgarian credit resource. The measurement's precision depends on the comparison between the current gain from foreign capital and the future payments of interest and principal. For more than 12 years the amount of those payments has been stable at a high level, and the debt servicing indicator has some critical values.

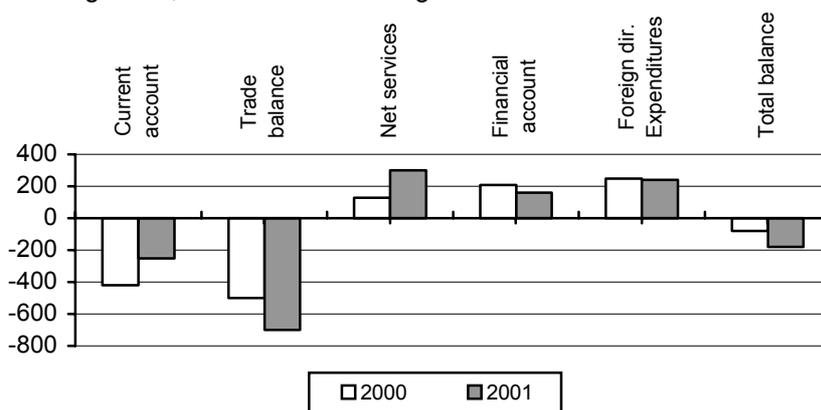


Figure 4. Major indicators of the balance of payments of Bulgaria for the first half of 2001.

Source. BNB.

Figure 4 shows that in comparison with the same period of the previous year, there has been some improvement in the current account, but the deficit level is still 285 mln. USD. The export has grown by 8.9%, and import by 12.7%. The greatest relative share is that of resources and materials - 42%, but in import they are also at the top - 36.58%. Investment goods represent 23.16%, but here belong also motor vehicles, a great number of which are second-hand cars.

With the services item, the positive balance is formed mainly by tourism, which is currently not signalling any favourable short-term forecast. Foreign direct investment amounts to 274 mln. USD, which is less in comparison with the same period of the previous year. The increase in the outflow of credit resource from commercial banks continues. For the first six months of the year, the sum total of their deposits abroad has grown by 240 mln USD, out of which 132 mln. were transferred in July only. *The negative balance of the total balance of payments for the first half of the year amounts to 160 mln. USD, while the deficit for the same period last year was 51 mln.* The deficit is fully covered by BNB's reserves, which have gone down by 164 mln. for the first six months of the year.

### **The choice of macroeconomic policy in an open economy**

For a very open economy the Mundell-Fleming model recommends the mixed type of fiscal and monetary policy when solving short-term problems (a short run solution: monetary-fiscal mix)<sup>4</sup> Because of differences in the way monetary and fiscal policy affect internal and external economic equilibrium, it offers an original way to overcome disequilibrium.

In order for the monetary policy to lead to positive results the interest rate has to be reduced and, in order for the fiscal policy to lead to positive results the interest rate has to be increased. The expansive monetary policy reduces the interest rate, which leads to increase in aggregate demand, employment and gross product. However, such kind of policy at a fixed interest rate has an adverse effect on the balance of payments, because the reduction of the interest rate causes an outflow of capital, increase in prices and unfavourable current balance due to capital drainage and reduced export. If the rate is not fixed firmly, such kind of policy can be an instrument for solving the current macroeconomic problems. This can be seen in Figure 5, which illustrates its mechanism through the example of equalizing the active balance of payments.

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<sup>4</sup> The model is discussed in detail at an easily comprehensible level by *Pilbeam, K.* International Finance, publ. by FTP, 1996; *Lindert, P., T. Pugel.* Op. cit.

## Equilibrium in an Open Economy

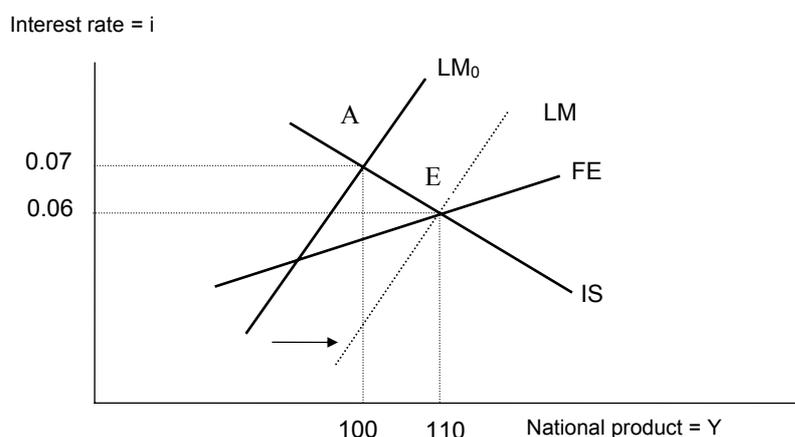


Figure 5. Equalizing the active balance of payments at a fixed exchange rate

Expansive fiscal policy starts with an increase in government expenditure and/or a decrease in taxes, which leads to an increase in interest rate, inflow of capital, increase in aggregate expenditure, income and prices. That is a convenient mechanism for solving current problems, but in the long run it makes the situation worse. *It is impossible to avoid the negative effects of the two policies in the long run if those are applied individually. Only if they are applied jointly is one of them able to offset the deficiencies of the other.*

Such an approach, justified by the Mundel - Fleming model, is widely used in the developed countries. It is extremely necessary for this country, however, its application is impossible because of the currency board, whose rules do not allow the use of the exchange rate, money supply and interest rate as macroeconomic equilibrium tools. The combination of fiscal and monetary policy is needed due to the presence of both internal and external disequilibrium - external debt, high level of unemployment, annual inflation rate about 10 - 12 %, low level of real growth and a negative balance of payments, but it is impossible because of the frozen monetary policy and the fact that the market is not taken into consideration when setting the interest rate.

The currency board has helped solve a number of serious problems - the inflation rate, budgetary policy, interest rates, exchange rates, but it has also led to a greater number of lost benefits. There arose a kind of a paradox. Financial stability did not turn into economic growth and increased real income, increased employment in the area of production, internal equilibrium. Monetary policy is blocked, fiscal policy is restrictive, the interest rate on deposit accounts is negative, that on credits - sky high, banking is conservative, the balance of payments is offset with the help of foreign loans, the inflow of foreign capital is in line with privatization dynamics and dies off as soon the resources of the

latter have been depleted; on the other hand we eulogize financial stabilization, on which macromanagerial self-contentment feeds, the latter being actually founded on external factors - the presence of the IMF and the World Bank in the economy and the negotiations over the accession to the European Union.

Isn't it high time we reassessed the currency board as an instrument to solve issues of growth? In the world economy there are 14 countries featuring such a system (half of them are city-states). Wasn't the currency board introduced because of politicians' inability to manage the economy and in particular because of the large foreign debt of the country? Today conditions are different, and the attempt at managing political democracy seems trustworthy and leads to positive expectations.

The coexistence of a high of unemployment level, unsatisfactory level of real growth, progressive stagnation of the market and increasing poverty level with the deficit in the balance of payments, that is, the presence of both internal and external disequilibrium, along with the lack of monetary policy, based at that on the program and recommendations of the IMF, is hard to overcome. A combined ailment should be more easily treated through the use of a combined therapy based on the mix of a fiscal and monetary policy (Figure 6).

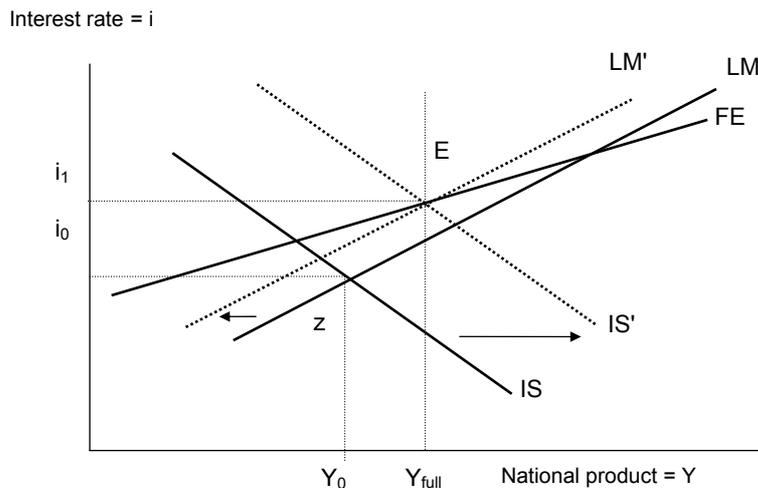


Figure 6. Combined monetary and fiscal policy

Starting at point Z, at national income  $Y_0$  below the level of full employment  $Y_{full}$  and a deficit in the BP, there can be achieved full employment and the desired balance equilibrium in point E through the simultaneous activation of monetary and fiscal policy. The restrictive monetary policy generates high interest rate

and attracts foreign investment, and the expansive fiscal policy creates the conditions for full employment. In this way, as is shown in Fig. 6, the IS curve is shifted to position IS', and the LM curve - to position LM'. With this combination the government can borrow capital, but the money supply will not increase. That boosts the volume of credit resource and its transformation into real investment.

The combination of the two policies achieves Mundell's assignment rule - *the aim of the fiscal policy is the stabilization of the internal economy, that of the monetary policy - the stabilization of the balance of payments*. Following this rule, every kind of policy would be targeted to a particular goal. Then each of the curves in the IS-LM-BP model shifts in the right direction clockwise around the point of macroequilibrium in the open economy.

In this combination it is possible for a particular aspect of the policy to encounter a time lag and lead to unfavourable expectations in economic agents. Time lags erode the effect of the mixpolicy, but they can be neutralized. The conditions may stay the same, but they would not get any worse. The monetary policy will push the BP curve towards a position needed for the equilibrium in the balance of payments, and the fiscal policy - towards inflation and unemployment.<sup>5</sup>

The eager protection of the current constitution of the monetary system in this country is defended by two major arguments: a) if changes are introduced in the currency board, the country will go back to the situation in which it was before its introduction, b) if the currency board is kept, it will be easier and less painful for Bulgaria to be granted membership in the European monetary union, and in particular the ERM II (Exchange Rate Mechanism).

A counterpoint to the first argument could be the consideration that a major share of the bank capital will soon be privatized, what is more, that will be done on the basis of foreign property. Its management will probably act in a much more responsible, disciplined and adequate manner in comparison with the Bulgarian management prior to July 1997. BNB has already acquired the technology of conducting targeted monetary policy. But the inflationary targeting of the latter requires a mix of monetary as well as fiscal policy.

The real sector of the economy has already been privatized, too. It's share in the creation of GDP is close to 70%, that is, close to the optimum. Therefore we could say that the public wealth drainage tap is gradually closing, which also narrows the "natural" basis for corruption. The privatized sector itself will oppose the drainage of the public sector, because it will be needed for entrepreneurship. Economic legislation is being developed and harmonized with the European

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<sup>5</sup> There are a lot of publications on this issue. See *Minasyan, G., V. Yotsov, M. Nenova*. The currency board in Bulgaria, Sofia, 1998; *Savov, S.* The economics of transition. Sofia, "Siela", 1999; *Minasyan, G.* Financial stabilization and economic growth. - In: Bulgarian economy. The challenges of the transition. Sofia, UPH "Economy", November 2001; *Nenovski, N., K. Hristov*. Monetary regimes and the real economy. Discussion papers. BNB, 10/1999.

legislation, although premature harmonization (before the country has been granted full membership to the EU) has its side effects.

A counterpoint to the second argument: there is the possibility for the country to be better prepared when entering the Eurozone and to fulfill the Copenhagen criteria, especially the requirement of assuming the responsibilities of a full membership through exercising control over a fluctuating exchange rate. This way the lev can achieve real market assessment of its relative purchasing power. Its current nominal base is slightly different from its actual exchange rate. The currency board no longer provides normal conditions for the functioning of a market economy.

"Investors (domestic, as well as foreign) rely on the fixed exchange rate and their decisions are greatly affected by it. The exchange rate is eliminated and there is no way to properly assess the economy's potential to manage with the various forms of currency shocks."<sup>6</sup>

If the period following the introduction of the Currency board is split into two - 1997 - 1998 and 1999 - 2000, it will become obvious that macroeconomic indicators have changed for the worse during the second half (Table 6).

Table 6

1999 - 2000 macroeconomic indicators for Bulgaria

Indicator	1999	2000
Inflation at year end (%)	6.2	11.4
Average annual inflation (%)	1.8	13.4
GDP per capita (USD)	1510	1459
Real economic growth (%)	1.75	-0.38

Source: AEDP. 2000 annual report, p. 2; BNB. 2001 annual report, p. 149-152.

In the conditions of a Currency board the monetary mechanism for equalizing the balance of payments does not work despite the theoretical grounds for such possibility. In 1999, for instance, the money base grew, but the deficit in the current account also rose, that is, export shrunk. In 2000 the situation was similar. The deficit in the current account did not reduce money supply. The great share of import materials, which grew more expensive, overrode the rule, according to which the devaluation of the lev should stimulate export. Export goods become less competitive, because the production of a great number of them requires imported raw materials and intermediate products.

Monetarization of the economy is an indicator of its market-oriented functioning, but since 1997 it has been deteriorating, a substantial factor for

<sup>6</sup> *Minasyan, G.* The currency board: a way to the European Union and the Euro. – In: Bulgarian economy. The challenges of the transition..., p. 26.

which has been the constitution of the Currency board, and, of course, the dynamics of the macroindicators.

*Table 7*

Degree of monetarization of Bulgarian economy

Year	Credit in Lev and foreign currency in rel. to GDP	Credit to state-owned companies in rel. to GDP	Credit to private companies in rel. to GDP	Credit to the general public in rel. to GDP
1997	0.20	0.07	0.12	0.01
1998	0.17	0.04	0.11	0.12
1999	0.18	0.03	0.12	0.03
2000	0.16	0.02	0.12	0.02

Source: BNB. Annual report, 1998, 1999, 2000.

For the same period the ratio of natural persons and juridical entities' deposits in foreign currencies in relation to the total deposits is stable and at a high level - between 50 and 60%. The Currency board did not lead to any major changes in the amount of foreign currency - available or on deposit, held by the public.

The lack of active monetary policy is consequential to the country's dependence on the IMF. The fiscal policy is not independent from the Fund, either. The foreign trade policy is within EU recommendations, however, we will actually start enjoying the advantages of the full membership not earlier than in ten years time, which is why liberalization and globalization have so far yielded mostly negative results. All this has kept the capabilities of the Currency board in firm mistrust.

In the 1999 and 2000 annual reports of the BNB there is the recurrent conclusion that "the main internal factors, which determine the development of the interbank monetary market, are the monetary inflow and outflow with respect to the Ministry of Finance." However, that is not a good indicator of the market-oriented functioning of the financial sector and the transfer of positive impulses to the real sector of the economy.

The fixed rate of the lev acts as a nominal anchor, which is easily observed by economic agents at decision-making, but it is guaranteed by external financing and is not the result of internal macroeconomic factors. The IMF covers approximately 40% of the external financing, ensuring between 400 and 500 mln USD on the yearly tranches. Foreign investors cover about 50% of the financing. The above nominal anchor, however, guarantees the predictability of business activity with regard to nominal macroindicators - prices, income, wages, social expenditure, taxes, but not with regard to employment, real import and export volume. This means that macrobehaviour

of entrepreneurs is not stable. It is not necessary to burden the Currency board with such tasks, but if its messages can not be translated into the language of real economic growth, the only language the ordinary consumer is able to understand, the initial trust vested into it is bound to erode.

The base exchange rate, which the Currency board allows BNB to use, is also a kind of a nominal anchor level, providing orientation to the behaviour of entrepreneurs. However it has gradually turned from a flexible monetary policy instrument into an instrument for fiscal repression, because it hampers the rationalization of credit flows, since in the primary market it affects the interest rate policies of commercial banks through the state securities, especially as far as depositing is concerned. Thus the fixed exchange rate, the fiscal restrictions of the IMF, the WTO rules, and our status of an associated EU member have rendered the economic system "superdetermined with no balanced solution".<sup>7</sup> In this way the exchange rate is no longer an effective transmission between the monetary and the real sector of the economy.

10.X.2001

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<sup>7</sup> See *Nenovski, N., K. Hristov. Op. cit.*