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Perspectives and Challenges for Economic Policy in Belarus During the Global Crisis: Evidence from Macroeconometric Modelling

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Perspectives and Challenges for Economic Policy in Belarus During the Global Crisis: Evidence from Macroeconometric Modelling

Summary

This paper deals with the perspectives of the development of the Belarusian economy during the global crisis and options of economic policies. We show that during 2009 Belarusian economy faces a couple of challenges that are consequent to its structural distortions, which, however, were strengthened substantially by the negative global conjuncture. In this situation a current account deficit achieved definitely dangerous level. However, taking this problem into consideration, economic authorities paid much attention to maintaining the growth of GDP. The current policy mix includes enhancing more flexibility to the exchange rate and more rigid fiscal discipline. But from the view of the domestic demand the policy is twofold. On the one hand, expenditures for government consumption and wages are being restricted. On the other hand, a couple of measures for stimulating investments and household consumption are carried out. Furthermore, a rather ambiguous monetary policy - relatively high interest rates and restrictions of placing government's deposits at commercial banks, alongside with active banks' refinancing - is carried out. Currently this policy is resulting in maintaining rather attractive dynamics of the GDP, in distinction from neighboring countries and major trade partners. However, large growth rate of foreign borrowing is the other side of the coin, which allows balancing currency market and monetary sphere. In order to argue about best policy mix we use Belarusian macroeconometric model of the IPM RC. We simulate a number of scenarios that are varying depending on different policy instruments used and different assumptions about the path of the global economy. First we come to the conclusion that under different scenarios the problem of the huge current account deficit is kept. Hence, we recognize this problem to be structural one (not temporary) and emphasize that using only economic policy tools is not enough, while institutional policies are needed in order to balance the current account. Further, we conclude that there are inflation risks in the Belarusian economy under different scenarios. Hence, using devaluation as the only policy instrument seems to be unacceptable, while it leads to inflation acceleration against much lower effect for the reducing the current account imbalance. Hence, we conclude that economic policy mix should include a number of instruments, such as wage restrictions, moderate devaluation, fiscal discipline, etc. At the same time, we recognize that under a number of assumptions, stimulating investment demand might be effective measure of the antirecession policy. However, we admit that growth rates of the Belarusian GDP in 2009 were maintained rather artificially and in majority of scenarios the recession seems to be inevitable. The latter stresses again the necessity of structural policies in Belarusian economy.

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Contents

1. Introduction

In the first half of 2009 Belarus has maintained economic growth against the global recession and huge drop of output in neighboring countries. These rather overwhelming results were achieved against the background of a substantial fall of external demand for the Belarusian goods alongside with a rather stable demand for imports. Thus, it was mainly due to the stimulation of the domestic demand. But here a couple of peculiarities might be admitted. From the demand side, a great role belongs to growing inventories and investments. Accumulation of inventories has become the result of the policy directed at maintaining the high volume of output despite the unfavorable environment. Investment growth mainly took place due to the government's antirecession policy. Furthermore, economic authorities due to maintaining growth of real wages (though this growth is decelerating) and moderate devaluation avoided drop in household consumption. Hence, assumptions about moving towards internal disequilibrium may be argued. Alongside, the external disequilibrium seems to be evident for the national economy. The main tool used for financing the deficit were foreign borrowings, mainly carried out by the government, while the access to other sources of the capital is restricted during the global crisis. Despite absolute and relative parameters of the foreign borrowings are at a definitely low level, using only this tool may change this picture rather rapidly and lead to the problem of the debt burden, especially if the consequences of the crisis will affect Belarusian economy for a relatively long period. From this view, it is evident that at least additional usage of macroeconomic instruments is needed in order to restore macroeconomic balance.

In this paper we exploit the IPM RC Belarusian macroeconometric model in order to compare the effectiveness of the usage of the different policy instruments and show the impact of the different scenarios of the progress in the global crisis. In Section 2, we provide a brief overview of the policies that are carried out by the economic authorities. We show changes that are taking place at the structural level and at the macroeconomic level. In Section 3, we give a short overview of the IPM RC Belarusian macroeconometric model, providing exogenous and endogenous variables and depict major relationships within the model. In Section 4, we elaborate a couple of scenarios that may be on the agenda for the Belarusian economy and we present the results of the simulation of the correspondent scenarios. Finally in Section 5, we provide major conclusions and recommendations, based on the model simulation.

2. Antirecession policy and its outcomes in Belarus

2.1. Prospects for institutional changes during the crisis

For the first look, it seems that Belarus decided to carry its 'puzzle' title even in this crisis times. According to official statistics, economic growth in Belarus between January and July amounted to 0.4% yoy, while the economy of Russia – major market for Belarusian industrial exports – dropped by 9.3% yoy. However, Belarus was among the first who asked IMF for stand-by loan – 'to facilitate an orderly adjustment to external shocks faced, and to address pressing vulnerabilities'[1]. Recently the IMF approved increase of this loan by $1 bn, because of 'a greater than expected impact from the global financial crisis'[2] on Belarus. The Fund expects that Belarusian government will take liberalization efforts and prepare the economy for privatization, as well as implement some structural changes 'which are essential to improve prospects for long-run growth and external stability'[3].

The program includes several measures which can be treated as liberalization – of prices (partial), of wages (minor), and of doing business (quite progressive, but also partial). After recent agreements with the IMF and conversations with the World Bank it seems that Belarusian authorities are ready to launch medium and large scale privatization[4]. Evidently, all these meas-

[1] IMF (2009). Republic of Belarus: Request for Stand-By Arrangement - Staff Report; Staff Supplement and Statement; Press Release on the Executive Board Discussion; and Statement by the Executive Director for the Republic of Belarus, *IMF Country Report* 09/109.
[2] IMF (2009). MF Executive Board Completes First Review Under Stand-By Arrangement with Belarus, Approves US$679.2 Million Disbursement, and Increases Financial Support to US$3.52 Billion, *IMF Press Release*, June 29, 2009.
[3] IBID.
[4] Kirchner, R., Giucci, R. (2009). Privatisation in Belarus during the Global Financial Crisis: No Time to Lose, IPM Research Centre, *Policy Paper* PP/02/09, http://research.by/pdf/pp2009e02.pdf.

ures are good for growth in the medium and long run, but it is not evident that they solve short-term problems of the economy.

2.2. Macroeconomic agenda

Rapid decrease of external demand is a major consequence of the global crisis for the Belarusian economy. It has two dimensions: (i) fall of oil and other commodities prices (which reduced windfall profits of Belarusian oil refineries and some other 'output-generating' enterprises) and (ii) decline of demand for industrial goods (tractors, trucks, refrigerators, etc.). The first led to lower supply of foreign currency at the domestic forex market and to contraction of revenues of the government[5]. The second resulted in recession in respective industries and growing inventories (finished goods in stock). According to the official statistics, 4.8% of industrial output produced between January and May of 2009 has been directed into inventories. In some industries (machine building and metal works, light industry, and ferrous metallurgy) this indicator exceeded 10%[6].

As a result, between in the 1st half of 2009, Belarusian merchandise exports dropped by 47.7% yoy, almost equally explained by decline in average prices (which fell by about 32.4% yoy) and volumes of exports (reduced by 22.6% yoy). Taking into account the existing relationship between volumes of exports and imports (1% change in exports leads to 0.64% change in imports), contraction of exports should result in growing deficit.

In the 1st half of 2009, merchandise trade deficit amounted to USD 3.95 bn, or 18.3% of GDP. First quarter's current account deficit amounted to USD 1.9 bn (17.7% of GDP). Seasonally adjusted figures would be even higher – usually, in the beginning of the year Belarus has more balanced external trade. Evidently, this is because domestic demand has not followed exports – in the first quarter, it increased by 7.1% yoy, completely because of the investment growth.

Investment increase (by 17.8% yoy between January and July of 2009) seems quite unusual for crisis times. However, a major source of their increase is bank loans (in the 1st half they provided financing of 65% of investments) – and banks dispose government funds (as it was in the end of 2008) and loans obtained from the National Bank (NBB). Between January and July of 2009, NBB's claims on banks increased by 119.2%, while reserve money for this period shrank by 13.0%.

Active refinancing of banks seems contradictory to other elements of monetary policy (increasing of interest rates of NBB's instruments and sterilization of net foreign assets increase). However, it can be easily explained by the fact that the government (in order to get the IMF's loan) took an obligation to run balanced budget and to transfer its deposits in commercial banks to the NBB. This reduced its possibilities to stimulate the economy via usual sources and 'forced' to increase money supply through the mentioned channel.

Contrary to investment, consumption slightly declined, as the government preferred to frieze incomes (or, precisely, to restrict their growth according to the commitment to the IMF). However, this reduction was not enough to reduce imports in the extent which is needed to balance external trade. As a result, in the 1st half of 2009 the value of imports dropped 'just' by 33.4% yoy.

2.3 Policies carried out

Growing external imbalances forced the government to revise exchange rate policy. First, the NBB switched from the peg to the US Dollar to the peg to the currency basket[7] (Euro, US Dollar, and Russian Ruble in equal weights) with ±5% currency band. Second, Belarusian ruble was devalued by 20.45% on January 2, 2009 (devaluation was required by the IMF). However, this devaluation has not been supported with necessary restriction of domestic demand, and current account deficit persisted. Moreover, households responded to devaluation with expectations of further devaluation and higher demand to foreign currency. Dollarization of broad money increased from 33% (as of January 1, 2009) to 46.3 (as of June 1, 2009). Hence, the

[5] In 2008, two oil refineries generated about 10% of general government revenues; in the Jan-May 2009, consolidated revenues dropped to 47.9%, comparing to 55.3% a year ago.

[6] In June the growth of inventories of finished products decelerated, while in July they decreased. This may be due to increased drop in industrial production, stimulation of sales on domestic and foreign markets, and removing these inventories from the balance sheets of the producers to the balance sheets of their dealers.

[7] Giucci, R., Trebesch, C. (2004). Monetary and Exchange Rate Policy in Belarus: Analysis and Recommendations, IPM Research Center, *Policy Paper* PP/17/04, http://research.by/pdf/pp2004e17.pdf.

value of the currency basket approached upper bound of currency band, and in June the NBB announced widening of the exchange rate band to ±10% (which was highly supported by the IMF[8]). In any case, the main reason for exchange rate instability – current account deficit – persists, which requires adequate policies from the Belarusian authorities.

However, the rate of devaluation made is far from being necessary for balancing current account and thus required foreign borrowings to become another core instrument for the macroeconomic balancing. The contraction of the global financial markets restricted access to the private borrowings, and hence, since November 2008 sovereign borrowing has been actively accumulated. Consequently the structure of the gross external debt has changed substantially: the share of the government's borrowings increased from 8.6% (as of January 1, 2007 – the beginning of the period of the active foreign borrowings) up to 25.1% as of April 1, 2009. Defacto, taking in consideration the IMF loan[9] (including the last tranche of USD 679.2 granted to the NBB in the beginning of July), the share of sovereign debt is about 34%. Thus, the government tries to play the main role in financing the current imbalance in order to provide stability at the segments of the monetary sphere. At the same time, the effectiveness of the government borrowings is closely in touch with achievement of the external balance. Such borrowings may be justified if the imbalances are considered to be short-term ones and there is a clear policy aimed at changing the current situation in near future. However, at the current stage the motivation of borrowings seems to be more of short-term matters, directed just only at the balancing the current account deficit. Furthermore, the criterions of debt burden and low absolute and relative indicators of the volume of the Belarusian foreign debt are used for justifying the necessity of borrowing.

A range of economic policies are directed at managing the domestic demand during the crisis. On the one hand, there are measures of fiscal contraction and wage restriction, which are directed at the reduction of demand and hence the demand for imports. This policy mix is supported by the IMF and assumes the reduction of the pressure at the domestic currency market. Furthermore, it provides fiscal discipline, which is severe for preventing additional debt and/or inflation risks during the crisis.

It was supposed that these measures will provide the contraction of the domestic demand through the household and government consumption. But realization of the measures in practice leaves a maneuver space. The non-deficit budget approved allows manipulating the items of the expenditure side, and hence, a couple of them expand the demand in the economy.

Further, this policy mix is supplemented by domestic demand stimulation through investments. As mentioned above, the huge investment growth took place much due to credit expansion. But from the view of investment structure, the housing investments should be emphasized. This kind of investments is currently being the engine of growth. The core factor here is the big amount of people who need improving the living conditions in Belarus and hence who have been saving funds just for this purpose. When the residential prices had gone down, providing inflow of these savings to the residential market is more probable. Furthermore, there were a couple of measures by the economic authorities aimed at additional stimulation of residential building (widening the target groups for whom concessional loans for residential building are available and decreasing interest rates for some of these groups). Finally, we have a decelerating, but growing domestic demand, where the share of investments is growing.

Thus, the baseline policy mix carried out by the economic authorities may be summarized as follows:

1. More flexible exchange rate, but within the band of ±10% to the currency basket.

2. Limiting additional inflationary risks and necessity of additional borrowing through relative fiscal discipline.

3. Restricting imports and currency demand through wages and government consumption restrictions.

4. Stimulating investment demand by means of stimulating housing investments.

[8] IMF (2009). IMF Supports Belarus's Decision to Widen the Exchange Rate Band, *IMF Press Release*, June 22, 2009.
[9] According to the IMF methodology, the loans provided by the funds are accounted as the debt of the monetary authorities.

5. Financing the deficit of current account be means of accumulating external debt (mainly the government's one).

3. Belarusian Macroeconometric Model: a Short Overview

Small macroeconometric model of the economy of Belarus was developed by the IPM Research Center in 2006[10] and revised and updated in 2007[11], 2008, and 2009. The last version of the model was designed in order to forecast impact of the global crisis on the Belarusian economy. One of the main differences from the previous versions is the way of GDP estimation: before it was based on the production function approach, now GDP is determined as a sum of aggregate demand components. As a result, valid forecasting horizon of this version of model is quite short and in our opinion should not be more than 2-3 years.

Current structure of the model includes the following economic blocks:

1. Domestic demand: household consumption, gross fixed capital formation (investments), and change in inventories (government and NPISHs consumption are exogenous variables);

2. External sector: exports and imports of goods and services; average exports and imports prices (deflators);

3. Labor market: wages (employment is considered as exogenous variable);

4. Money market: money demand, inflation and interest rates.

5. GDP: determined as a sum of household, government and NPISHs consumption, gross fixed capital formation, change in inventories, and net exports of goods and services.

List of the model variables presented in Table 1.

Table 1. Model variables

Exogenous variables	Endogenous variables
1. CPI (Russia)	16. Capital stock
2. CPI (USA)	17. Change in inventories
3. Employment in Russia	18. CPI
4. Gas price for Belarus (index)	19. Deflator of exports
5. Monetary base	20. Deflator of exports to Russia
6. Nominal exchange rate to the Russian Ruble	21. Deflator of imports
7. Nominal exchange rate to the US Dollar	22. Deflator of imports to Russia
8. Oil price index (OPEC basket)	23. Depreciation rate
9. Political business cycle (cyclical component of real wages)	24. Employment
	25. GDP deflator
10. Real GDP of Euroarea	26. Monetary aggregate M1
11. Real GDP of Russia	27. Monetary aggregate M3
12. Real government consumption	28. Nominal interest rate on new loans
13. Real labor productivity in Russia	29. Nominal interest rate on new time deposits
14. Real NPISHs consumption	30. Nominal refinancing rate
15. Relationship of gas price for Belarus and gas price to Europe (Germany)	31. Real exchange rate to the Russian Ruble
	32. Real exchange rate to the US Dollar
	33. Real exports of goods and services (to Russia)
	34. Real exports of goods and services (to the rest of the world)
	35. Real GDP
	36. Real household consumption
	37. Real imports of goods and services (from Russia)
	38. Real imports of goods and services (from the rest of the world)
	39. Real interest rate on new loans
	40. Real interest rate on new time deposits
	41. Real investment (gross fixed capital formation)
	42. Real labor productivity
	43. Real refinancing rate
	44. Real wages

[10] Chubrik, A., Kruk, Dz., Pelipas, I. (2006). *Major Macroeconomic Relationships in Belarusian Economy: The Results of Econometric Modelling*, Minsk, IPM Research Center.

[11] Chubrik, A., Kruk, Dz. (2007). The Belarusian Economy after the Energy Shock: Scenarios of Development. In: Chubrik, A., Haiduk, K., Pelipas, I. (Eds.) *Growth for All? Economy of Belarus: The Challenges Ahead*, Minsk, IPM Research Centre.

4. Scenarios of the Belarusian Economy Functioning in 2009-2010

In this Section we provide the results of the macroeconometric modeling under different scenarios. They are pointed out depending on the possible global economy path and different economic policy mixes used by the Belarusian authorities.

For the perspectives of the global economy we use the last projections of the World Economic Outlook[12] by the IMF as the baseline scenario. Alternative path of the global economy indicates deeper and longer L-shaped depression.

Considering the economic policies by the authorities we stress the following policy tools: the rate of devaluation, wage restriction, government consumption, investment demand stimulation. Moreover, we consider the scenario of depressed global environment within the additional scenario. The full range of scenarios considered is presented in Table 2.

Table 2. Scenarios of Belarusian Economy Development

Scenario number	Scenario contents
1	Baseline scenario: current policy mix at the background of the global IMF's WEO projections
2	Additional devaluation of 51.0 and 35.5% yoy in 2009 and 2010 correspondingly
3	Wages reduction by 15% through 2009q3 – 2010q4
4	Combination of devaluation by 51.0 and 35.5% yoy devaluation and 15% wage restrictions
5	Reduction of government consumption by 10% in 2009q3 alongside with the refusal from investment demand stimulation
6	Reduction of government consumption by 10% since 2009q3
7	Worse global environment

4.1. Baseline scenario

This scenario reflects the baseline development of the global economy according to the IMF's World Economic Outlook, which assumes a slow recovery since 2010. Within this scenario economic policy carried out is supposed to be unchanged in comparison to one of the 1st half of 2009. The values of the main exogenous variables are treated as it shown in Table 3. Model simulation under this scenario gives the results, presented in Table 4.

Table 3. Exogenous variables

Exogenous variables, % yoy (if other not indicated)	2009	2010
Devaluation rate against US dollar (annual average)	33.3	6.7
Government consumption	0.0	0.0
Real refinancing rate, % annually	-1.0	-1.0
Base money (4Q on 4Q of the previous year)	-5.0	2.0
Labor employment, (annual average)	-1.0	-0.8
World crude oil price (average annual, USD/b)	60.4	72.4
Gas price for Belarus (average annual, USD/tcm)	150.0	155.0
Russian GDP	-6.5	1.5
GDP of the Eurozone	-4.8	-0.3
Russian inflation (average annual)	12.9	9.9
Devaluation rate of Russian ruble against US dollar (annual average)	29.4	4.9
US inflation (average annual)	-0.9	-0.1
Labor employment in Russia	-1.0	-1.0

Source: IMF WEO, US Energy Information Administration STEO database, own projections.

Table 4. Main Macroeconomic Indicators (Scenario 1)

Variable % yoy (if other not indicated)	2009	2010
Household consumption	-0.1	-1.3
Investments	7.2	-14.2
Exports (in real terms)	-41.6	28.3
Imports (in real terms)	-24.3	6.9
GDP	-1.2	-5.6
Inflation (average annual)	16.2	16.7
Wages (average annual)	-3.1	-0.9
Current account deficit, nominal, USD bn	-8.2	-7.7
Current account, % of GDP	-15.7	-13.6

[12] See http://www.imf.org/external/pubs/ft/weo/2009/update/02/pdf/0709.pdf.

4.2. Scenario of additional devaluation

This scenario keeps all the exogenous variables constant in comparison to the baseline scenario except the devaluation rate. Herewith, we assume that monetary authorities carry out additional devaluation of the Belarusian ruble against US dollar and hence the average annual rate of devaluation is 51.0 and 35.5% yoy in 2009 and 2010 correspondingly. This scenario performs the following results (see Table 5).

Table 5. Main Macroeconomic Indicators (Scenario 2)

Variable % yoy (if other not indicated)	2009	2010
Household consumption	-0.4	-0.4
Investments	6.6	-16.0
Exports (in real terms)	-38.9	38.9
Imports (in real terms)	-23.1	8.9
GDP	-1.4	-3.6
Inflation (average annual)	21.7	37.3
Wages (average annual)	-3.3	-0.4
Current account deficit, nominal, USD bn	-7.7	-5.2
Current account, % of GDP	-16.0	-10.4

4.3. Scenario of more radical wage restrictions

This scenario keeps all the exogenous variables constant in comparison to the baseline scenario. But however, here we exclude the real wages from the solution of the model and treat it as the exogenous variables, setting its gradual decrease since the 3rd quarter of 2009 till the end of 2010 by 15% (to the level of the 2nd quarter of 2009). Such an instrument may potentially be used as the (partial) alternative to the devaluation in order to balance the current account. The results of using this instrument are provided in Table 6.

Table 6. Main Macroeconomic Indicators (Scenario 3)

Variable % yoy (if other not indicated)	2009	2010
Household consumption	-0.1	-3.3
Investments	7.2	-15.7
Exports (in real terms)	-41.6	26.3
Imports (in real terms)	-24.3	5.0
GDP	-1.2	-7.1
Inflation (average annual)	16.2	19.5
Wages (average annual)	-3.5	-9.7
Current account deficit, nominal, USD bn	-8.2	-7.5
Current account, % of GDP	-15.7	-13.1

4.4. Joint usage of the additional devaluation and wage restriction

Under this scenario we combine scenarios 2 and 3, in order to see how the joint usage of these instruments affects the current deficit. Hence, we assume the annual average devaluation of 51.0 and 35.5% yoy in 2009 and 2010 correspondingly, alongside with the gradual 15% reduction of real wages. The output of this scenario is as follows (see Table 7).

Table 7. Main Macroeconomic Indicators (Scenario 4)

Variable % yoy (if other not indicated)	2009	2010
Household consumption	-0.4	-2.4
Investments	6.6	-17.5
Exports (in real terms)	-38.9	36.8
Imports (in real terms)	-23.1	-7.1
GDP	-1.4	-5.0
Inflation (average annual)	21.6	40.7
Wages (average annual)	-3.5	-9.7
Current account deficit, nominal, USD bn	-7.8	-5.0
Current account, % of GDP	-16.0	-10.1

4.5. Reduction of government consumption and refusal from stimulating investments

Within this scenario we consider how the restriction of the fiscal discipline (reduction of government consumption by 10% in 2009q3 and keeping this level till 2010q4) may alter the economy. Furthermore, government consumption through multiplication effect in the economy may also cause increasing imports. Hence we consider this instrument to be aimed at imports

restriction as well. Furthermore, while the fiscal discipline is making more severe, we assume that the government involuntarily quits from the investment demand stimulation. Technically, the latter is achieved through removing the dummy variable from the investment equation for the periods after 2nd quarter of 2009. The results of this scenario are provided in the Table 8.

Table 8. Main Macroeconomic Indicators (Scenario 5)

Variable % yoy (if other not indicated)	2009	2010
Household consumption	-1.3	0.0
Investments	3.0	8.2
Exports (in real terms)	-42.6	36.0
Imports (in real terms)	-25.6	15.8
GDP	-3.9	1.3
Inflation (average annual)	19.4	7.9
Wages (average annual)	-4.3	0.2
Current account deficit, nominal, USD bn	-8.1	-8.8
Current account, % of GDP	-15.5	-15.7

4.6. Reduction of government consumption

This scenario is identical to the previous one, except the stimulation of investment demand. We keep the dummy variable in the investment equation for 2009, in order to see the pure effect of the reduction of the government consumption. The results of this scenario are provided in the Table 9.

Table 9. Main Macroeconomic Indicators (Scenario 6)

Variable % yoy (if other not indicated)	2009	2010
Household consumption	-0.7	0.9
Investments	9.9	2.8
Exports (in real terms)	-41.6	35.2
Imports (in real terms)	-23.7	13.5
GDP	-1.6	0.5
Inflation (average annual)	17.5	9.2
Wages (average annual)	-3.8	1.6
Current account deficit, nominal, USD bn	-8.5	-8.7
Current account, % of GDP	-16.0	-15.3

4.7. Worsening of the global environment

Through this scenario we want to reflect the influence of the possible global worsening. This scenario captures possible second wave of the global crisis based on the new banking runs and/or sovereign borrowings crisis. Furthermore, partially this scenario we may consider as the beginning of the long and deep L-shaped depression in the world economy, which is also probable due to the downwarding trend of the world consumption. However, it should be mentioned that this scenario of global worsening is far from being most pessimistic and may be also treated as one that reflects the global development worse than according to the last update of the IMF's World Economic Outlook.

Within this scenario we project the following exogenous variable (see Table 10).

Table 10. Exogenous variables (Scenario 7)

Exogenous variables, % yoy (if other not indicated)	2009	2010
Devaluation rate against US dollar (annual average)	33.3	6.7
Government consumption	0.0	0.0
Real refinancing rate, % annually	-1.0	-1.0
Base money (4Q on 4Q of the previous year)	-5.0	2.0
World crude oil price (average annual, USD/b)	60.3	51.2
Gas price for Belarus (average annual, USD/tcm)	150.0	155.0
Russian GDP	-10.0	-2.0
GDP of the Eurozone	-5.5	-2.0
Russian inflation (average annual)	14.0	11.0
Devaluation rate of Russian ruble against US dollar (annual average)	36.1	8.7
US inflation (average annual)	-1.2	-1.0
Labor employment in Russia	-2.0	-1.0

Source: IMF WEO, US Energy Information Administration STEO database, own projections.

This scenario performs the following results (see Table 11).

Table 11. Main Macroeconomic Indicators (Scenario 7)

Variable % yoy (if other not indicated)	2009	2010
Household consumption	-0.1	-1.6
Investments	7.2	-14.6
Exports (in real terms)	-43.7	24.0
Imports (in real terms)	-25.3	5.2
GDP	-1.1	-6.5
Inflation (average annual)	16.1	17.8
Wages (average annual)	-3.0	-1.2
Current account deficit, nominal, USD bn	-8.7	-8.0
Current account, % of GDP	-16.6	-14.0

5. Conclusions and policy implications for Belarus

The main outcome of all the scenarios is the **problem of sustainable external imbalance (current account deficit)**. According to the baseline scenario, current account deficit is projected at the level of 15.7 and 13.6% of GDP in 2009 and 2010 correspondingly. Furthermore, within the scenarios of substantial devaluation and wage restriction, which are considered to be the main policy tools for balancing the current account, the deficit remains at the extremely high level. Additionally, strong crowding-out effect peculiar to the Belarusian economy limits possibilities of using restriction of government consumption as an instrument for balancing the current account in the short run, because it leads to growth of private investments. Hence, it leads to investment imports increase, which is good in the long run, but may undermine positive impact of government consumption reduction on current account balance.

In order to solve the problem through policy options, either a substantial devaluation should be used, or a mix of devaluation and restrictions of domestic demand through wage freezes and government consumption cuts. However, as it is follows from the scenario 4, even huge devaluation alongside with 15% cut of *real* wages do not lead to elimination of the current account deficit. In this scenario it reaches the level of about 10% of GDP per annum. This leads to the conclusion that **current account deficit in Belarus is a structural, not temporary problem**.

The next conclusion is related the monetary sphere and possible usage of devaluation as the policy tool. Scenarios 2 and 4 show that **devaluation creates high inflationary pressure**. This pressure sustains even despite the assumption of quite tight monetary policy (according to the obligations taken in the Memorandum with the IMF). This inflationary pressure is divergent to the path of majority of developed countries that face deflationary pressure because of decreasing domestic demand.

The nature of this pressure is threefold. First, like many transition countries that functioned under the external deficit, Belarus had to devalue its currency. This automatically leads to increase of prices on imported goods. Second, like in many economies of the region, money demand in Belarus may not be a stable function during external shocks. Hence, shocks in the money demand caused by low confidence to the national currency (and resulted in increased dollarization) may alter the balance of the domestic money market. Third, the inflationary pressure maybe consequent to the domestic demand enhancing policies. Based on the scenarios 5 and 6, one may implicitly conclude that there domestic demand is still too high, which creates inflationary risks as well.

Thus, active using of the devaluation tool may result in higher inflation, which disturbs macroeconomic equilibrium and is risky for medium-term growth path (which is outside the boundaries of the model). Hence, **devaluation may be necessary, but it is not sufficient tool for struggling against external imbalances**.

Even relatively optimistic scenarios of global recovery in 2010 will not provide balanced current account. Economic policy tools that are used today are either not sufficient, or the extent of using them should be increased dramatically that may lead to a radical reduction of the living standards. The latter may have negative social consequences and may undermine the long-term growth prospects. Belarus may achieve 'acceptable' level of current account deficit in case of rapid and full recovery of the global economy alongside with the correspondent recovery of global external trade, supplemented with 'right' domestic policies in Belarus. However,

global recovery of such scale seems quite unrealistic. Thus, **structural changes, supported by the discussed economic policy tools, are crucial for removal of external imbalances in the medium and long run**.

As the problem of external imbalance is not temporary, policy of external borrowing becomes of a special interest. At the moment, it seems to be no clear strategy for *elimination* of the current account deficit. Alongside, external borrowings (especially sovereign ones) seem to be chosen as a strategy of *financing* of the existing distortions. Taking into account persistent high deficit to be financed with external borrowing, Belarus may loose its advantage of low level of foreign indebtedness. Moreover, under unfavorable scenarios **critical level of foreign indebtedness may be reached rather soon** (especially having in mind high debt servicing ratio[13]).

Rather ambiguous conclusions follow from simulation of usage of such policies as government consumption and investment demand stimulation. From the view of investment demand stimulation, scenario 5 shows that absence of stimulation of investment demand later on compensated by endogenous growth of investments. This policy tool also enables to avoid excessive demand and thus inflationary pressure, while the recovery of the investment growth in 2010 does not determine correspondent inflationary pressure. However, this conclusion might not be treated as the explicit one, because the model does not capture changes in the structure of the investments, where the housing investments play the role of the engine nowadays. Furthermore, their role in stimulating demand on imports (which might be indirectly supported through comparison between 5 and 6 scenarios) might not be so straightforward. Hence, under certain conditions this instrument might be rather effective tool of managing domestic demand during the crisis. Among these conditions we can mention absence of financing these investments through budget funds, and absence of artificial credit expansion for financing these investments. In other words, we may argue that the instrument of housing investment stimulation may be used as the antirecession policy in case of keeping a fiscal discipline and balanced monetary policy.

The expediency of using the reduction of government consumption during the crisis is not evident as well. From the view of reducing the external imbalance, this instrument seems to be ineffective, while in both 5 and 6 scenarios it is less effective than, say, devaluation within the baseline scenario. However, due to the strong crowding out effect this instrument might be useful for preventing recession. The reaction of private investments after the reduction of the government consumption is overwhelming for the domestic demand (however, it worsens the external balance). Thus here we may argue that this instrument may be used in one policy mix with other instruments.

Finally, we must admit that all the scenarios show that **economic recession in Belarus is inevitable**. It is consequent to the specific measures carried out in Belarusian economy for maintaining growth of domestic demand, but which cannot be kept for a long-term without harming the economy in the medium and in the long-run. Thus, this treat should be in mind when choosing a policy mix alongside with the structural measures for reforming the economy of Belarus.

[13] See Shymanovich, G. (2009). Belarus External Debt: Sustaining Levels in a Time of Global Crisis, IPM Research Centre, *Policy Discussion Paper* PDP/09/01, http://www.research.by/pdf/pdp2009r01.pdf.