Updated scenarios for the Romanian economy medium-term dynamics

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I. UPDATED SCENARIOS FOR THE ROMANIAN ECONOMY MEDIUM-TERM DYNAMICS*

Academician Emilian DOBRESCU**

The current study uses the 2000 version of the Romanian economy macromodel (Emilian Dobrescu: "Macromodels of the Romanian Transition Economy", EXPERT Publishing House, 2000), amended only by up-dating the inflation econometric function. Special attention will be paid to:

- the estimations for 2001;
- the potential impact of the external environment deterioration upon the Romanian economy evolution during 2002;
- the medium-term implications.

1. The economic indicators in 2001

In order to get a preliminary situation as close to the real data as possible, the exogenous variables of the macromodel were dimensioned according to the macroeconomic policies effectively promoted during 2001. The main points of reference may be synthesized as it follows:

- The demographic parameters were correlated with the preliminary statistical information.
- The effect of the residents' nominal income dynamics will very likely result in the gross domestic product in current prices amounting to around 1105 trillion lei, increasing by 38-39% as against 2000.
- The taxation and the budgetary expenditure structure were corroborated with the preliminary data of the Ministry of Public Finance included in the "Pre-Accession Economic Programme"; under these circumstances the budgetary deficit rate falls within the limits agreed with the International Monetary Fund.
- The import facilities that were operational especially during the first semester were also considered for computation purposes.

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* *Paper for ESEN2 Project of the Romanian Academy.*

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- The estimations take into account the more intense pace of the economy's *remonetization, ensured mostly* not through the amplification of the monetary base (included in the macromodel with an increase of 37.7%), but through the increase of the monetary multiplier.
- *The foreign capital inflows were dimensioned by extrapolating the data recorded* during the first two-three quarters.

Under these hypotheses, the simulation of the 2001 economic year generated the data included in Table 1; they are numerically presented as they resulted after running the macromodel, so without rounding or correcting figures based on additional prerequisites (the same way of working will also be used for the other tables).

Table 1

Macromodel estimations for 2001

Indicator	Percentage change as against 2000	Indicator	Percentage change as against 2000
Gross domestic product, constant prices	4.53	Consumer price index in December 2001 as against December 2000	31.44
Domestic absorption, constant prices, - of which:	6.01	Labour productivity (GDP per employed person)	3.26
• final consumption	4.61	Employed population	1.23
• gross capital formation	10.00	Unemployment rate (yearly average)	9.47
Export of goods and services	14.21	Money multiplier (M2/M0)	3.98
Import of goods and services	16.53	Money velocity (GDP/M2)	4.71
Exchange rate (yearly average)	35.98	The ratio of the general consolidated budget incomes to GDP	0.3254
Gross domestic product deflator	32.71	The ratio of the general consolidated budget expenditures to GDP	0.3600
Yearly average index of consumer prices	33.33	The ratio of the general consolidated budget balance to GDP	-0.0346

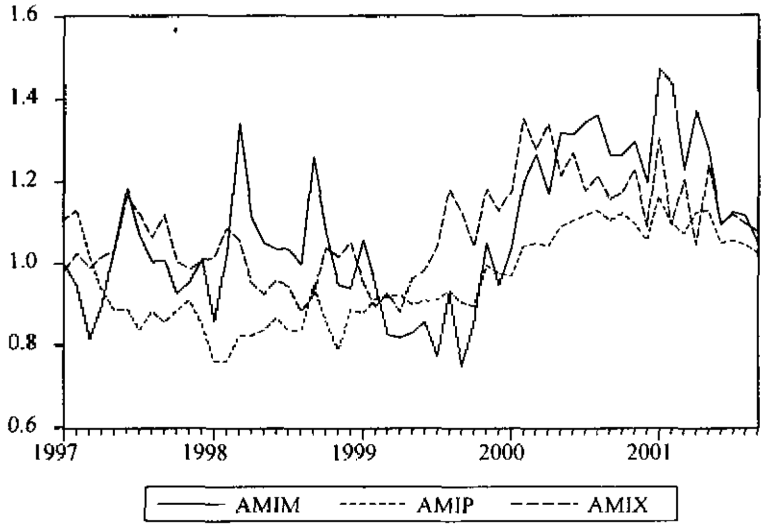
1. The 2000 recovery was consolidated during 2001, and the gross domestic product growth rate reached 4.5%; this estimation exceeds the International Monetary Fund preliminary rate (4.1%) and is very close to that announced by the European Commission (4.6%).
2. From the point of view of absorption, the economic growth continued to be based on exports, but the roles of the final consumption and gross formation were much increased. Consequently, the current account deficit increased significantly, and the correction of this imbalance remains an important problem for the coming year.

   The still small foreign debt service and the foreign currency reserves existing within the domestic banking system provide credibility to the country's financial solvency, which appreciation is considered true also by the international rating agencies. The concluding of the stand-by agreement with the IMF strengthened this expectation.
3. The disinflation continued, although on a smaller scale than that envisaged by the Government and the National Bank at the beginning of the year. According to the macromodel estimations, the consumer price level, computed as December 2001/December 2000, increased by 31.44% (as compared to nearly 41% during the previous year). The yearly average index was slightly greater (33.33%); which estimation does not significantly differ from the preliminary ones made by the International Monetary Fund (33.8%), or from other foreign specialist estimations. However, it is worth mentioning that Romania is still characterized by the highest inflation among the candidate countries to the accession to the European Union.
4. Generally the exchange rate stability was preserved in real terms: for the whole 2001, the average level amounted to nearly 29500 lei/USD.
5. An increase in labour productivity was revealed. However, the economic growth was also based on an increase in the employed population, which induced a certain diminution in the unemployment rate (due to the downward trend, the end-of-interval data will be lower than the yearly average computed by the macromodel and included in Table 1).
6. The ratio between the money base in the large sense and the gross domestic product improved from 18.74% in 2000 to 21.24% in 2001, clearly indicating a remonetization of the economy (the opposite being the decrease in the money velocity). The ratio between the monetary base and the gross domestic product practically stagnated (changing from 5.38% in 2000 to 5.34% in 2001), the remonetization process being supported mainly by the increase of the money multiplier (through the reduction of the reserves requirement ratio, diversification of the banking services, expansion of the credit to non-government).
7. Both incomes to and expenditures from the general consolidated budget, as against the gross domestic product, fall within the limits envisaged by the Government.

8. The time evolution of the real economy deserves special attention. Until the quarterly and monthly estimation of the gross domestic product, we shall use – as output indicator – the industrial output dynamics in constant prices (AMIP); also relevant are the exports (AMIX) and the imports (AMIM) dynamics. Graph 1 presents for the three above-mentioned estimates the indices computed against the same month of the previous year. This way the seasonal influence is flattened and the tendency is more accurately revealed. Including intervals both of economic decline and of recovery, the interval January 1997 – September 2001 looks representatively enough to us.

Graph 1

Indices against the same month of the previous year, in %



Two findings are important:

The statistical correlation among the three data series is significant. In order to deepen the analysis the Granger causality test was also computed. From it we can conclude *that the probability of the output dynamics to depend on the export dynamics is high*, and anyhow higher than opposite. Also, it looks plausible to admit that rather the import variation is induced by the change in the output rather than the reverse case.

The fact that the relationship export→output→import works proves that the impact of the foreign markets upon the economic growth may be essential, even under the conditions of the country's current degree of integration within the international trade.

b) The graph also indicates a certain descending trend of the output indices, beginning with the spring of 2001. The shape of the export trend was similar, but that was not the only factor that inhibited the output dynamics. Also, the supply side domestic constraints matter in this respect.

This is a signal that should be very seriously considered.

2. Two scenarios for 2002

Considering the "Pre-Accession Economic Programme", two scenarios pose a special interest: the A Scenario – desirable – oriented towards the maximum levels of the economic growth envisaged in that programme, and the B Scenario – moderate – considering for computation the possibility of lower rates.

2.1. Introductory considerations

Regarding the domestic evolution, both scenarios encapsulate the qualitative premises adopted in the 2000 medium-term strategy, involving both the unequivocal enforcement of the structural reforms and the promotion of adequate macroeconomic policy mixes.

Many of the discussions regarding the possible evolutionary paths of Romania are insufficient and even misleading, because they leave aside a fundamental characteristic of the current state of the economy, namely the fact that its performance suffer from a double limitation – both on the supply and on the aggregate demand side.

1. In the case of supply, four constraining factors are mentioned:
   a) Some capacities cannot operate over the critical level (meaning minimum) of the gross value-added. Their use involves reallocations of resources that negatively affect the overall supply. The compression of this virtual sector is essential for the structural adjustment of the economy.
   b) The excessive postponement of the de-nationalization of the economy and the numerous patrimony litigations make other capacities, although potentially profitable, chronically underused or even entirely blocked. The fast clarification of the property rights and the privatization reveal themselves as output incentives not only from long-run perspectives, but also in the short and medium run.
   c) A great part of the economy's viable segment is severely undercapitalized. However, the foreign capital inflows with such a destination presuppose the overall improvement of the business environment. Of course, one can enforce measures regarding the increase in the monetary base, the reduction of the compulsory reserves rate, the relaxation of interest rates, but if all these are not doubled and supported by what is called the enforcement of hard budgetary constraints for the operation of the companies, they would not lead only to the acceleration of the price dynamics. And the erosion by inflation of the companies' working capital aggravates the situation.
   d) The taxation also influences the output. Some comparisons show that Romania is among the states with a low overall taxation rate. It is the case (here and further) of the effective rate, which also includes the tax collecting degree. From the macroeconomic viewpoint this – and not the theoretical taxation quota – is more relevant, because it reflects the real interaction (as resource reallocation) between the budget, on the one hand, and the companies, banking system and households, on the other hand.

In the case of Romania, in 2001 the ratio between the incomes of the general consolidated budget and the gross domestic product represented 32.7%, a share inferior to that of the European Union average. However, the denominator of the ratio comprises two components that call for caution: the so-called unobserved economy, officially estimated at a 21-22% share in the GDP, and a self-consumption household output amounting to some additional 5-6%, both placed outside the taxation circuit. If recalculated with these two corrections, the overall taxation rate becomes 44.2-45.4%. Such a rate is in our opinion excessive as compared to the companies' financial potential, and aggravates even more the issue of their (under)capitalisation.

A tax relief - that would especially envisage the cost of labour - would thus be beneficial for the recovery of the economy. The fact that the current budgetary financing needs do not allow for it does not mean that the problem does not exist.

The main restrictions on the supply side can only be overcome through structural changes. In their absence, the current account deficit increase cannot be but a temporary solution.

2. It is impossible to deny that the size of the real domestic demand is also a problem. The data regarding the expansion of poverty and the structure of the households' budgets tell everything in this respect. The simulations using the macromodel, in all the versions from 1996 till today, have signaled the high risks that the standard Keynesian recipes would bring about in the case of Romania. The above mentioned supply-side limitations are so strong, and some important markets so distorted that the excessive stimulation of the nominal demand does only fuel the inflation. So, we return again to the institutional problems.
3. The set of the necessary measures is known: finalizing the privatization and restructuring programmes, ensuring the legal framework coherence and stability, strengthening the financial discipline, improving the corporate governance. It is important that these measures are included in the governmental programme, as well as in the agreements concluded by Romania with the international organizations. Their unambiguous enforcement is the defining premise for the scenarios presented further.

That is why from among the many traps that should be avoided during the coming years, especially in 2002, the "stop-and-go" pattern of transition is the most dangerous one. Although the harmfulness of such behaviour is beyond doubt, the temptation to resuscitate it remains strong. Both the still tensed social context and the relaunch of the election cycle may favour it. In conclusion, the faster institutional restructuring of the market mechanisms is not only the *sine qua non* condition for the accession of Romania to the European Union, but also its main reserve of economic growth in the short-medium run.

2.2. Computation hypotheses

1. Both in the desirable scenario (A) and in the moderate one (B) it based on the premise that the Executive and the National Bank will firmly act in order to attenuate the supply-side constraints.
   a) We shall not mention the measures to restructure the non-profitable companies and to relieve the inert productive assets because they are detailed in the agreements with the international organizations and the governmental programme.

b) Regarding the general consolidated budget, both scenarios consider a slight diminution in the overall taxation rate, a hypothesis also accepted in the "Pre-Accession Economic Programme". The share of the public expenditures in the gross domestic product would also decrease. The budgetary deficit rate would also fall within the limits agreed with the International Monetary Fund (around 3%).

c) Both scenarios have in common the fact that in 2002 the economy's remonetization process will continue by improving the money multiplier (decrease in the reserves requirement ratio, expansion of the credit to non-government).

Of course, such evolutions would not be possible but in strict connection with the structural changes (privatisation, more efficient functioning of the markets, severe decrease in the monetary distortion especially induced by arrears, etc.)

They are also conditioned by a rigorous policy in the area of the nominal incomes, able to support the disinflationary process. The attenuation of the pressures towards increasing the nominal incomes without an adequate economic foundation involves, of course, the extension and consolidation of the agreement between the Executive and the social dialogue partners. Under these circumstances, a gross domestic product volume in current prices amounting to 1430 trillion lei in 2002 may be deemed as acceptable.

2. Regarding the problems of demand, both scenarios involve a diversification of the country's foreign markets as a damper of the impact of the recessionary phenomena in the developed area of the world economy. It becomes more and more clear that these would not be entirely overcome, so that it is considered a decrease of the pace of exports - as compared to the years 2000 and 2001 - and implicitly of their role in ensuring the economic growth. A compensation of this effect by expanding the final consumption would be difficult to achieve due to the constraints at work on the supply side, and very important, to the possibility to reactivate the inflationary spiral. More appropriate is thus to stimulate investments, including by lower taxation (also considered in the assumptions regarding the budget).

The intensity of the negative influence of the external environment is more accentuated in the Scenario B than in the Scenario A. The foreign capital inflows are also differentiated in favour of the former.

2.3. The results of the simulations

The results of the simulations are presented in Table 2.

The Scenario A ranges within the parameters of the maximum (optimistic) alternative of the "Pre-Accession Economic Programme". The probability of its achievement remains important. In fact, even the European Commission's latest prediction estimated at around 4.4% the increase in real terms of the gross domestic product in 2002 in Romania, and the International Monetary Fund in its recent estimations considered a 4.5% growth rate. The yearly average inflation rate would follow to decrease to 23.58%.

Table 2

Scenarios for 2002

- percentage change as against 2001-

Indicator	Scenario A	Scenario B
Gross domestic product, constant prices	5.08	3.85
Domestic absorption, constant prices,of which:	4.61	4.24
• final consumption	1.62	1.82
• gross capital formation	12.73	10.80
Export of goods and services	8.99	5.46
Import of goods and services	6.99	6.35
Exchange rate (yearly average)	25.28	23.41
Gross domestic product deflator	23.16	24.62
Yearly average index of consumer prices	23.58	25.07
Consumer price index in Dec. 2002 as against Dec. 2001	20.96	22.56
Labour productivity (GDP per employed person)	3.37	2.57
Employed population	1.65	1.25
Unemployment rate (yearly average)	7.97	8.34
Money multiplier (M2/M0)	4.47	4.47
Money velocity (GDP/M2)	4.29	4.29
The ratio of the general consolidated budget incomes to GDP	0.3174	0.3186
The ratio of the general consolidated budget expenditures to GDP	0.3480	0.3480
The ratio of the general consolidated budget balance to GDP	-0.0306	-0.0294

However, the latest prospective estimations do not exclude the fact that the deterioration of the external environment may induce a lower growth, similar to that in the Scenario B, characterised by a real output growth rate of 3.85% and a yearly average inflation rate of 25.07%. Both in the International Monetary Fund forecast and in that of the European Union the yearly average rate of inflation is approximated to 26%. These circumstances call for great caution in building up the macroeconomic policies.

1. In order to avoid a possible undesired disconnection of the general consolidated budget (built up under the hypothesis of a more accentuated dynamics) from the reality, it would be advisable that, at least when phasing the expenditures, the specifications for the first and second quarters be more closer to the obtainable resources. In the Scenario B, the Government should be prepared for the same eventuality also concerning the external financing need.
2. The economic actors should be warned regarding the imminent change - following privatization - in the behaviour of some large traditional creditors of the

36.2% in 2005, as compared to 34.8% in 2002. Maintaining the deficit to around 3% obviously imposes the corresponding increase in the budgetary income rate. This building follows the philosophy of the "Pre-Accession Economic Programme", which is based on the assumption that the overall taxation rate is relatively low in Romania. As we shall see, the implications are far from being negligible.

d) In both scenarios the economy's remonetization process continues. A successive increase in the monetary base by 23.5% in 2003, 17.4% in 2004, and nearly 20% in 2005 was considered. The reserves requirement ratio would be gradually reduced to around 10% in 2005. It is obvious that such evolutions would only be possible in strict compliance with the structural changes (privatisation, more efficient functioning of the markets, severe reduction in the monetary distortion, especially that induced by arrears, etc.). They are also firmly conditioned by a rigorous policy in the nominal income area.

2. The differences between the two scenarios envisage the foreign trade and the foreign capital inflows, each of them extrapolating the hypotheses considered for 2002 (a non-favourable impact of the deterioration of the external context more accentuated in Scenario B than in Scenario A).

The results of the simulations are concentrated in Tables 3a-3b.

Table 3a

Estimations for 2003-2005 in Scenario A

- percentage change as against the previous year -

Indicator	2003	2004	2005
Gross domestic product, constant prices	4.97	5.04	4.82
Domestic absorption, constant prices, of which:	5.10	5.31	5.51
• final consumption	2.55	3.58	3.81
• gross capital formation	11.32	9.19	9.12
Export of goods and services	8.50	8.48	8.97
Import of goods and services	8.02	8.32	9.54
Exchange rate (yearly average)	16.19	12.02	12.09
Gross domestic product deflator	13.92	9.68	9.68
Yearly average index of consumer prices	14.16	9.85	9.85
Labour productivity (GDP per employed person)	4.45	4.49	4.36
Employed population	0.50	0.52	0.45
Unemployment rate	7.51	7.03	6.62
Money multiplier (M2/M0)	4.72	5.21	5.46
Money velocity (GDP/M2)	3.94	3.50	3,19
The ratio of the general consolidated budget incomes to GDP	0.3241	0.3278	0.3319
The ratio of the general consolidated budget expenditures to GDP	0.3540	0.3580	0.3620
The ratio of the general consolidated budget balance to GDP	-0.0299	-0.0302	-0.0301

36.2% in 2005, as compared to 34.8% in 2002. Maintaining the deficit to around 3% obviously imposes the corresponding increase in the budgetary income rate. This building follows the philosophy of the "Pre-Accession Economic Programme", which is based on the assumption that the overall taxation rate is relatively low in Romania. As we shall see, the implications are far from being negligible.

d) In both scenarios the *economy's remonetization process* continues. A successive increase in the monetary base by 23.5% in 2003, 17.4% in 2004, and nearly 20% in 2005 was considered. The reserves requirement ratio would be gradually reduced to around 10% in 2005. It is obvious that such evolutions would only be possible in *strict compliance* with the structural changes (privatisation, more efficient functioning of the markets, severe reduction in the monetary distortion, especially that induced by arrears, etc.). They are also firmly conditioned by a rigorous policy in the nominal income area.

2. The differences between the two scenarios envisage the foreign trade and the foreign capital inflows, each of them extrapolating the hypotheses considered for 2002 (a non-favourable impact of the deterioration of the external context more accentuated in Scenario B than in Scenario A).

The results of the simulations are concentrated in Tables 3a-3b.

Table 3a

Estimations for 2003-2005 in Scenario A

- percentage change as against the previous year -

Indicator	2003	2004	2005
Gross domestic product, constant prices	4.97	5.04	4.82
Domestic absorption, constant prices, of which:	5.10	5.31	5.51
• final consumption	2.55	3.58	3.81
• *gross capital formation*	11.32	9.19	9.12
Export of goods and services	8.50	8.48	8.97
Import of goods and services	8.02	8.32	9.54
Exchange rate (yearly average)	16.19	12.02	12.09
Gross domestic product deflator	13.92	9.68	9.68
Yearly average index of consumer prices	14.16	9.85	9.85
Labour productivity (GDP per employed person)	4.45	4.49	4.36
Employed population	0.50	0.52	0.45
Unemployment rate	7.51	7.03	6.62
Money multiplier (M2/M0)	4.72	5.21	5.46
Money velocity (GDP/M2)	3.94	3.50	3,19
The ratio of the general consolidated budget incomes to GDP	0.3241	0.3278	0.3319
The ratio of the general consolidated budget expenditures to GDP	0.3540	0.3580	0.3620
The ratio of the general consolidated budget balance to GDP	-0.0299	-0.0302	-0.0301

Table 3b

Estimations for 2003-2005 in Scenario B

- percentage change as against the previous year -

Indicator	2003	2004	2005
Gross domestic product, constant prices	3.76	4.31	4.09
Domestic absorption, constant prices, of which:	4.79	5.09	4.87
• final consumption	2.82	3.58	3.35
• gross capital formation	9.70	8.61	8.27
Export of goods and services	5.70	7.61	8.70
Import of goods and services	8.02	8.96	9.70
Exchange rate (yearly average)	14.53	10.00	10.08
Gross domestic product deflator	15.25	10.45	10.45
Yearly average index of consumer prices	15.52	10.63	10.63
Labour productivity (GDP per employed person)	3.64	4.01	3.86
Employed population	0.11	0.29	0.22
Unemployment rate	8.23	7.97	7.77
Money multiplier (M2/M0)	4.72	5.21	5.46
Money velocity (GDP/M2)	3.94	3.50	3.19
The ratio of the general consolidated budget incomes to GDP	0.3256	0.3288	0.3324
The ratio of the general consolidated budget expenditures to GDP	0.3540	0.3580	0.3620
The ratio of the general consolidated budget balance to GDP	-0.0284	-0.0292	-0.0296

As one can notice, the growth rates are lower than those mentioned in the "Pre-Accession Economic Programme", although the computation hypotheses are similar, and for 2002 it was considered the desirable scenario. It might happen that the macromodel estimations reflect more correctly the potential negative influences of the increase in the overall taxation rate (the ratio of the general consolidated budget incomes to the gross domestic product). These influences also appear in the simulations for the Scenario B.

In order to check up the above-mentioned hypothesis, both scenarios were computed again under the circumstances of extrapolating the main parameters of the budgetary policy in 2002.

Table 4

Estimations for 2003-2005 under the circumstances of maintaining the main parameters of the 2002 budgetary policy

- percentage change as against the previous year -

Indicator	2003	2004	2005
Gross domestic product, constant prices			
Scenario A	5.35	5.35	5.25
Scenario B	4.14	4.63	4.52
Domestic absorption			
Scenario A	5.11	5.07	5.17
Scenario B	4.83	4.88	4.58
Gross domestic product deflator			
Scenario A	13.50	9.35	9.24
Scenario B	14.82	10.11	10.00
The ratio of the general consolidated budget balance to GDP			
Scenario A	-0.0263	-0.0245	-0.0225
Scenario B	-0.0248	-0.0236	-0.0219

The comparisons between Tables 3 and 4 confirm the assumption that a possible increase in the overall taxation charge would influence the dynamics forecasted for the coming years.

Bucharest, November 2001