

## **Republic of Belarus: Selected Issues**

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REPUBLIC OF BELARUS

**Selected Issues**

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Approved by the European II Department

March 27, 2003

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## I. PENSION SYSTEM FINANCES AND REFORM OPTIONS<sup>1</sup>

### Executive Summary

**During the first half of 2002, Social Protection Fund (SPF) cash flow deteriorated rapidly and the ability of the government to pay pensions on time was cast into doubt.** The SPF's operating reserves were exhausted, forcing the government to support the fund with loans to minimize any delays in pension payments. Although deteriorating demographics and the use of the retirement system to reduce labor supply during transition are at the root of the financial imbalance of the Belarusian pension system, the severity of the problem in mid-2002 was amplified by unsustainable wage and pension policies. Specifically, in recent years, the government has administratively targeted economy-wide wage growth that was not supported by matching productivity growth. At the same time, the government tried to maintain a stable relationship between the average pension and the average wage levels. In the second half of the year, the authorities stabilized SPF finances through short term measures on both the expenditure and revenue sides.

**Systemic reforms are also needed.** Belarus has not increased the retirement age and remains committed to maintaining the pension replacement rate. Pension reform opponents argue that life expectancy in Belarus is too low to justify an increase in the retirement age. Proponents of reforms point out, by contrast, that life expectancy at retirement in Belarus is close to that of both women and men in industrial countries. The current low retirement age reduces contribution periods, lengthens beneficiary periods, and results in high social tax rates and lower than optimal net wage and pension incomes. In addition to systemic reforms, including increasing the retirement age, it may be appropriate to consider the use of privatization receipts to finance the formation of a funded pension pillar.

### A. Introduction

1. **This paper reviews developments during 2001–02 in the Belarusian pension system, and discusses potential short and medium term reforms** needed to put pension system finances on a sustainable path. Section B presents a short overview of demographic trends and developments in Belarus and their impact on the pension system. Section C discusses the financial difficulties of early 2002 and the policy measures the authorities took to deal with them. Section D presents a critical review of the methodology used in preparing annual SPF budgets. Sections E and F discuss short-term and medium-term reform options. In particular, Section F considers the possibility of using privatization proceeds to finance pension reform. One option would be to earmark privatization proceeds to short term liabilities of the SPF. Doing so would permit a portion of current SPF tax revenues to be set aside to partially finance a funded individual pension tier for current younger cohorts.

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<sup>1</sup> Prepared by Roman Zyttek.

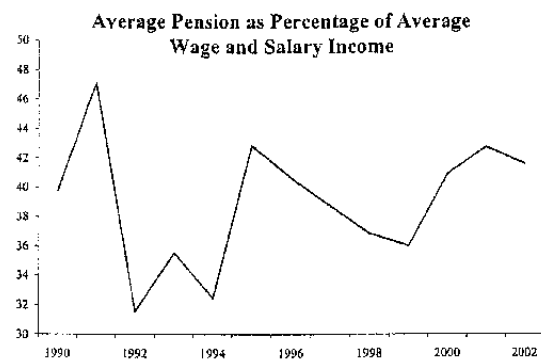
Appendix I presents the results of simple simulations of the impact of increasing pension age on long-term pension finances.

## B. The Interaction of Demographics and Wage Policies

2. **The dependency ratio has risen sharply during transition.** Owing to falling employment and a gradual increase in the number of pensioners, the dependency ratio rose from 0.45 in 1990 to 0.59 in 2002. (In other words, the number of workers supporting each pensioner—the inverse of the dependency ratio—fell from about 2.2 in 1990 to around 1.7.) During 1990–2002, total employment in Belarus declined by 16 percent, while the number of pensioners rose by 11 percent. The number of pensioners receiving disability pensions jumped by almost 13 percent, while the number of people receiving pension benefits for social reasons rose by 38 percent.

3. **SPF finances were also impacted by the rapid increase in the replacement rate** (the ratio of average pensions to average wages). The average pension in Belarus rose from 32.5 percent of average wage and salary income in 1994 to almost 44 percent in the first half of 2002. For 2003, the authorities project the replacement rate to reach 45 percent.<sup>2</sup>

4. **Both factors led to an increase in the pension burden.** The total pension bill rose from 18.1 percent of the estimated wage and salary bill in 1994 (5.6 percent of GDP) to 27.1 percent in 2002 (9.3 percent of GDP).



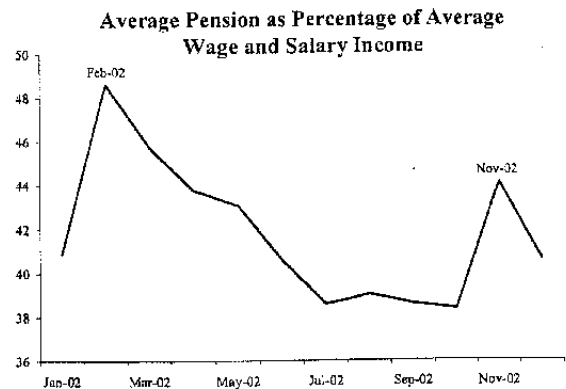
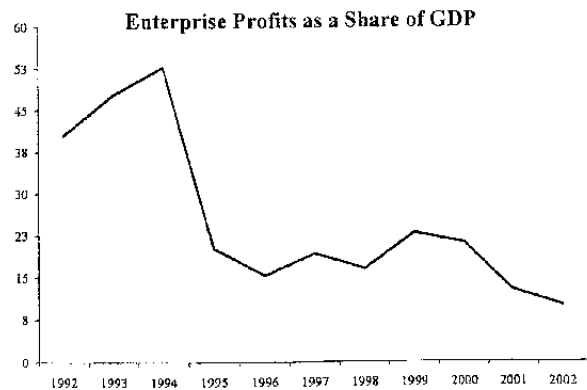
<sup>2</sup> Although under conditions of low inflation some of the increase in the average replacement rate could be attributed to the increase in the number of retirees (as new retirees receive higher than average benefits), this argument does not apply fully to Belarus, where the distribution of pensions was compressed by the need to compensate for high inflation rates.

### C. SPF Finances in 2002

5. **Real wage growth during 2000–02 was excessive and not supported by comparable labor productivity and economic growth.** After rising by 13 percent in 2000, real wages rose by 31 percent in 2001 and by another 8 percent in 2002 (for a total increase of 61 percent over three years). By comparison, economic output, as measured by GDP, rose by just 16 percent during the same period. Significant increases in labor compensation had been promised before the 2001 Presidential elections, and were delivered late in that year. President Lukashenko’s election platform also pledged an average labor income in the economy of US\$100 by the end of 2001, a pledge that was fulfilled in December 2001.<sup>3</sup>

6. **The administrative wage increases in 2001 caused corporate performance to deteriorate sharply in early 2002.** As a result of higher labor costs and the resulting decline in corporate competitiveness, inventories of finished goods surged and many companies faced severe cash flow problems. With only limited access to easy credit, wage payments were often delayed, and with them enterprise contributions to the SPF. Arrears on SPF contributions jumped by almost 50 percent in the first quarter of the year, from Rbl 79 billion at end-2001 to Rbl 117 billion on March 31, 2002.<sup>4</sup> Tax arrears in the first quarter amounted to 6 percent of SPF revenues (and half of the SPF’s Q1 deficit).

7. **Administrative wage increases also triggered proportional increases in pension benefits.** The existing indexation rules in early 2002 required that pension benefits track growth in average wages and salaries very closely. Pensions were to be indexed any time the average

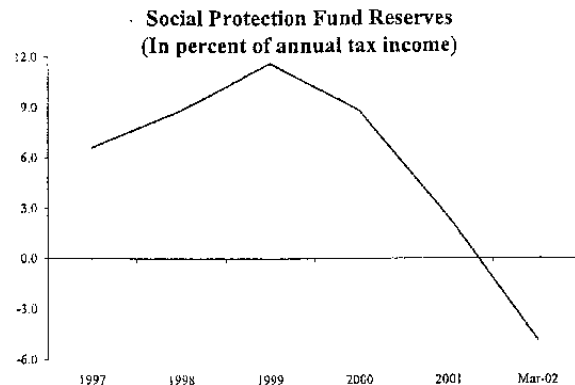


<sup>3</sup> To some extent, the government tried to justify the increases in real wages above productivity growth as compensation for increasing the utility rates paid by households to limit cross-subsidization. However, in practice, the increase in the economy-wide labor compensation bill went well above the amounts needed to compensate households for higher utility tariffs and housing rents.

<sup>4</sup> Almost Rbl 55 billion in arrears due to the SPF were accumulated by enterprises belonging to the ministry of agriculture, Rbl 41 billion: ministry of industry, Rbl 3.3 billion: ministry of architecture, the debt of budget organizations being Rbl 9 billion.

wage in the economy rose by 10 percent or more. Therefore, relatively frequent administrative increases in labor compensation spilled over into pensions. For example, pensions were indexed five times in 2001. The very sharp wage and salary increase in December 2001 induced similar increases in pension benefits in February 2002, when the average pension was raised by 21 percent.

8. **SPF reserves dwindled.** As a result of growing arrears in SPF contributions and the sharp increase in pension obligations, SPF reserves fell from an estimated 12 percent of its annual expenditures at the beginning of 2000, to negative 1 percent by the end-March 2002.<sup>5</sup> The dramatic deterioration in SPF's liquidity led to some delays in pension deliveries.<sup>6</sup> Although there were no arrears in pension payments, there were reports of delays within any given month.



9. **These shortfalls forced the central government to bail the SPF out.** To ensure that pension obligations were paid, during the second quarter the Republican (central) government transferred to the SPF Rbl 66.5 billion (0.3 percent of GDP, or 2.2 percent of SPF revenue). This was the entire annual amount included in the Republican budget for transfers to the SPF, and was meant to cover child benefits paid by the SPF.<sup>7</sup> Also, in May the Republican budget provided additional temporary support in the form of a Rbl 10 billion loan designed to ensure that pensions were paid on time. By that time, the SPF had serious liquidity problems, with cash balances often standing at about one day of expenditures.

10. **During the summer of 2002, SPF finances were stabilized through a number of aggressive measures aimed at both boosting SPF revenues and slowing the growth of spending.** Specifically, Presidential Decree No. 19 of August 6, 2002, required banks to add

<sup>5</sup> The SPF entered 2002 with Rbl 46.7 billion in accumulated savings from previous periods, or an equivalent of 20 percent of its monthly expenditure during January–March 2002. By the end of March, the SPF held a negative net cash position of Rbl 29.3 billion. The loss of reserves virtually eliminated capital revenue of the SPF (about 2 percent annual SPF revenue).

<sup>6</sup> Moreover, contributions to the SPF are based on wages of the previous month, but are received by the SPF only in the following month. However pensions are paid for the current month, so high inflation tends to undermine pension finances.

<sup>7</sup> Although in previous years the State budget allocated funds to support part of the SPF's payments of child allowances, in practice, because of the SPF's large surpluses, the actual transfers were much smaller than budgeted.



the personal income tax and social security contributions to the amount of loans that they extend to enterprises and self-employed entrepreneurs for the payment of salaries to their employees. The SPF also took steps to improve tax administration, including by tightening enforcement of social security contributions. They also implemented proposals to expand the tax base by including individual entrepreneurs, a measure that is expected to yield an additional Rbl 50 billion (0.1 percent of GDP) in contribution receipts in 2003.

11. **Even stronger measures were taken on the expenditure side.** SPF outlays were reduced by a delay in the recalculation of pension benefits that effectively cut the average pension to 41 percent of the average wage during the fourth quarter of 2002 (from 45 percent in the first quarter). To slow down growth in pensions pension indexation was delayed until November 1, when they were raised by 12 percent, bringing the average pension to the level of 44 percent of the average wage and salary in the economy. The delay in the indexation resulted in estimated savings of up to Rbl 195 billion during April–December (0.8 percent of GDP).

12. **The revised indexation rules also reduced the frequency of indexation.** Instead of raising pensions each time wage growth exceeded 10 percent, they are now to be indexed at least once—but no more than four times—per year (with a target of two). Also, the wage growth indexation trigger was raised. Pensions must now be indexed if wages increase by at least 15 percent, rather than 10 percent as previously. If wages fail to increase by 15 percent, pensions must be indexed on November 1 of each year to the actual increase in the average wage. The minimum pension will continue to be indexed to inflation four times a year (at the end of each quarter).

13. **The SPF also targeted other spending items for savings.** The authorities re-negotiated pension delivery costs with the state postal system (cutting expenditures on this item by half, yielding savings of Rbl 5 billion in 2002). Further, significant savings have been achieved by limiting subsidies to finance visits to health spas, and additional savings materialized in the area of child allowances. The latter savings were realized when child allowances were indexed later in 2002 than had been expected at the time the 2002 SPF budget was approved.

14. **As a result of these difficult measures, the SPF ended 2002 with a small deficit of Rbl 6 billion** (less than 0.03 percent of GDP). Looking ahead, most of the measures taken in mid-2002 will have only a limited long term impact on SPF finances. Over the medium term, it is clear that Belarus faces a demographic situation that will make it difficult to pay pensions at levels the authorities would like.

Table 1. Social Protection Fund Finances and Projections, 1997-2008  
(In millions of rubels, unless otherwise indicated)

	1997	1998	1999	2000	2001	2002				2003	2003	2004	2005	2006	2007	2008
						Q1	H1	9 months	Year							
Current year income	37,964	76,284	325,767	1,009,948	1,983,946	622,337	1,409,338	2,196,081	3,065,027	4,399,713	4,092,991	4,993,486	5,626,390	6,076,844	6,429,066	6,776,690
In percent of GDP	10.3	10.9	10.8	11.1	11.6	12.9	12.9	12.0	12.0	13.4	12.0	12.0	11.9	11.7	11.6	11.5
Annual growth	100.9	327.0	210.0	96.4	...	...	...	54.5	43.5	33.5	22.0	12.7	8.0	5.8	5.4	0
Balance carried over (from previous year)	252	2,322	6,282	35,039	83,325	46,681	46,681	46,681	46,681	843	40,305	0	0	0	0	0
Income plus balances from previous year	38,215	78,607	332,050	1,044,987	2,067,271	669,018	1,456,020	2,242,762	3,111,708	4,400,555	4,133,296	4,993,486	5,626,390	6,076,844	6,429,066	6,776,690
Social Protection Fund Contributions	34,961	70,954	300,986	941,219	1,912,482	601,583	1,308,565	2,080,611	2,915,835	4,188,134	3,872,852	4,741,734	5,339,326	5,763,028	6,092,969	6,420,167
In percent of GDP	9.5	10.1	9.9	10.3	11.1	12.5	12.0	11.3	11.4	12.7	11.4	11.4	11.3	11.1	11.0	10.9
Annual growth	...	103	324	213	103	...	...	...	52.5	43.6	32.8	22.4	12.6	7.9	5.7	5.4
Interest from deposits	185	1,932	12,440	45,972	35,224	2,033	2,868	4,040	5,457	5,000	13,560	0	0	0	0	0
Other income	790	1,209	12,341	14,745	31,197	8,466	26,406	34,930	63,915	66,895	66,895	81,523	92,958	101,621	108,836	115,451
Transfer from the State Budget	2,027	2,189	0	8,012	5,043	10,255	66,500	66,500	69,820	139,684	139,684	170,228	194,106	212,195	227,261	241,073
Loans from the Budget	0	0	0	0	0	0	5,000	10,000	10,000	0	0	0	0	0	0	0
Total expenditure	35,893	72,324	297,011	961,662	2,020,590	698,284	1,406,505	2,206,937	3,071,403	4,349,531	4,363,444	5,346,469	6,148,369	6,778,669	7,321,856	7,833,193
In percent of GDP	9.8	10.3	9.8	10.5	11.8	14.5	12.9	12.0	12.0	13.2	12.8	12.9	13.0	13.1	13.2	13.3
o/w pensions	27,633	54,308	220,828	727,343	1,551,703	539,915	1,080,710	1,661,536	2,321,401	3,222,950	3,352,861	4,129,920	4,760,225	5,260,107	5,694,341	6,105,566
Military pensions	433	767	3,085	15,038	27,054	9,425	22,029	35,908	50,035	70,825	68,564	84,368	97,146	107,238	115,972	124,220
Other o/w:	7,826	17,249	73,098	219,281	441,833	148,943	303,766	504,492	689,967	1,055,756	942,019	1,132,180	1,290,998	1,411,325	1,511,544	1,603,407
Benefits to families with children under 3 years old	994	2,286	9,073	24,428	56,950	21,153	44,896	83,028	117,063	181,509	158,072	192,638	219,659	240,130	257,179	272,809
Benefits to families with children 3-16 years old	1,603	3,248	11,112	34,000	72,153	18,500	41,333	78,592	111,257	175,822	150,232	183,084	208,764	228,220	244,423	259,278
Disability benefits	2,236	5,503	23,579	67,392	138,458	58,600	102,013	145,902	204,205	299,520	275,742	336,039	383,174	418,883	448,624	475,889
Maternity benefit	435	936	4,062	12,126	25,089	8,122	17,429	27,051	36,474	51,688	49,252	60,022	68,440	74,819	80,131	85,001
Child birth benefit	171	300	1,278	4,181	8,381	2,440	5,519	9,929	14,879	21,656	20,091	24,484	27,918	30,520	32,687	34,674
Pension delivery cost	839	1,578	6,209	20,762	42,800	14,664	30,184	39,337	48,690	58,013	65,118	79,358	90,489	98,922	105,946	112,385
Health-related expenditure	972	2,300	11,385	36,355	63,212	12,830	39,092	84,288	94,588	175,133	139,502	154,164	175,788	192,171	205,815	218,323
In percent of GDP	7.7	7.8	7.4	8.1	9.2	11.4	10.1	9.2	9.3	10.0	10.0	10.1	10.3	10.4	10.5	10.6
Pensions	1.8	2.2	2.0	2.0	2.2	2.7	2.4	2.4	2.4	2.9	2.4	2.4	2.4	2.4	2.4	2.4
Non-pension social benefits	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Administrative expenses	2,322	6,282	35,039	83,325	46,681	-29,265	49,515	35,825	40,305	51,024	-230,148	-352,983	-521,979	-701,825	-892,790	-1,056,503
SPF balance (equal to accumulated savings)	0.6	0.9	1.2	0.9	0.3	-0.6	0.5	0.2	0.2	0.2	-0.7	-0.8	-1.1	-1.4	-1.6	-1.8
In percent of GDP	0.6	0.6	1.0	0.5	-0.2	-1.6	0.0	-0.1	0.0	0.2	-0.8	-0.8	-1.1	-1.4	-1.6	-1.8
Current year balance	2,071	3,960	28,757	48,286	-36,644	-75,947	2,833	-10,856	-6,376	50,181	-270,453	-352,983	-521,979	-701,825	-892,790	-1,056,503
In percent of GDP	0.6	0.6	1.0	0.5	-0.2	-1.6	0.0	-0.1	0.0	0.2	-0.8	-0.8	-1.1	-1.4	-1.6	-1.8
Accumulated surplus/deficit (in percent of GDP)	0.6	0.9	1.2	0.9	0.3	-0.6	0.5	0.2	0.2	0.2	-0.7	-1.4	-2.3	-3.5	-4.9	-6.4
Memorandum items:																
Real growth in pensions	...	12.1	4.9	27.0	35.3	-45.4	-27.2	-32.2	6.5	13.8	9.1	4.0	3.0	3.3	3.5	3.5
Pensions as percentage of average wage & salary	39.0	37.0	35.9	40.6	42.1	44.0	43.7	41.9	41.6	44.1	43.5	43.5	43.5	43.5	43.5	43.5
CPI (average)	64	73	294	169	61.3	47.0	45.6	44.6	42.5	22.0	29.2	18.3	11.8	6.9	4.5	3.5
GDP (in billions)	366.83	702	3,026	9,134	17,173	4,824	10,901	18,361	25,518	32,900	34,104	41,562	47,391	51,808	55,486	58,858
GDP nominal growth	91.2	91.4	331.0	201.8	88.0	51.0	53.0	50.4	48.6	28.9	33.6	21.9	14.0	9.3	7.1	6.1
GDP real growth	11.4	8.4	3.4	5.9	4.1	3.2	4.7	4.4	4.7	6.0	3.50	3.00	2.00	2.25	2.50	2.50
Employment	4,370	4,417	4,442	4,441	4,435	4,258	4,319	4,311	4,307	4,307	4,221	4,200	4,158	4,116	4,075	4,034
Average wage and salary	2,257	4,615	19,678	59	125	164	175	185	192	251	259	319	367	405	438	469
Overdue contributions (millions of rubles, end period)	1,841	2,180	5,556	19,571	78,845	...	...	...	153,500	...	...	...	...	...	...	...
In percent of tax collections	5.3	3.1	1.8	2.1	4.1	...	...	...	5.3	...	...	...	...	...	...	...

Sources: Ministry of Labor and Social Protection; and IMF staff estimates.

#### D. Projecting Annual SPF Cash Flows

15. **SPF revenue projections are based on the government's official macroeconomic targets, and thus tend to be overoptimistic.** In drafting its annual budget, the SPF is required to use the official macroeconomic growth targets prepared by the ministry of economy rather than more realistic, mid-point forecasts. In 2002 these projections have turned out to be unrealistic. For example, in its budget the SPF planned to receive Rbl 2,940 billion (12.0 percent of budgeted nominal GDP) in social contributions in 2002. However, despite much higher-than-forecast inflation and strong growth in wages, SPF contributions were only Rbl 2,916 billion (11.4 percent of actual GDP).

16. **The ministry of economy target for average wage growth and the SPF forecast of tax compliance are particularly unrealistic.** During 2002, although many enterprises could comply with administrative increases in the wage bill (often by running arrears on payments to suppliers or at the expense of profit margins), they were not then able to cover their obligations to the SPF, as evidenced by the sharp increase in arrears on SPF contributions. In projecting its 2003 revenues, the SPF is required to assume full tax compliance, an unlikely outcome considering that sharp growth in labor compensation has put serious strains on enterprise finances (Box 1). Finally, economic reforms and privatization are likely to rationalize and reduce employment, thereby—at least temporarily—reducing total payroll and increase noncompliance.

17. **The SPF is also required to administer many non-pension benefits.** These expenditures include allowances to families with children, maternity and birth-related benefits, and benefits due to disability and death, as well as payments for health-related vacations. The share of these non-pension benefits rose in recent years from 1.8 percent of GDP in 1997 to 2.4 percent in 2002. Childbirth and benefits to families with children above 3 years old were shifted in 1999 from the Republican government to the SPF, with the agreement that the former would make transfers to fund these mandates. However, in recent years, funding from the Republican budget for these benefits has been set at insufficient levels. For example, in 2002 the SPF budgeted Rbl 165 billion to pay childbirth benefits and allowances to families with children above 3 years old. (In the event the SPF paid Rbl 132 billion, but received only Rbl 23.3 billion from the Republican budget.) In 2003, the SPF expects to be reimbursed for only 37.2 percent (Rbl 71 billion) of its obligations in this area (Rbl 197 billion).

Table 2. Calculation of Pension Expenditure

	2003
<b>Summary</b>	
Total SPF expenditure on pensions and delivery cost	3,351,429
Pension expenditure (thousands of rubels)	3,298,434
of which financed at the expense of the Republican budget	70,919.7
Pension expenditure financed by SPF's own revenues	3,227,514
Pension delivery cost	59,372
Total number of pensioners	2,498
Average monthly pension (in thousands of rubels)	110.0
Projected average wage	251
Average pension as percentage of average wage	43.9
<b>Detailed pension bill calculations</b>	
<b>Workers</b>	
Number of eligible (in thousands)	2,424
Average pension (in thousands of rubels)	111.0
Expenditure	3,228,768
For pension delivery (at 1.8 percent of the pension bill)	58,117.8
of which early retirement due to unemployment paid outside SPF	
Number of eligible (in thousands)	4.5
Average pension (in thousands of rubels)	116.0
Expenditure	6,264
For pension delivery	112.8
<b>Social pensions</b>	
Number of eligible (in thousands)	52
Average pension (in thousands of rubels)	40.0
Expenditure	24,768
For pension delivery	445.8
<b>Military pensions</b>	
Number of eligible (in thousands)	22.7
Average pension (in thousands of rubels)	138.0
Expenditure	37,591
For pension delivery	676.6
<b>Supplements for exceptional contributions to Belarus</b>	
Number of eligible (in thousands)	6
Average pension (in thousands of rubels)	73.6
Expenditure	5,564
For pension delivery	100.2
<b>Supplements for government employees</b>	
Number of eligible (in thousands)	3.3
Average pension (in thousands of rubels)	44.0
Expenditure	1,742
For pension delivery	31.4

Source: SPF.

**Box 1. Projections for 2003**

The SPF budget for 2003 projects nominal revenue growth of 43 percent, despite the authorities' inflation target of 18–24 percent and GDP growth target of 6–6½ percent. As a result of unrealistic revenue projections, in 2003 pension benefits are projected to increase by 40 percent, and total SPF expenditures are expected to rise by 42 percent. Including transfers from the Republican budget of Rbl 140 billion (0.4 percent of GDP), the SPF projects to end 2003 with a small surplus of Rbl 50 billion (0.2 percent of GDP).

On current policies, the staff projects that the SPF deficit—before transfers from the Republican budget—could reach Rbl 270 billion (0.8 percent of GDP) in 2003. The staff projects that SPF revenues would grow by about 33 percent (in line with nominal GDP), owing to a more realistic assumption for real economic growth (3.5 percent), higher inflation (29 percent), and a 2 percent decline in employment. Compliance with social contribution requirements are projected to stay at a level similar to previous years. (Effective tax compliance stood at 81.7 percent in 2002, and for 2003 it is projected to be 82 percent.) No fundamental reform of the pension system is assumed, including changes in the pension indexation formula or an increase in the retirement age.

SPF Projections for 2003  
(In percent of GDP unless otherwise indicated)

	2002	2003	
		Authorities	IMF
Revenue	12.0	13.4	12.0
<i>of which:</i> transfers from Republican gov't.	0.3	0.4	0.4
Expenditure	12.0	13.2	12.8
<i>of which:</i> pensions	9.3	10.0	10.0
Current year balance	0.0	0.2	-0.8
Memorandum items:			
GDP (billions of rubels)	25,518	32,900	34,104
Average inflation	42.5	18-24	29.2

Sources: SPF and Fund staff estimates.

## **E. Reforming the Pension System: Short- to Medium-Term Reforms**

18. **Belarus faces a need for deep reforms in the pension system over the medium term.** These changes are driven by demographic factors, broader economic reforms in the economy, and prospects for further economic integration with Russia, including the unification of the labor markets.
19. **On the revenue side, tax arrears and noncompliance on SPF contributions are likely to grow.** Market reforms, including privatization and decentralization, are likely to increase the number of corporate taxpayers sharply, and thus could undermine the existing tax enforcement system in Belarus. It may be useful to consider merging all tax collection activities, including the collection of the social insurance contributions, into a single institution, such as the ministry of taxes and fees, given the broad overlap between the tax bases of the payroll tax and that of the personal income tax.
20. **Therefore, most of the adjustment to the pension system finances will have to come on the expenditure side of the budget.** Pension indexation rules will probably need to be revised. One possibility would be to delink pension growth from developments in wages and salaries. While it is important to be mindful of protecting the real value of pensions, it is possible that unemployment will rise over the medium term in Belarus. Thus, the current system of indexing pensions to the growth rate of the average wage could be replaced by a rule linking benefits to the economy-wide wage bill.
21. **It would be important to slow the growth in the number of eligible pension recipients.** To accomplish this objective, it may be advisable to consider raising the retirement age from the current levels of 55 years for women and 60 years for men. (The required duration of employment to receive full pension benefits is 20 years for women and 25 years for men.) To minimize social disruption, the process of increasing the retirement age should start as soon as possible, but be implemented gradually. For instance, it could be raised by six months every year until it reaches 62 or even 65, while unifying the retirement age for men and women.<sup>8</sup>
22. **Some analysts have argued that the retirement age should be linked to life expectancy,** which is much lower in Belarus than in the West. However, there are three fundamental flaws with this argument:
- First, what matters for pension system financial sustainability is not life expectancy at birth, but life expectancy at retirement. Indeed, life expectancy of men at age 60 is

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<sup>8</sup> See Appendix I for a discussion of the impact of increasing the retirement age.

about 14 years, not much less than the life expectancy of men at age 65 in industrial countries;<sup>9</sup>

- Second, a worker who retires at age 55 instead of 65 will not only draw benefits for 10 years longer, but has contributed 10 years less into the pension system; and
- Finally, as evidence from other transition countries shows, life expectancy at retirement is likely to increase in the next few years in Belarus as the economic situation stabilizes and the Belarusian population benefits from improved health care.<sup>10</sup> Indeed, over the longer term, overall average life expectancy is likely to grow.

**23. Reforms of the pension system should also encourage employment by retirees.** The authorities should avoid discouraging employment of retirees by reducing the retirement benefits of working pensioners, including by setting earnings limits or imposing punitive taxation of retirees' labor compensation. These steps serve to enhance pension tax contributions, and may embody an element of means-testing. However, attempting to address growing unemployment by pushing the pension-age population out of the labor force would undermine pension system finances.

**24. The Belarusian authorities have begun preparing new pension legislation.** On March 4, 2002, the Council of Ministers approved the *Program for Reforming the Pension System in Belarus*. This new pension legislation, which originates in the ministry of labor and social security, broadly corresponds to the reform principles noted above. For example, it would provide for a rise in the retirement age by 2.5 years for men and by five years for women over the next ten years. Each year, the retirement age would be increased by three months for men and six months for women. The proposed reforms aim at making the system more transparent by allowing the exclusion from the base on which pension benefit rights are accumulated of periods when a future pensioner served in the military, was on maternity leave, or attended school. The new pension legislation will consist of three major bills dealing with the state pension system and two additional bills to lay the groundwork for the creation of the private pension system: *On Supplementary Pension Insurance* and *On Non-state Pension Funds*.

**25. The proposed reforms would also separate the financial management of the pension system from the administration of other social benefits.** This would require that

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<sup>9</sup> Life expectancy at age 65 in the U.S. stood at 17½ years in 2000, up from 14½ years in 1960, and was projected to increase to 20 years after 2060. See *UNISEX Life Expectancy at Retirement Based on Period Life Tables*, published by the U.S. Social Security Administration, [www.ssa.gov/history/reports/adccouncil/report/table1d.htm](http://www.ssa.gov/history/reports/adccouncil/report/table1d.htm)

<sup>10</sup> For example, in Estonia, life expectancy at birth for men plunged from 64.4 years in 1991 to 61.1 years in 1994, before recovering to 64.4 years in 1998. Similar patterns were observed in Latvia and Lithuania.

the SPF be broken into two separately-financed parts. One portion would finance public pensions exclusively, while the other would manage non-pension social benefits, though it is possible these will be consolidated into the Republican and local budgets.<sup>11</sup>

#### **F. Options for Financing Pension Reform: Use of Privatization Receipts?**

26. **Privatization in Belarus is only now getting under way.** Whereas in neighboring transition countries the bulk of state assets were sold off some time ago, the authorities in Belarus are seeking at this stage to complete the process of corporatization. They expect to divest of holdings in a number of large enterprises over the coming year or two. Thus, it may be possible in Belarus to gain public support for privatization by linking the proceeds to pension reform.

27. **From a political economy standpoint, it could be argued that all of the investment in the state assets about to be privatized was financed by the current older generation.** In a sense, those who worked during the postwar era financed the construction and maintenance of public enterprises. Therefore, political support for privatization might be enhanced if the authorities were to link the use of privatization proceeds to financing pension reform.<sup>12</sup> The calculations below simulate the impact of dedicating privatization proceeds to pension reform in Belarus.

#### **Simulation assumptions**

28. **To simulate the use of privatization receipts to support pension reform, the following is assumed.** At the end of 2003, resources from privatization are assumed to rise to at least Rbl 2 trillion after large scale privatizations are completed. (These include the receipts from the sale of government's stake in Slavneft in December 2002, and those from the sale of petrochemical companies in 2003). The authorities earmark these resources, and the accumulated interest (at 2.5 percent annually) over ten years, to finance pension reform. The SPF is not projected to generate significant surplus on its own in the coming years. Therefore, in the absence of the privatization funds, the authorities would have to increase the SPF contribution rate to generate the surpluses needed to finance its current pension and social welfare obligations as well as the funded pillar of defined contribution retirement accounts for the current working generation. However, the availability of the privatization resources permits the establishment of a funded pension tier without increasing the SPF contribution rates. The SPF could use the privatization resources to partly finance pensions of

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<sup>11</sup> For detailed discussion of proposed pension reforms in Belarus see ILO (2001).

<sup>12</sup> To some extent, this notion responds to a distortion in the allocation of assets in transition countries. Empirically, in most Western economies, the distribution of assets is strongly skewed in favor of the older generation, while in transition countries, such as Belarus, this is not the case. (For the U.S., see "Survey of Consumer Finances," <http://www.federalreserve.gov/pubs/oss/oss2/scfindex.html>).



the current retirees, and use the surpluses between its current revenues (mainly from social contributions) and current expenditure to finance a funded pension tier for the current working generation.

29. **For the purposes of this simulation, macroeconomic developments follow a baseline scenario which assumes macroeconomic stability continues to be a problem and structural reforms move slowly.**<sup>13</sup> In this scenario, GDP growth declines to 2.5 percent in the medium term. Wages grow at a rate that is 1 percentage point slower than GDP in 2004 and ½ percentage point less than GDP thereafter. Pensions are assumed to grow at the same rate as the growth rate for wages. (See Table 3 for detailed results of the simulation.)

30. **It is assumed that the government would launch broad pension reforms that would include the following measures,** these measures are needed to ensure that the accumulated privatization receipts are not used to increase pensions in the short-term, but are rather saved to finance the formation of the fully-funded pension tier.

- The retirement age is gradually increased from current levels to 65 for both men and women, to lessen the financial burden on the SPF.
- The pension indexation formula would be delinked from average wages, to ensure that average pensions grow at the rate of the wage bill (i.e., taking account of increasing unemployment).
- A funded pension tier is created for all those employed under a certain age, to be financed by part of SPF contributions.

31. **Only after the above measures are approved should the SPF begin to use privatization receipts to pay current pension obligations.** At the same time, the government would have to ensure that the current SPF surpluses are used as prescribed to fund the funded tier.

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<sup>13</sup> See accompanying staff report.

Table 3. Financing Scenario for the Use of Privatization Receipts to Finance Pension Reform

(In billions of 2003 rubels unless otherwise indicated)

	Outstanding balance in the privatization receipts account, end-of-period	Annuity from the privatization account	Pension bill	Pension Fund own revenues (from social contributions)	Surplus in the Pension Fund after use of annuity from the privatization account	Surplus as percent of Pension Fund revenues	Assumed real wage growth	Assumed real pension growth	Average wage and salary income, 2003=100	Average real pension, 2003=100	Average pension as percentage of average wage and salary income
2004	1,866	227	3,403	3,416	240	7.0	2.0	2.0	100.8	100.8	41.3
2005	1,682	227	3,509	3,509	227	6.5	1.5	1.5	102.5	102.5	41.3
2006	1,495	227	3,632	3,603	198	5.5	1.8	1.8	104.2	104.2	41.3
2007	1,302	227	3,768	3,710	168	4.5	2.0	2.0	106.2	106.2	41.3
2008	1,105	227	3,914	3,822	135	3.5	2.0	2.0	108.3	108.3	41.3
2009	902	227	3,994	3,938	171	4.3	2.0	1.0	110.5	109.8	41.0
2010	695	227	4,034	4,058	251	6.2	2.0	1.0	112.7	110.9	40.6
2011	482	227	4,075	4,181	333	8.0	2.0	1.0	115.0	112.0	40.2
2012	264	227	4,116	4,309	420	9.7	2.0	1.0	117.3	113.1	39.8
2013	41	227	4,157	4,439	509	11.5	2.0	1.0	119.7	114.3	39.4
	(In percent of GDP)										
2004	5.6	0.7	10.1	10.2	0.7	...	...	...	...	...	...
2005	4.9	0.7	10.3	10.3	0.7	...	...	...	...	...	...
2006	4.3	0.6	10.4	10.3	0.6	...	...	...	...	...	...
2007	3.6	0.6	10.5	10.3	0.5	...	...	...	...	...	...
2008	3.0	0.6	10.6	10.4	0.4	...	...	...	...	...	...
2009	2.4	0.6	10.6	10.4	0.5	...	...	...	...	...	...
2010	1.8	0.6	10.4	10.5	0.6	...	...	...	...	...	...
2011	1.2	0.6	10.3	10.6	0.8	...	...	...	...	...	...
2012	0.7	0.6	10.1	10.6	1.0	...	...	...	...	...	...
2013	0.1	0.5	10.0	10.7	1.2	...	...	...	...	...	...

Source: Staff simulations

Assumptions:

Privatization account yields 2.5 percent in real terms. Pays an annuity to the Pension Fund calculated to exhaust the Fund in 2014.

Average real wage and salary: For 2004 growth follows real GDP growth less 1 percentage point, for 2005-2013 follows real GDP growth less 0.5 percentage point.

Average pension: For 2004-08 follows wage and salary growth; for 2009-13 slows to half the rate of wage and salary growth.

Pension Fund own revenues: Grow in line with real wage and salary growth and growth in working age population (0.25 percent per year over the period).

Pension bill: Grows with average pension and the number of pensioners.

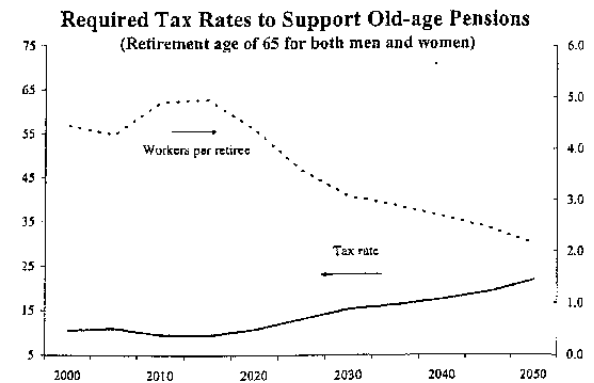
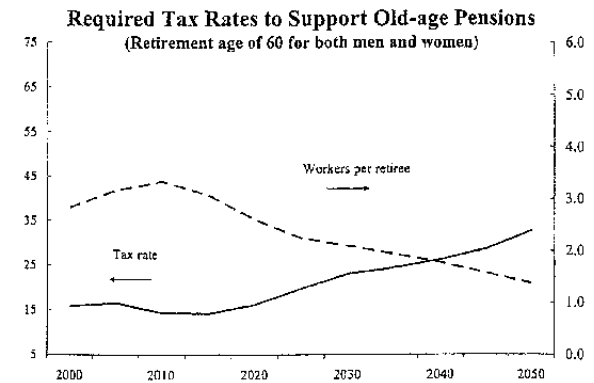
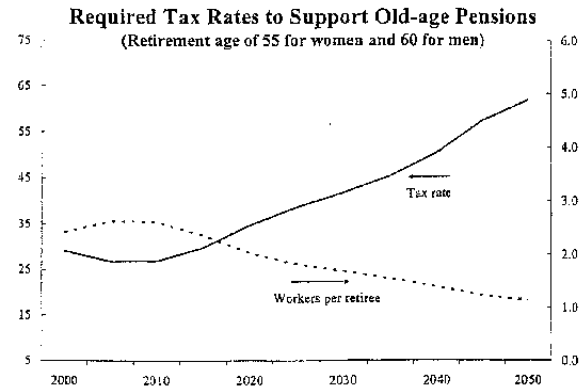
### SIMULATION OF LONG-TERM PENSION FUNDING NEEDS UNDER DIFFERENT RETIREMENT-AGE SCENARIOS

1. Using World Bank population projections we project the necessary social contributions to finance the state pay-as-you-go pension system in Belarus during 2000–50. Although the projections are extremely simple, they give an indication of how high the social contributions will need to be to cover pension obligations in the next 50 years.

2. In the first case, the retirement age is set at the current levels: 55 years for women and 60 for men. Under the assumption that the pension system can collect 80 percent of the social contributions due, the payroll tax needed to finance future pensioners will increase from the current level of about 29 percent to 62 percent in 2050.

3. In the second case, the retirement age is increased to 60 years for both men and women. Such an increase, under similar assumptions yields about 10 percentage points decrease in the required social tax rate needed to finance the pension payments in 2050.

4. In the third and most ambitious case, an increase in the retirement age to 65 years for both men and women requires a social tax rate of only about 32 percent in 2050.



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## II. MONEY DEMAND IN BELARUS<sup>1</sup>

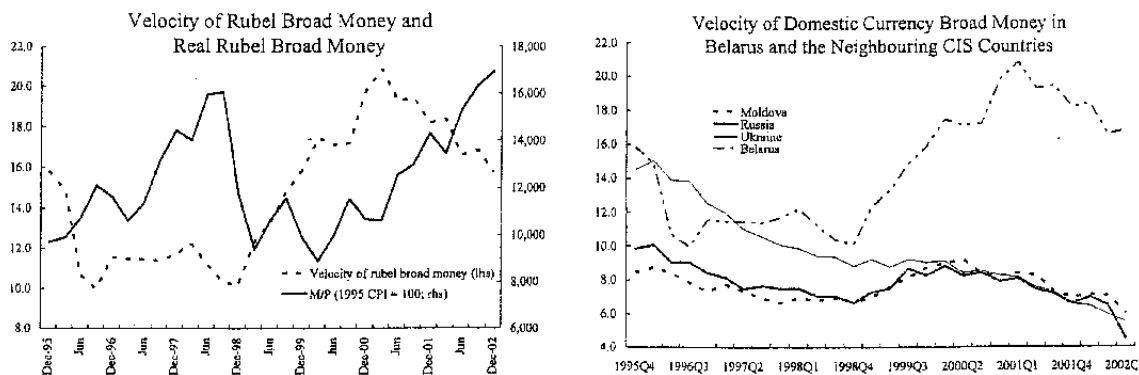
### Executive Summary

**Demand for rubel broad money has improved significantly since mid-2001.** Declines in inflation, relative exchange rate stability, high real interest rates, declines in barter transactions, and robust real GDP growth have largely contributed to this outcome.<sup>2</sup>

**The authorities expect further improvements in money demand and envisage significant increases in money supply in their economic program for 2003.** To achieve this objective, they have adopted specific measures in programs to increase money demand in 2002 and 2003 (Box 1 and Table 1). It is important to understand these and other changes in money demand in order to formulate an appropriate monetary policy for the period ahead.<sup>3</sup> Although this is a preliminary effort to investigate trends in demand for rubel broad money in Belarus, this paper suggests that stable money demand relationships can be identified in Belarus, and that the usual theoretical predictors apply.

### A. Background

1. **There have been wide swings in rubel broad money velocity during 1995–2002.** Velocity doubled from end-1998—in the aftermath of the Russian crisis—to mid-2001, and declined only gradually during the relative stabilization since mid-2001. However, despite a significant improvement since mid-2001, velocity at end-2002 had only returned to the level of end-1995, and it remains well above the level of neighboring countries.



<sup>1</sup> Prepared by Etibar Jafarov.

<sup>2</sup> However, owing to methodological problems, official data on real GDP growth are thought to be overestimated. (See Appendix III of accompanying staff report.)

<sup>3</sup> It is especially important given the authorities commitment to fix the exchange rate vis-à-vis the Russian ruble from January 1, 2004. Higher inflation would lead to real appreciation of the currency, which in the absence of compensating improvements in productivity would hurt the balance of payments.

2. **Financial markets in Belarus are underdeveloped and financial intermediation is weak.** The economy remains dominated by the government, including in the banking system, where five of the six major banks are state-owned.<sup>4</sup> It is estimated that 80 percent of GDP is produced by the public sector, and equity markets are almost non-existent. Accordingly, the chief options for savers are cash (foreign and domestic), bank deposits (again, in foreign and domestic currency), government bonds, and—more recently—precious metals.

### **Box 1. The Authorities' Program to Increase Money Demand**

The Belarusian authorities adopted a program to increase money demand in 2002.<sup>1</sup> This program, which was extended in 2003, has had only limited influence thus far. The program contains both measures that are likely to prove helpful and steps that could hinder development of market relations in Belarus.

The program aims to increase rubel broad money demand by: (i) increasing real GDP growth; (ii) increasing the share of deposits in the total money stock; (iii) balancing the stock of cash money in circulation with sales of goods, including on a regional basis; (iv) reducing arrears and barter; and (v) developing new asset markets (securities, precious metals, privatization, land reform).

The program comprised specific measures and a timetable to implement them. These measures included: (1) reducing the number of activities subject to licensing requirements; (2) developing measures to reduce the tax burden in Belarus to the level in Russia; (3) saturating markets with domestically produced consumer goods; (4) gradually liberalizing controlled wholesale prices and reducing the number of socially important goods subject to price controls; (5) maintaining a positive real return on deposits; (6) making reserve requirements on new foreign currency deposits in rubels; (7) suspending licenses of those firms engaged in providing services to individuals in foreign currency; (8) developing precious metal markets; (9) increasing efforts to attract deposits; (10) expanding the usage of plastic cards; (11) equipping shops with cash registers; (12) balancing cash supply and sales of goods and services on a regional basis; (13) developing the insurance market; (14) forcing certain enterprises to abstain from barter; (15) reducing "non-monetary" (in-kind) payments for energy; (16) forcing restructuring, reorganization, and bankruptcy procedures for loss-making companies; (17) issuing government securities for individuals; and (18) expanding the privatization of state assets.

Progress has been made on a number of these measures, and many will support macroeconomic stabilization in Belarus. Others will not, however, including the attempt to saturate the market with domestically produced goods, or to match monetary expansion to supply of goods on a regional basis. In the end, there is no substitute for the difficult task of rebuilding confidence in the rubel through a sustained period of low inflation.

<sup>1</sup> Council of Ministers and NBB Resolutions No. 1875/30 of December 28, 2001, and No. 1825/30 of December 30, 2002.

<sup>4</sup> An exception is Priorbank, which sold fifty percent of its shares to Raiffeisen AG of Austria in January 2003.

Table 1. Selected Economic Indicators, 2000–03

	2000		2001		2002		2003	
	Auth. Proj.	Act.	Auth. Proj.	Act.	Auth. Proj.	Act.	Auth. Proj.	Staff Proj. 1/
Velocity 2/	17.4	19.8	19.0-20.3	18.2	12.1-16.0	15.7	14.01-14.04	14.6
Y-o-y change (in percent) 2/	14.3	24.7	22.1-30.5	-8.4	-32.3-(-10.2)	-13.5	-10.7-(-10.8)	-6.7
Real GDP growth (in percent)	...	5.8	3.0-4.0	4.7	5.0	4.7	6.0-6.5	3.5
Y-o-y change in CPI (in percent)	70-90	107.5	34-51	46.1	20-27	34.8	18-24	27.0
Y-o-y increases in monetary aggregates (in percent):								
Reserve money	...	124.3	...	102.8	...	32.0	...	21.6
Rubel reserve money	60.0	122.5	41.3	114.2	102-563	40.1	35-42	38.2
Rubel broad money	60.0	124.1	52.0	96.9	39-117	59.6	28-35	35.0
Exports of goods (in millions of US dollars)	...	6,641	...	7,256	7,790	7,682	8,132	7,901
Y-o-y growth (in percent)	...	17.6	...	9.3	6.5	5.9	5.2	2.8
(Net) FDI (in millions of U.S. dollars)	...	119	224	96	395	338	565	156
NFA of the NBB (in millions of U.S. dollars)	357	150	266	229	240	441 3/	283-319	320
Real exch. rate of the rubel vis-à-vis the U.S. dollar (e.o.p.), 1995–100	...	51.2	...	55.0	...	59.6	...	60.5
Y-o-y growth (in percent)	...	-45.7	...	7.5	...	8.3	-1.0-(-3.8)	1.4

Sources: Belarusian authorities; and Fund staff estimates.

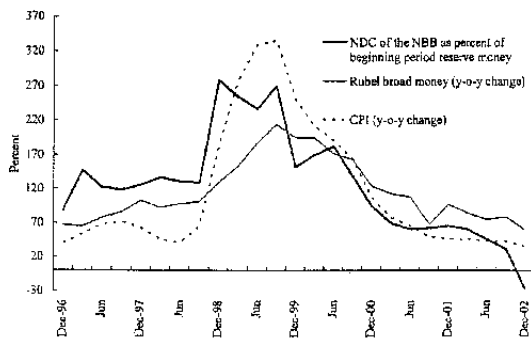
1/ Baseline projections.

2/ Calculated as GDP divided by average rubel broad money. For the authorities projections, velocity is calculated based on the annual Monetary Guidelines.

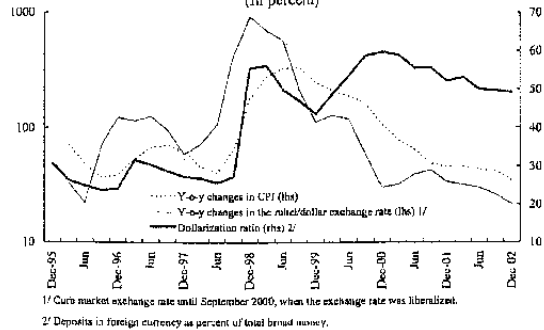
3/ Without US\$207 million for the sale of the government share in Slavneft and a US\$40 million loan from the Russian government, NFA of the NBB would have been US\$194 million at end-2002.

3. **Since early-1996, monetary policy has been largely accommodative of the broader policy goals of the government.** These goals have included providing subsidized and directed credits to selected sectors of the economy, mainly to agriculture and housing construction. The major sources of monetary expansion have been increases in net credits from the NBB (of which a large part was direct credit to government) and directed lending to priority sectors (“state programs” or “socially important programs”) by the state-owned commercial banks. As a result, Belarus has had the highest inflation rate among the CIS countries over the past five years, a factor that has undermined demand for money and contributed to dollarization of the economy.

Net Domestic Credit of the NBB, Rubel Broad Money, and CPI



CPI, Exchange Rate, and Dollarization (In percent)

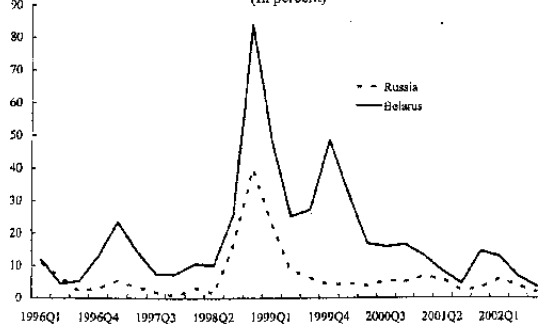


1/ Curb market exchange rate until September 2000, when the exchange rate was liberalized.  
2/ Deposits in foreign currency as percent of total broad money.

4. **The stance of monetary policy was loosened still further following the Russian financial crisis of August 1998.**<sup>1</sup> The authorities responded to these shocks by easing monetary policy, which caused even more inflation.<sup>2</sup> Not surprisingly, the velocity of rubel broad money doubled and the real money stock halved from September 1998 to March 2000.

5. **Macroeconomic policies have been tighter since early 2000.** At end-1999, the authorities signed a treaty with Russia to form a union state, including establishing a monetary union.<sup>3</sup> This factor has contributed to stability insofar as it imposed a timetable for convergence of macroeconomic outcomes in Belarus and Russia. Belarus agreed to unify exchange rates and peg the Belarusian rubel (Rbl) to the Russian ruble (Rub), while the Central Bank of Russia (CBR) agreed to provide Rub 4.5 billion (about US\$150 million) in the form of a stabilization loan to Belarus.

Quarterly Changes in CPI in Belarus and in Russia (In percent)



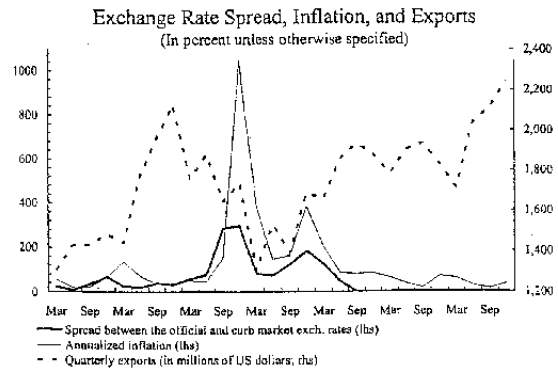
<sup>1</sup> Poor weather conditions also played a role.

<sup>2</sup> The authorities reduced the required reserve ratio from 18 percent to 16 percent in August 1998 and increased directed credits to agriculture and housing.

<sup>3</sup> See companion Selected Issues paper.

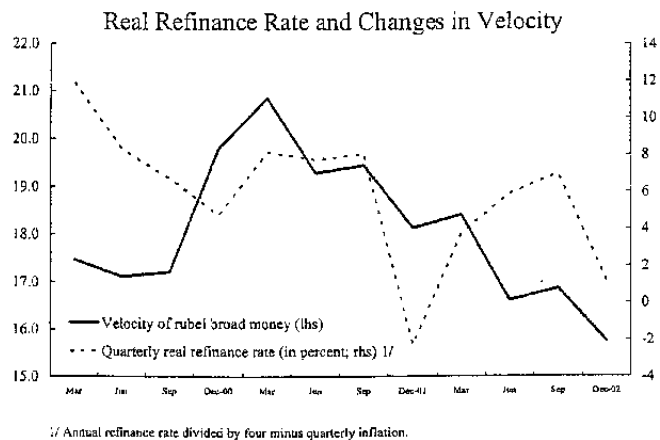


6. **Inflationary pressures have eased since mid-2000 with liberalization of the foreign exchange market.** Reducing the spread between the official and curb market rates from 184 percent at end-1999 to 47 percent at mid-2000, and then abolishing the multiple exchange rate system in September 2000, eliminated an implicit tax on exporters, facilitating growth in exports. The resulting inflows of foreign currency helped ease pressure on exchange rates and increased confidence in the currency.



7. **The authorities adopted a crawling band exchange rate regime in late 2000.** The band is identified in terms of the ruble, given the agreement on monetary union with Russia.<sup>4</sup> The authorities believe that, in Belarus, the exchange rate is more effective in anchoring inflationary expectations than monetary aggregates, mainly because it is easily understood and widely monitored. At the same time, they recognize that the transmission mechanisms of monetary impulses in Belarus are not well-understood.

8. **Exchange rate stability is also supported by high interest rates.** The NBB increased its refinance rate to 175 percent in February 2000 from 90 percent at end-1999 in an effort to make rubel assets more attractive in comparison with those denominated in foreign currency. Since then, the (annualized) real refinance rate has averaged about 15 percent, a factor that has contributed to the increase in money demand.<sup>5</sup> In particular, high interest rates have contributed to an increase in deposits and have reduced the share of cash in broad money. In addition, high interest rates may have also helped to curb demand for credits.<sup>6</sup>



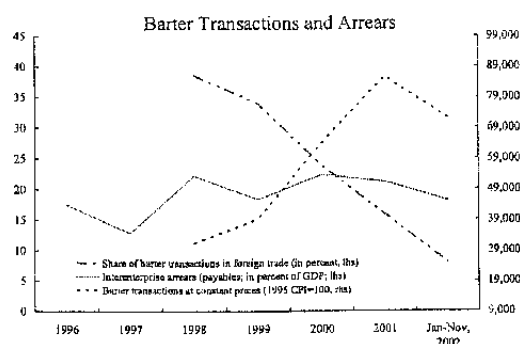
<sup>4</sup> De facto, the authorities have been targeting the U.S. dollar.

<sup>5</sup> Nevertheless, in late 2001 and late 2002, real interest rates were again allowed to move into negative territory as inflation picked up.

<sup>6</sup> Though lack of hard budget constraints on state-owned enterprises make interest rates a relatively ineffective means of rationing credit in an economy where market oriented reforms are lagging.

9. **The authorities' efforts at macroeconomic stabilization were bolstered by a Staff-Monitored program (SMP) in 2001 and a monetary program agreed with the CBR in 2002.** Both programs included quantitative targets on NDA, NIR and an indicative target on reserve money. The CBR program was supported by financial resources—three equal tranches of Rub 1.5 billion with one year maturity.<sup>7</sup> Both the SMP and the CBR program ended on September 30, and were followed by a marked loosening of—monetary and thus higher inflation policy—in the fourth quarter.

10. **Interenterprise arrears and barter remain endemic, despite the authorities' efforts to reduce them.**<sup>8</sup> While the share of barter transactions has been reduced significantly in international trade—given pressure to limit it from Russia and other CIS countries—the share of barter in domestic transactions remains high.



## B. Modeling Money Demand in Belarus

11. **Mainstream theories of money demand relate the optimal stock of real money balances to returns on competing assets (negatively) and to real income (positively).**<sup>9</sup> Money demand in Belarus is considered in Krivorotov (2000). He argues that money demand in Belarus is a function of real output, expected inflation, returns on instruments in domestic currency, the relative yield on foreign currency assets and changes in quasi-money (accounts receivable, barter, etc.). However, the impact of these variables is not measured.

12. A standard model of money demand is developed in this paper, which relates money demand to real transactions and a set of variables capturing the opportunity cost of holding money:

$$mp = f(y, R)$$

where  $mp$  stands for real money,  $y$  is a scale variable capturing real economic activity, and  $R$  is a vector of variables capturing opportunity costs of holding money.

<sup>7</sup> These tranches were disbursed in July 2001, June 2002, and November 2002. The first tranche was rolled over for another year in July 2002.

<sup>8</sup> Tighter macroeconomic policies and soft budget constraints have contributed to increases in money surrogates that tend to undermine demand for money.

<sup>9</sup> For review of the literature on money demand, see Sriram (1999).

## Data and methodology

13. **We use ruble broad money (M2) for money balances.** Mainly because of data constraints, we use real GDP (rGDP) and real wages (RW) to capture real economic activity. To capture opportunity costs, we use changes in CPI ( $\Delta CPI$ ), changes in exchange rates ( $\Delta EXR$ ), the real refinance rate ( $RR$ ), and the real deposit rate ( $DR$ ).<sup>10</sup> (Due to lack of data, barter and arrears are not included as explanatory variables.) All variables except real interest rates are in logs.

14. **Data are monthly from January 1996 to September 2002**, a period of relative stability, although there are some breaks in the time series. Dummy variables are used to capture seasonality, as well as three significant shocks:

- (September 1998) for the Russian crisis;
- (December 1998) for the currency reform; and
- (October 2000) for exchange rate unification.

15. **Calculations are done using the Johansen procedure**, in three steps (using three lags).<sup>11</sup> First, we conduct unit root tests. Second, we do a vector autoregression (VAR) analysis to find long-term relations among the variables. Finally, in a single equation, changes in real money balances are regressed on contemporaneous changes in the explanatory variables, lags of changes in real money balances and the explaining variables, and the first lag of cointegrating vectors from the VAR.

## Results

16. **The results of unit root tests show that all variables are integrated of order (1)** (Table 2). As the variables are non-stationary, we purge the non-stationarity by differencing, and estimate only differenced variables:

$$\Delta mp = f(\Delta \Delta cpi, \Delta \Delta exr, \Delta rGDP, \Delta rw, \Delta DR, \Delta RR)$$

The results suggest that only growth and changes in inflation significantly explain changes in real money balances (Table 3).<sup>12</sup> Real money balances are inversely related to inflation and positively related to growth.<sup>13</sup> However, valuable information concerning the long-run

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<sup>10</sup> The curb market rate is used prior to exchange rate unification in September 2000.

<sup>11</sup> This is an error-correction model. For details, see Johansen (1988 and 1992), Johansen and Juselius (1990, 1992, and 1994).

<sup>12</sup> Changes in real wages, in the exchange rate, real deposit and refinance rates are excluded from the equations based on F-tests. As growth is not significant in equation (1), it is excluded from equation (2). But in that case, we find an autoregression in the second equation.

<sup>13</sup> But see also Bogetic and Miadenovic (2002), which finds different results.

equilibrium properties of the underlying process is lost in the above equation. Therefore, a VAR analysis is conducted.

**Table 2. Augmented Dickey-Fuller (ADF) Statistics for Testing a Unit Root 1/ 2/**  
(Sample period January 1996-September 2002)

	Levels 3/		Changes	
	Coefficient of the first lag	ADF statistics	Coefficient of the first lag	ADF statistics
Real broad money (mp)	0.00	-2.47	-0.46	-2.64**
CPI (cpi)	0.00	-0.69	-0.14	-2.04*
Real GDP (rGDP)	-0.10	-0.92	-2.68	-5.19**
Real wages (rw)	-0.10	-0.64	-1.01	-3.51**
Curb market exchange rate (exr)	-0.01	-1.59	-0.49	-2.77**
Refinancing interest rate (RR)	-0.16	-2.49	-0.87	-5.18**
Deposit interest rate (DR)	-0.13	-2.16	-0.82	-4.75*

	Levels 3/		Changes	
	Coefficient of the first lag	ADF statistics	Coefficient of the first lag	ADF statistics
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Real wages (rw)	-0.10	-0.64	-1.01	-3.51**
Curb market exchange rate (exr)	-0.01	-1.59	-0.49	-2.77**
Refinancing interest rate (RR)	-0.16	-2.49	-0.87	-5.18**
Deposit interest rate (DR)	-0.13	-2.16	-0.82	-4.75*

1/ Using seasonality dummy variables.

2/ \* indicates rejection of null hypothesis at 5 percent level, and \*\* at 1 percent level.

3/ Including a constant.

17. The results of the VAR analysis suggest that there is a cointegration relationship in levels among real rubel broad money, the real refinance rate, and real GDP. In this relationship, real money balances are inversely related to the real refinance rate and positively related to real GDP (Table 4).

**Table 3. Coefficients in Growth Rate Model 1/  
(Changes in variables)**

	Constant	$\Delta\Delta\text{CPI}$	rGDP
Equation (1)	0.03	-1.64	0.05
Equation (2)	0.04	-0.35	

1/ The equation also includes seasonality dummy variables.

AR 1-5 test for equation (1) : F(5.59)=1.92

AR 1-5 test for equation (2) : F(5.59)=2.74\*

**Table 4. Long-Run Cointegrating Relation**

	rGDP	RR
Coefficients	0.91	-0.14
Standard error	0.43	0.03

18. The single equation analysis suggests that changes in real money balances have inertia and are inversely affected by increases in inflation. While changes in real deposit rates increase money demand, changes in the refinancing rate reduce it.

Feedback from the error-correction term (ECT)—which represents deviations from the long-term relationship between real money, real refinance rate, and real GDP—has a minus sign as expected (Table 5).

But the relationship is stronger than would be expected, suggesting that there are omitted variables (such as arrears or barter) in the equations.<sup>14</sup> Moreover, Chow-tests indicate that there may be a structural break in the equation in November 2000, probably related to the liberalization of the foreign exchange market in the previous month. Therefore, the findings of the single-equation analysis should be interpreted with caution.

**Table 5. Coefficients of Error-Correction Equations 1/ 2/**

Lags	mp	$\Delta\Delta\text{CPI}$	$\Delta\Delta\text{CPI}$	DR	RR	ECT
	1		2	1	2	
Coefficients	0.66	-0.58	-1.59	0.003	-0.013	-0.57
	(3.7)	(-2.09)	(-2.20)	(1.62)	(-2.25)	(2.24)

AR test: F(5.49)=1.79.

ARCH test: F(5.40)=0.35.

Normality test: Chi<sup>2</sup>(2)=0.56.

Heteroscedasticity test: F(23,26)=0.95.

1/ The equation also includes seasonality dummy variables.

2/ ECT stands for the error-correction term.

### C. Summary

19. While preliminary, the results above suggest that it is possible to identify a stable demand for money relationship in Belarus. The standard predictions generally seem to apply, in that demand for money falls with inflation and rises with output and own interest rates. However, considerable work remains to be done in this area, given data deficiencies.

<sup>14</sup> Banerji (2002) shows that declines in barter contributed to increases in money demand in Russia.

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### III. CORE INFLATION IN BELARUS<sup>1</sup>

#### Executive Summary

**In most economies, the short-term dynamics of inflation are strongly influenced by non-monetary factors such as sudden and large changes in the prices of food and energy (“supply shocks”).<sup>2</sup>** In a transition economy like Belarus, these supply shocks play an even more prominent role. Increases in utility tariffs for households frequently put pressure on the overall price level. Moreover, the weight of food items in the consumption basket is high (about 64 percent), which exacerbates the seasonal component of CPI inflation.

**In this paper, we construct a measure of inflation that removes supply shocks from the headline CPI inflation.** We confirm the common intuition that supply shocks, in particular those related to hikes in utility prices, have been quite strong in Belarus, especially during 2002. The combined impact of deregulations and other shocks is estimated at 12 percent last year, compared with annual inflation of 35 percent.

**To examine the short-term impact of supply shocks on inflation, we construct a simple model of Belarusian inflation and estimate it over the recent period of relative monetary stability (2000-2002).** We find that the estimated model shares many features with standard inflation models estimated on data from advanced economies. Inflation is positively correlated with output and the underlying inflation rate is highly persistent. We also find that the supply shocks only have temporary effects on inflation. At the same time, they have a highly persistent effect on the price level. This finding can be interpreted in the sense that the monetary authority accommodates supply shocks to minimize any output effects arising from deregulation.

#### A. The Concept of Core Inflation: Motivation

1. **It is important to estimate core inflation because it removes sector-specific factors from the headline inflation rate.** Thus, it better reflects the underlying monetary component of price increases.<sup>3</sup> The most important sources of supply shocks in Belarus have been (i) gradual price liberalization/administrative hikes of prices in various sectors (particularly utilities), and (ii) seasonal fluctuations in food prices.

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<sup>1</sup> Prepared by Martin Sommer.

<sup>2</sup> See Ball and Mankiw (1995) for review. Ball and Mankiw prefer using term “relative-price shock” rather than “supply shock” because at the microeconomic level, a change in a price of one commodity can be caused by both supply and demand shocks. At the macroeconomic level, however, this distinction is not important.

<sup>3</sup> Bryan and Pike (1991), and Bryan and Cecchetti (1994).

2. **The main benefits of computing core inflation in Belarus are:**

- It enables a more subtle interpretation of historical episodes of high inflation. In certain periods such as early and late 2002, it has not been apparent what is the relative weight of monetary and non-monetary factors in the overall inflation rate.
- Since supply shocks are shown in this paper to be of a transitory nature, core inflation is a convenient way of distinguishing between temporary (“supply shocks”) and persistent (“core”) components of inflation process. In this way, core inflation can be useful for short-term inflation forecasting.

3. **A number of countries have computed and closely follow measures of core inflation.** In the U.S., the closely watched measure is inflation without food and energy prices. Seeking a more general, and empirically more successful, alternative to this measure, researchers associated with the Cleveland Federal Reserve Bank have developed the methodology of a weighted-median inflation rate (Federal Reserve Bank of Cleveland, 2003). The Central Bank of Russia has recently started monitoring core inflation and announced an indicative target for this inflation rate (see Box 1 below).

4. **The most common measure of core inflation simply excludes food and energy prices from the headline inflation rate,** because most of the rapid swings in prices occur in these two sectors. However, this measure may not be suitable for a transition economy. Food items typically make up about half of the consumption basket and excluding them (together with energy) would lead to a measure of inflation that is arguably no longer representative. Excluding food prices alone is also not satisfactory, as many transition countries go through a period of gradual energy price increases that are sources of sizable inflation shocks.

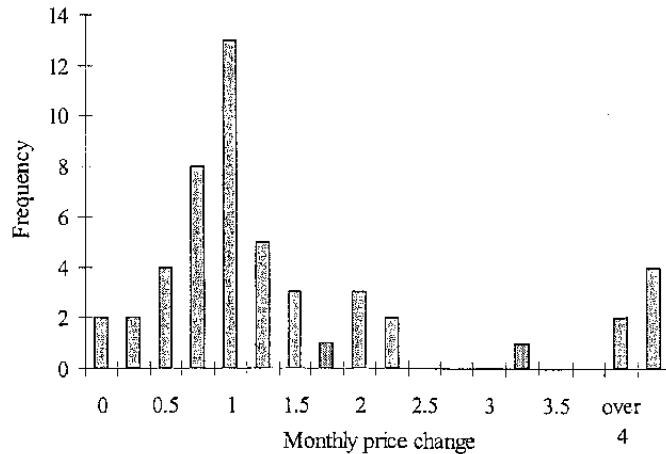
5. **A useful measure of core inflation is based on the median price change.** Core inflation is in this case defined as a median price change in the cross-section of commodities that are contained in the CPI basket. Since core inflation thus measured represents a price change of a typical commodity, it is unlikely to be influenced by sectoral shocks. The intuition for median inflation can be acquired from Figure 1, where the distribution of price changes in December 2002 is plotted. The headline inflation rate of 3.2 percent was strongly influenced by increases in the prices of vegetables (up by 20 percent), water (up by 28 percent) and energy (up by 6 percent). After calculating a weighted-median (rather than a weighted-average) price change, it turns out that inflation would have been just 1.41 percent without these and other outliers.<sup>4</sup>

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<sup>4</sup> Core inflation cannot be read directly from Figure 1 because the actual calculation takes account of weights in the CPI basket. See Appendix 1 for details on the methodology.



**Figure 1. Histogram of Price Changes  
(December 2002)**



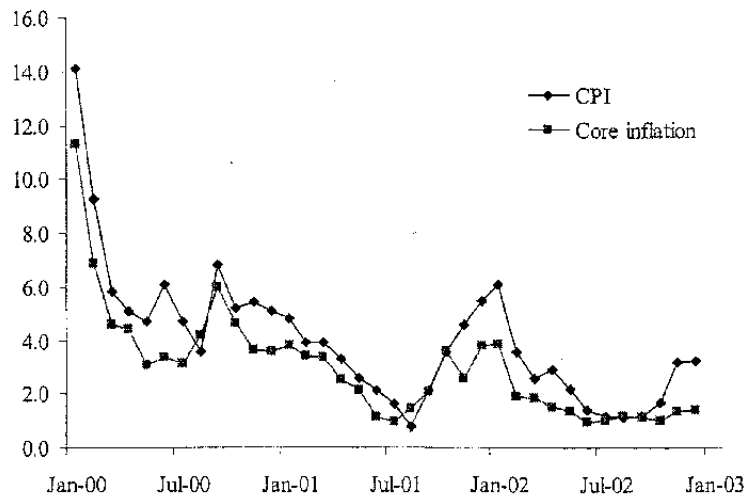
Source: Ministry of Statistics.

## **B. Core Inflation in Belarus**

6. **The ministry of statistics constructs one price index that approximates core inflation:** inflation without rent, water, fuel and power prices. However, seasonal fluctuations and liberalization measures in the food sector would make this measure a rather imprecise measure of core inflation. For example, vegetables contributed more than one percentage point to December 2002 inflation of 3.2.

7. **The staff has estimated core inflation in Belarus.** The median price change was derived using detailed price data provided by the ministry of statistics from January 2000 to December 2002. Figure 2 compares the CPI inflation series with core inflation thus estimated. The core inflation series is consistent with popular stories about the development of inflation in Belarus. For example, increases of energy prices carried out at the beginning and at the end of 2002 led to only temporary increases in inflation. Both favorable and unfavorable food shocks that occur in the summer and winter seasons are removed too. Median inflation is highly correlated with inflation excluding rent, water and energy (the correlation is 75 percent in first differences), but is more sensible as it excludes sharp fluctuations caused by food and other items. Moreover, inflation excluding rent, water, and energy does not leave out occasional large changes in prices of public transportation.

**Figure 2. Headline and Core Inflation in Belarus**  
(January 2000-December 2002)



Sources: Ministry of Statistics and IMF staff estimates.

8. **Monetary policy is still important.** Although the measure of core inflation removes seasonal fluctuations in prices of individual commodities, it cannot (and should not) filter out any seasonal pattern in monetary policy. Both in 2001 and 2002, monetary and fiscal policies were loosened at the end of year, which led to a rise in both core and headline inflation. In this sense, core inflation is not a seasonally adjusted series.

9. **Supply shocks have had a significant impact on inflation in recent years.** During 2002, the authorities rapidly increased cost recovery in the communal services sector. Hence, while the annual inflation-rate reached 35 percent, 12 percent could be attributed to various supply shocks. In 2003, the authorities expect that similar administrative price increases will contribute 5–6 percent to the inflation rate. It needs to be stressed, however, that at annual frequencies inflation is largely a monetary phenomenon, and the overall inflation level is determined by the monetary policy set by the NBB.<sup>5</sup>

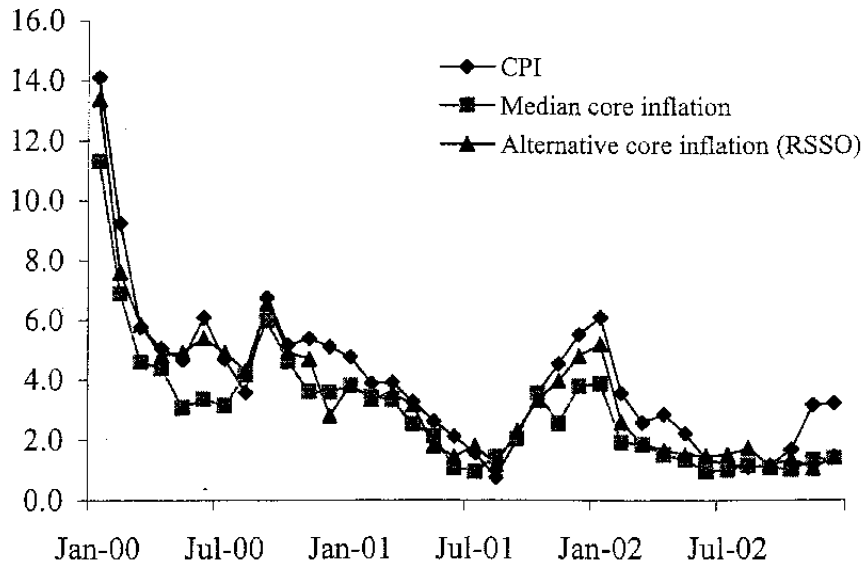
<sup>5</sup> The NBB can in principle offset inflationary effects of any supply shocks by sticking to its predetermined monetary targets.

### Box 1. Core Inflation in Belarus and Russia

The Russian State Statistical Office (RSSO) recently started publishing a measure of core inflation. It is defined as inflation excluding energy, administered prices, fruits and vegetables. So far only a limited number of data points are available, which prevents us from comparing effects of supply shocks on inflation in Belarus and Russia.

However, given the increasing level of cooperation between the National Bank of Belarus and the Central Bank of Russia, it is reasonable to ask whether the measure of core inflation employed in Russia would be sensible in Belarus. Figure 3 compares Belarusian headline inflation, median core inflation and a measure of core inflation that was calculated according to the methodology used in Russia.

Figure 3. Median Core Inflation and Its Alternative  
(2000–02)



Sources: Ministry of Statistics and IMF staff estimates.

While the intuition behind removing volatile fruit and vegetable prices is reasonable, this alternative measure of core inflation does not, for example, smooth out shocks to prices of all the other food items. In Belarus, food excluding fruits and vegetables forms over 50 percent of the CPI basket. The difference between the two measures of core inflation was substantial during several months of 2000 and 2001. During 2002, median inflation and core inflation according to the alternative methodology were quite similar as the frequency of shocks from sectors other than fruits, vegetables and energy diminished.

**Table 1. Impact of Supply Shocks on Inflation**  
(2000–02)

	2000	2001	2002
Total CPI inflation	107.5	46.1	34.8
<i>of which: cumulative supply shocks 1/</i>	18.5	8.3	12.4

Sources: Ministry of Statistics and IMF staff estimates.

1/ The inflation model that underlies this calculation is estimated in Section C of this paper.

10. **The share of monthly inflation volatility explained by supply shocks has increased as monthly inflation rates have fallen.** In November 2002, headline CPI inflation was 3.2 percent, but only 1.3 percent was core inflation. The remainder (1.84 percent) was related to hikes in gas and other utility prices for the households. Similarly, in December 2002, headline inflation was 3.2 percent but the core inflation was just 1.4 percent. Therefore, it is not unusual that much of the inflation in any given month can be attributed to “special,” non-monetary factors, and that the underlying inflation rate is much lower than suggested by the headline.

11. **Does the inflation rate quickly fall back to the level of core inflation or does the supply shock persist?** The question of how inflation evolves after a supply shock is important. It can be answered using econometric techniques, but Figure 2 provides some useful intuition. Consider for example the beginning of 2002. There were repeated unfavorable inflation shocks, yet the core inflation rate fell slightly at first and then remained constant. This suggests that the persistence of supply shocks is currently low and inflation quickly returns to its core level within a month or two. This conclusion is confirmed by econometric analysis below.

### C. Inflation Model and Policy Implications

12. **A model of Belarusian inflation is needed in order to analyze the persistence of supply shocks formally.** Given the difficulties associated with estimating structural models of transition economies, inflation is modeled here by a simple reduced-form Phillips curve.<sup>1</sup> To ensure stability of such a reduced form, it is necessary to estimate the model over a period of stable economic policy (Lucas, 1976). Therefore, data are used for the period from April 2000 to December 2002, which approximately forms a stable policy regime. During this

<sup>1</sup> The theoretical underpinning for this approach is provided by Mankiw and Reis, 2003.

period, monthly inflation rates stabilized below 5 percent and the crawling band exchange rate regime (launched in 2001) provided an anchor for inflation expectations.

13. **The Phillips curve is estimated using monthly data** on CPI inflation ( $\pi_t$ ), year-on-year growth of industrial output ( $y_t$ ) and a measure of supply shocks ( $Shock_t$ ), which is defined as the difference between headline and core inflation rates. The variable  $\varepsilon_t$  denotes aggregate shocks such as monetary and wage innovations.<sup>2</sup>

$$\pi_t = 0.189 + 0.746\pi_{t-1} + 0.090y_{t-1} + 0.818Shock_t - 0.688Shock_{t-1} + \varepsilon_t$$

(0.308) (0.102)      (0.031)      (0.175)      (0.213)

$$\bar{R}^2 = 0.83, \quad s.e. = 1.67, \quad LQ(1) = 0.76, \quad LQ(4) = 0.52$$

14. **This simple model fits the data very well with a small number of regressors.** The adjusted  $R^2$  is over 80 percent, slope coefficients are highly statistically significant, and residuals have standard properties. The estimated inflation model exhibits several notable features: (i) supply shocks are short-lived, (ii) inflation and output are positively correlated, and (iii) underlying inflation is highly persistent.

15. **The persistence of supply shocks is limited.** Since the coefficient on the lag of  $Shock_t$  is nearly the opposite of the coefficient on contemporaneous  $Shock_t$ , supply shocks evaporate from headline inflation within a month or two. As suggested by Figure 2, in the current policy regime, supply shocks (that often represent administrative price hikes) have only short-lived effects on inflation. However, they have a highly persistent effect on the price level,<sup>3</sup> which means that the National Bank accommodates these disturbances.

16. **The other two results—that output is correlated with inflation and that underlying inflation is persistent—are standard in the business-cycle literature.**<sup>4</sup> But the finding that the Phillips-curve relationship is estimable using Belarusian data is important. The persistence of underlying inflation can be attributed to accommodative monetary policy and the influence on expectations of the crawling band exchange rate regime. Another factor has likely been a wage policy that has systematically attempted to set real wage growth over productivity growth.

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<sup>2</sup> Standard errors of estimated coefficients are reported in parentheses. LQ(1) and LQ(4) are probability values of the Ljung-Box test statistics at the first and fourth lags, respectively.

<sup>3</sup> This can easily be seen when we approximate the estimated model as:  $\pi_t = \pi_{t-1} + \beta y_{t-1} + Shock_t - Shock_{t-1} + \varepsilon_t$ . Inflation returns to its pre-shock level already after one period but the price level stays permanently higher. Estimates in Table 1 are based on this approximating model.

<sup>4</sup> See Mankiw (2001) for a review.

17. **The result on the stickiness of underlying inflation is essential** (the coefficient on inflation lag is close to one). Aggregate shocks, such as to wages or money, have had highly persistent effects on the core and headline inflation rates. The intuition can again be obtained by looking at figure 2. Following the dramatic wage increase in the middle of 2001, core inflation rose for many periods and only slowly returned to lower levels. Furthermore, core inflation has been stable at 1–1.5 percent a month since May 2002 and shows no sign of decline. It may have even been increasing recently, consistent with the seasonal character of monetary policy in Belarus. Clearly, the high level of underlying inflation has been built into inflation expectations. It may thus prove costly for Belarus to postpone reducing inflation to the level of its main trading partners.

### CORE INFLATION: METHODOLOGY AND INTERPRETATION

**Following Bryan and Cecchetti (1991), core inflation is measured as the weighted-median inflation rate.** For its computation, we need detailed information on price changes in the individual components of the consumer price index. For any given month, we obtained from the ministry of statistics and analysis price changes for 50–100 commodities along with the appropriate basket weights. We first sorted the individual price changes in ascending order while keeping track of weights. The median inflation rate is at the 50<sup>th</sup> percentile of this sorted list.

**The typical interpretation of core inflation is that it reflects underlying monetary inflation** (Bryan and Cecchetti, 1991 and 1994). A preliminary test of whether measures of core inflation and supply shocks calculated in this paper are consistent with this proposition can be made in two steps. First, supply shocks should be independent of current money and secondly, core inflation should be uncorrelated with current supply shocks. Regression results confirmed that the series calculated in this paper satisfy this property.

**Another, more recent, definition of core inflation in the literature stipulates that core inflation is the inflation rate that best predicts future headline inflation,** conditional on the level of economic activity (Smith, 2003). A partial test of this proposition consists of adding core inflation into the Phillips curve as a separate regressor. It turns out that coefficients on past inflation and past supply shocks become statistically insignificant, which is consistent with this definition of core inflation.

**Table 2. Headline and Core Inflation in Belarus  
(2000–02)**

	CPI Inflation	Core Inflation	Supply Shock
January 2000	14.1	11.3	2.8
February 2000	9.3	6.9	2.4
March 2000	5.8	4.6	1.2
April 2000	5.1	4.4	0.7
May 2000	4.7	3.1	1.6
June 2000	6.1	3.4	2.7
July 2000	4.7	3.2	1.5
August 2000	3.6	4.2	-0.6
September 2000	6.8	6.0	0.8
October 2000	5.2	4.6	0.6
November 2000	5.4	3.6	1.8
December 2000	5.1	3.6	1.5
January 2001	4.8	3.8	1.0
February 2001	3.9	3.4	0.5
March 2001	3.9	3.3	0.6
April 2001	3.3	2.5	0.8
May 2001	2.6	2.1	0.5
June 2001	2.1	1.1	1.0
July 2001	1.6	1.0	0.6
August 2001	0.8	1.4	-0.6
September 2001	2.1	2.1	0.0
October 2001	3.6	3.6	0.0
November 2001	4.6	2.6	2.0
December 2001	5.5	3.8	1.7
January 2002	6.1	3.9	2.2
February 2002	3.6	1.9	1.7
March 2002	2.6	1.9	0.7
April 2002	2.9	1.5	1.4
May 2002	2.2	1.4	0.8
June 2002	1.4	1.0	0.4
July 2002	1.2	1.0	0.2
August 2002	1.1	1.2	-0.1
September 2002	1.2	1.1	0.1
October 2002	1.7	1.0	0.7
November 2002	3.2	1.3	1.8
December 2002	3.2	1.4	1.8

Sources: Ministry of Statistics and IMF staff estimates.



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## IV. BELARUS-RUSSIA UNION: PROGRESS REPORT<sup>1</sup>

### Executive Summary

This chapter updates a paper prepared for the 2001 Article IV consultation.<sup>2</sup> Bilateral relations with Russia are particularly important in Belarus, given the historically strong cultural and economic ties between the two countries, and there have been a number of important developments over the past year. In particular, agreement was reached on an action plan to guide introduction of the Russian ruble in Belarus, and in this context the Belarusian authorities implemented a monetary program agreed with the Central Bank of Russia (CBR). There were significant agreements in the area of gas and transport pricing, and some important political issues related to the future of the Union State were discussed. Formally, the Belarusian rubel (Rbl) is to be pegged to the Russian ruble (Rub) on January 1, 2004, and monetary unification (with the ruble replacing the rubel) is meant to occur on January 1, 2005. A new currency for the Union State could replace the ruble in 2008. However, at this stage the prospects for monetary union are uncertain.

#### A. Review of Developments on Monetary Union

1. **Negotiations over monetary union have been protracted.** Discussions on a union of Belarus and Russia began in 1994, not long after the break-up of the Soviet Union. These negotiations reached an important stage in 1999 when agreement was reached on creation of a Union State. Traditionally, the Belarusians have been seen as being more interested in reunification than the Russians, and a portion of President Lukashenko's popularity in Belarus has derived from strong advocacy of this process.
2. **Economic ties between the two countries are strong.** In addition to close cultural and linguistic ties, the two economies are highly integrated. Over 60 percent of Belarusian trade turnover is with Russia (53 percent of exports and 65 percent of imports of goods and services in 2001).<sup>3</sup> Russian exports to Belarus are dominated by gas and oil, with much of the later being processed for export to markets in Central and Western Europe. Belarusian exports to Russia are predominantly machinery, agricultural products and especially transportation services. The *Druzhba* oil pipeline runs through Belarus, and Gazprom ships a considerable portion of gas exports to Central and Western Europe through pipelines on Belarusian territory. A large, nearly-completed gas pipeline originating in Yamal in Siberia extends across Belarus as well.

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<sup>1</sup> Prepared by Thomas Richardson

<sup>2</sup> Chapter V of SM/02/9 (01/04/02), pp. 47–57.

<sup>3</sup> However, only 5.6 percent of Russian trade turnover is with Belarus, reflecting the relative size of the two countries.

3. **From the standpoint of theory, Russia and Belarus may not be an optimal currency area.** External shocks seem to affect the two countries asymmetrically. While higher energy prices improve the Russian external position, they generally worsen that of Belarus, as the latter produces neither crude oil nor gas. On the other hand, a considerable portion of the oil processing capacity of the former Soviet Union is located in Belarus, suggesting that the impact of oil price shocks may be mitigated by access to inputs at close to Russian domestic prices. Adverse weather affects Belarus more than Russia, given relatively greater importance of agriculture in Belarusian output. However, the work of Mundell (1961) notwithstanding, the decision to form a monetary union is a largely political one. In the case of Belarus and Russia, a political decision has been taken to move to a common currency.

### **B. Recent Developments**

4. **Several important developments relating to monetary union occurred in 2002.** A concrete program of economic reforms for Belarus was drawn up by officials in both countries, and disbursements against a CBR stabilization loan and an export credit line from the Russian Ministry of Finance were made in this context. There were also signs of political disagreement, though by end-year a rapprochement of sorts seemed to have been worked out.

#### **Joint Action Plan**

5. **An important agreement was signed by officials from both governments and central banks in June 2002.** A key objective of this Joint Action Plan (JAP) on introduction of single monetary unit during 2001–05 is to level the playing field for enterprises in both countries. It contains dozens of time-bound measures in the areas of monetary and fiscal policies and structural reforms. Most of the measures envisage obligations of the Belarusian authorities, but Russia accepted a number of important obligations as well.

6. **On the basis of the JAP, Belarus agreed to eliminate many tax preferences for domestic enterprises.** This was a key Russian requirement, and it was implemented during the summer. Another important Russian objective was to establish a joint venture for gas transit and distribution, with contributions from Gazprom and the Belarusian state gas transit concern, Beltransgaz.

7. **The main Belarusian achievement in the JAP was Russia's agreement to provide gas and transportation services to Belarusian firms at internal Russian prices.** For natural gas, this meant lowering the price of gas (as well as electricity) imported from Russia to that of the Russian "fifth energy belt" (e.g., to the prices paid in nearby Smolensk oblast). Again, the objective was to level the playing field for Belarusian and Russian firms throughout the union. In practice, it meant that Gazprom reduced the price of gas at the border to \$24 per thousand cubic meters (tcm) from the previous price of \$31/tcm. The agreed volume of sales during 2002 by Gazprom was 10.6 billion cubic meters (bcm). It is not clear how seriously the Belarusian authorities took the agreed volume limit, but late in the year it became clear that Gazprom—which reportedly receives about \$80/tcm for gas sold to

Poland and Lithuania and \$60/tcm for that sold to Ukraine—took it very seriously.<sup>4</sup> (See below.)

8. **There were two disbursements in 2002 of a stabilization loan from the CBR to the NBB.** The overall size of this loan was Rub 4.5 billion, and it was disbursed in three equal tranches with a one year maturity, beginning in July 2001. The first tranche was rolled over in July 2002, following disbursement of the second tranche in June. The third tranche was released in November. Disbursements under this loan were conditioned on performance against an agreed monetary program for first nine months of 2002.

9. **The CBR monetary program bore a similarity to the 2001 SMP.** It contained quantitative targets on the usual variables; there was a ceiling on NDA, a floor on NIR, an indicative target for reserve money growth, and adjusters to allow for unplanned inflows. Performance under the program was monitored by the Interbank Currency Council (ICC), which comprises the heads of the two central banks and representatives of their senior staffs. The final test date under this program was September 30, 2002, on the basis of which the third tranche was released in November. The lack of external constraints in form of a quantitative framework may explain the weakening of monetary policy in the fourth quarter of 2002. (During the 2001 the SMP also ended with the third quarter.)

10. **The JAP also provided a framework for an export credit from the Russian Ministry of Finance (MoF) to the Belarusian MoF** in late December 2002. This US\$40 million loan—earmarked for purchase of Russian products (chiefly gas)—was conditioned on the following:<sup>5</sup> (i) raising export duties on oil and oil products to Russian levels, (ii) containing the budget deficit to 1.5 percent of GDP, (iii) moving toward competitive procedures for state procurement, (iv) eliminating directed credits through the banking system, and (v) moving refinance of commercial banks to a competitive basis. The terms of the loan were preferential (LIBOR plus 0.75, with principal to be repaid in three annual installments following a three-year grace period).

11. **A number of structural measures are also envisaged in the JAP.** In addition to unification of the external trade policy regime and issues related to monetary unification, these measures include the following commitments by the Belarusian authorities:

- harmonization of tax and budgetary legislation with those of Russia;<sup>6</sup>
- elimination of subsidies for industry;
- full consolidation of extrabudgetary funds into the state budget;

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<sup>4</sup> See Dodsworth, Mathieu, and Shiells (2002) for a review of energy trade issues in the CIS.

<sup>5</sup> The December 2002 tranche was immediately allocated to settlement of arrears on gas deliveries from Gazprom.

<sup>6</sup> The Belarusian authorities plan to develop a draft Budget Code based on the Russian code during 2003.

- procurement reform;
- improving the treasury system, including commitment control and limits on energy usage by budgetary organizations;
- elimination of direct NBB credit to the budget;
- harmonization of legislation on regulation of natural monopolies and utilities;
- creation of a joint venture to manage transit of gas across Belarus and distribution of gas within it;<sup>7</sup>
- harmonization of legislation concerning the licensing regime for business activities, bankruptcy and anti-money laundering;
- completion of small scale privatization and harmonization of legislation for large scale privatization; and
- harmonization of legislation on the insurance market.

A joint committee, headed by deputy economy ministers on each side, is charged with monitoring the structural reform program.

### Russian proposal

12. **In mid-2002, President Putin surprised the Belarusian leadership—and observers—by proposing to accelerate the process of monetary and political unification.** He suggested advancing the date for introduction of the Russian ruble in Belarus by one year, to January 1, 2004, following a referendum to be held in both countries on two possible options for political integration:

- Incorporation of the seven Belarusian oblasts into the Russian Federation; or
- Political unification along the lines of the European Union (where both countries would retain sovereignty subject to something like a subsidiarity principle).

13. **President Lukashenko rejected both options.** He preferred the status quo, which is the eventual creation of a Union State under which Belarus would retain an unspecified amount of autonomy. Negotiations have continued on drafts of a Constitutional Act for the Union State, but thus far have been inconclusive. At the same time, the NBB agreed to an acceleration of monetary union, but only if the structural preparations envisaged in the JAP had been accomplished beforehand.<sup>8</sup> As these may take some time, it would seem unlikely for monetary unification to take place faster than envisaged in the original schedule.

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<sup>7</sup> The Belarusian side also agreed to clear all debt owed by Beltransgaz to Gazprom.

<sup>8</sup> Tarakhovich (2002).

14. **A further conflict arose early in the fourth quarter over gas deliveries.** The lower gas prices envisaged under the JAP applied only to 10.6 bcm, compared with total imports of about 17 bcm. By November, Belarus had imported the full amount envisaged under the agreement, and Gazprom refused to deliver more than this amount at the low domestic Russian price. Following difficult negotiations, Belarus was obliged to contract with Itera and other commercial suppliers for deliveries over the remainder of the year at significantly higher prices.<sup>9</sup>

15. **Relations normalized late in the year.** Some observers have speculated that relations improved when the Belarusian parliament passed a law permitting privatization of Beltransgaz.<sup>10</sup> (This step was seen as a crucial precursor to establishment of the Russian-Belarusian joint venture envisaged in the JAP.)

16. **However, it remains unclear whether the agreed timetable for monetary union will be adhered to.** The Belarusian authorities have noted that introduction of the ruble in Belarus will only take place once the structural reforms in the JAP have been accomplished. Perhaps more importantly, fiscal and monetary policies in 2003 do not seem likely to be consistent with those of Russia by January 1, 2004, at which point the ruble is meant to be pegged to the ruble.<sup>11</sup>

#### **Outstanding issues**

17. **Both sides agree that there must be only one monetary “emission center,” but they disagree about the form it should take.** While there is some agreement on how to handle the conversion of ruble balances to Russian rubles, the CBR and the NBB have disagreed on the institutional arrangements for managing monetary policy on a day-to-day basis. The Belarusian authorities propose that the ICC—the co-chairmen of which are the two central bank governors—set monetary policy for the new ruble zone, subject to oversight from heads of the Union State. In their view, each central bank would “emit” reserve money according to precise limits set by the ICC.<sup>12</sup> Russia, by contrast, insists that the CBR be the sole source of ruble reserve money expansion, arguing that the experience of the former USSR and the former Yugoslavia provides a clear example of how a system of multiple central banks can go awry. Although some progress has been made on technical issues like

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<sup>9</sup> Gazprom has agreed to supply 10.6 bcm during 2003 as well, at a domestic Russian price of \$28/tcm. The authorities are negotiating for additional deliveries from commercial suppliers.

<sup>10</sup> Romanchuk (2003).

<sup>11</sup> There is some agreement on Belarusian monetary and fiscal policy in 2004 and beyond. For example, Belarus has agreed to eliminate direct NBB financing of the government budget deficit from January 2004. (These credits are now earmarked for housing construction.)

<sup>12</sup> Vlaskin (2002).

harmonization of prudential regulations, there has not been much discussion about rules for sharing seignorage.

18. **There is partial agreement about resolution of the problem of VAT rebates for Russian value added exported through Belarus.** Taxation of most CIS trade is conducted on the destination basis, rather than the origin basis.<sup>13</sup> However, the Russian authorities have insisted that bilateral trade between the two countries remain on the origin principle, arguing that the open border makes the destination principle unworkable. Because Belarusian firms process considerable quantities of Russian oil for export to markets to the west, the authorities in Belarus have complained they may be forced to provide export rebates for value added originating in Russia. Russian officials recognize that this could be a problem, and have proposed a rule of thumb to guide compensation. The Russian finance ministry would transfer to the Belarusian budget an amount equal to 16.67 percent of the bilateral trade balance, net of gas imports. This amount, which will be in the neighborhood of \$150–200 million each year, would only be paid once the Russian ruble has been introduced in Belarus (with retroactive compensation to 2003).

19. **Apart from the VAT compensation mechanism, there has been little discussion of fiscal federal transfers within the monetary union.** The absence of a formal mechanism could be important over the medium term, however. It is possible that the Russian ruble will appreciate in real terms in the coming years, owing to faster productivity growth (as reforms were initiated in Russia well before Belarus) and inflows related to raw materials exports. Moreover, the lack of a formal compensation mechanism makes the rate at which rubel balances are converted to the Russian ruble especially important. Any initial overvaluation of the rubel in real terms relative to the ruble could only be accommodated through painful adjustment in the real sector of the Belarusian economy.

### C. Conclusion

20. There has been considerable movement toward establishing a monetary union between Belarus and Russia during 2002 and early 2003. Macroeconomic policies are now closer to being synchronized, though there is still a significant spread between inflation rates in the two countries. Structural reform policies in a number of areas are meant to be harmonized, in many cases leading to significant improvements in institutions and the business environment in Belarus. However, monetary union remains fundamentally a political issue, and it is as yet unclear how quickly the process will advance over the period ahead.

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<sup>13</sup> See Chapter 17 of Ebrill and others (2001). Russia remains on the origin principle in energy trade in the CIS for the time being.

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## V. STATUS OF THE TAX SYSTEM<sup>1</sup>

As of January 1, 2003

### A. Individual Income Tax

1. Taxable income includes cash income in domestic and foreign currencies and in-kind income earned in Belarus and abroad. There are several types of income which are not taxed, such as the following: (i) certain gifts (material incentives) received from an enterprise in an amount of 30 monthly minimum wages (MMW) per year; (ii) free or discounted health resort treatment, and other support of social protection nature; (iii) all forms of social benefits (pensions, benefits under state social insurance and state social welfare (except temporary disability benefits), benefits paid by the state to citizens who suffered from the Chernobyl accident, and scholarships for students; (iv) proceeds from the sale of private property (once every five years for real estate and once a year for vehicles); (v) income from sale of products from private plots; (vi) interest and gains on deposits with banking institutions and on government securities; (vii) income received by inheritance and income received as a result of a gift from close relatives, regardless of the amount; and (viii) income received as a result of a gift from other individuals whose permanent residence is located on the territory of Belarus, up to two hundred times the MMW per gift, but not to exceed five hundred times MMW in a year; (ix) technical assistance and other foreign assistance rendered free of charge to individuals on projects and programs, approved by the President or government of Belarus, as well as under international agreements.

2. The income tax on physical persons is collected on a progressive rate scale. Tax rates are differentiated depending on taxable income expressed. The rate scale below became effective on January 1, 1999. Dividends and similar income, if earned, are taxed at a rate of 15 percent.

Monthly Taxable Income (Y)	Marginal Tax Rate (in percent)
Y < 240 MMW	9
240 MMW < Y < 600 MMW	15 <sup>2</sup>
600 MMW < Y < 840 MMW	20 <sup>3</sup>
840 MMW < Y < 1,080 MMW	25 <sup>4</sup>
1,080 < Y MMW	30 <sup>5</sup>

<sup>1</sup> Prepared by Roman Zyteck based on the updates provided by the authorities.

<sup>2</sup> 21.6 MMW plus marginal tax rate.

<sup>3</sup> 75.6 MMW plus marginal tax rate.

<sup>4</sup> 123.6 MMW plus marginal tax rate.

<sup>5</sup> 183.6 MMW plus marginal tax rate.

3. Members of kolkhozes (or of agricultural entities with a collective form of ownership formed out of former kolkhozes) pay income tax on the basis of the same procedure as all other tax payers.

4. Deductions for children and dependents are:

- 2 MMW per child up to age of 18 and for each dependent.

5. Deductions amounting to 10 MMW per month (120 MMW per year) are allowed for the following taxpayers:

- persons who fell ill and suffered radiation sickness from the consequences of the Chernobyl disaster, and persons who participated in disaster recovery efforts;
- veterans of various wars; and
- categories I and II of disabled persons with all types of disability.

The following amounts are subject to deduction from taxable income:

- amounts transferred by persons who are registered as being in need of improvement of their living condition, within the reported calendar year, limited to the actual amount spent on the construction or purchase of apartments, or for repayment of credits used for these purpose;
- non-cash contribution by legal entities and entrepreneurs for the construction or purchase of housing for persons who are registered as being in need of improvements of their living condition;
- amounts paid by taxpayers within the reported calendar year to the educational institutions located in Belarus, as well as for the education of a spouse and/or their children when they obtain the first higher education or secondary special education.

### **B. Tax on Income and Profit**

6. The income and profit tax is levied on legal entities, including enterprises with foreign investments, foreign legal entities, subsidiaries, representative offices, branch offices, and other structural subdivisions possessing an independent (separate) balance sheet and a settlement (current) account, as well as parties to a joint operating agreement, who have been assigned responsibility for overall management of these operations.

7. The income tax is paid on dividends and income treated as dividends under the law; the tax rate is 15 percent.

8. The profit tax is paid on balance-sheet profit. Balance-sheet profit is defined as the total profit from sale of products, goods (work, services) and other assets (including fixed assets, commodity stocks, intangibles, and securities) and income from operations unrelated to sales, less the expenses of these operations. Profit from the sale of products and goods (work, services) is defined as the difference between total receipts and the costs of business and commercial activity. The tax rate is 30 percent. Enterprises with balance-sheet profit for the year not exceeding 5,000 MMW and having an average annual number of employees, as listed below, are taxed at a reduced rate of 15 percent: in industry—up to 200 people; in science and scientific services—up to 100 people; in construction and other productive sectors—up to 50 people; in nonproductive sectors—up to 25 people.

9. The profit of enterprises, scientific associations, and other organizations of the agroindustrial complex received from production, technical, transportation, and scientific services, material and technical support, and repair and manufacture of equipment, as well as profit received from rendering these services to enterprises and organizations of the agroindustrial complex, is taxed at a rate of 10 percent. The profit of construction, repair-and-construction, and other organizations of the agroindustrial complex received from construction and repair of productive facilities of the agroindustrial complex is taxed at a rate of 7 percent.

10. Fixed amounts of profit tax may be set for enterprises conducting types of activity determined by the Council of Ministers. Such activities currently include retail sale of goods through small retail outlets, stores (on the condition that the total trading space of stores belonging to a single owner does not exceed 25 square meters), public catering enterprises, and at markets, fairs, and sales exhibitions.

11. Tax concessions with reduced rates are defined legislatively. They include: (i) profits used for disaster recovery at Chernobyl in accordance with the republican program; (ii) profits used for environmental and fire protection, scientific research, experimental design, and experimental engineering; and (iii) other uses of profits in selected enterprises and sectors, as defined by law.

12. Profit-tax exemptions are granted to six categories of enterprises including: (i) enterprises where a certain number of employees is disabled employing certain percentage of disabled workers and retiree-age workers in their workforces; (ii) enterprises with foreign investments in which the share of foreign investment is more than 30 percent of the authorized capital; and (iii) other exemptions, as specified by law.

### C. Value-Added Tax

13. Effective from January 1, 2000, the value-added tax (VAT) is paid by legal entities, including enterprises with foreign investments and foreign legal entities, and subsidiaries, representative offices, and other independent subdivisions of legal entities possessing a separate balance sheet and a settlement account, participating parties in joint ventures, enterprises and physical persons that engage in transit of goods via the territory of Belarus in accordance with the customs regulations of Belarus, and individual entrepreneurs if their proceeds from sale of goods (works or services) for the previous month exceeded the equivalent of Euro17,000 at the exchange rate set by the National Bank of Belarus for the last day of the month.

14. As of January 1, 2000, in accordance with the Law on changes and additions to the value added tax (Law No. 324-3), the authorities implemented the invoice method of calculating the VAT. Taxpayers' VAT liability (T) is calculated as the product between the tax base (B) and the tax rate (t). The tax liability is determined as the difference between the total tax liability and any tax credits (off-sets) calculated for a given tax period. If the latter exceeds the former, the tax payer is not obliged to pay VAT and the difference is carried over without penalty and deducted from tax liability in the next period or refunded to the taxpayer.

15. In accordance with current legislation, VAT is not levied on the following categories of goods and services: (i) goods and services used by foreign diplomatic missions and associated representative offices and for personal use of their diplomatic and administrative personnel and their immediate family members living in the same households. This exemption takes the form of a tax return to diplomatic missions and representative offices; (ii) receipts of certain authorized organizations performing certain services (customs, all forms of licensing, registration, patents, fee collected by government agencies, including local governments and other authorized agencies), payments for the use of natural resources, tax earmarked for the environmental protection fund, forestry tax, other payments to the budget, budgetary and extrabudgetary funds; (iii) property of enterprises in the form of deposits in the statutory fund in certain proportions; (iv) value added on primary sale of government securities; and (v) budgetary revenues from privatization and rentals of government enterprises.

16. Value added tax is levied at the following rates:

- Zero (0) percent on exports of goods; labor and services of transit, loading, shipment and transshipment and other similar labor and services directly related to the sale of exported goods; exports of construction goods, transport services, and services arising in the production of raw materials; and goods and services directly related to the transit via the territory of Belarus.

- Ten (10) percent on value added of enterprises and individual entrepreneurs in farming (excluding flowers and decorative plants), animal breeding (excluding fur animals), fishery and honey bee production; enterprises producing goods for children according to a list determined by the council of ministers; producing enterprises using new and high technologies according to a list determined by the ministry of finance; household services; and imports of consumer goods for children according to a list determined by the council of ministers.
- Twenty (20) percent on other goods and services not listed above. In addition, the law determined the rates of 9.09 and 16.67 percent, respectively, which are levied on goods and services subject to regulated prices (tariffs).

17. A number of goods and services are exempted, including medicine, medical equipment, tools and machines, medical and veterinary services (excluding cosmetic services), services for sick, handicapped and elderly, services for pre-school childcare, child education in local, music, and sport schools and facilities, education services, culture and arts services, financial and insurance services, communication and media services etc.

18. When imported into the customs territory of Belarus, the following items are exempt from VAT:

- transportation equipment used for transporting goods or passengers, as well as supplies, fuel, food and other property necessary for normal exploitation of the means of transport used for the time spent on travel, at intermediate stops or purchased abroad to recover from an accident or a break-down of the means of transport used;
- goods in transit via the customs territory of Belarus and destined for third countries;
- goods that are subject to confiscation in accordance with the Belarus legislation;
- goods for sale at duty-free shops in the special zones under customs control.

19. In accordance with current legislation, the VAT is levied on the basis of the destination principle in foreign trade relations with the following Commonwealth of Independent States (CIS): Ukraine, Kazakhstan, Moldova, the Kyrgyz Republic, Tajikistan, Uzbekistan, Armenia, Turkmenistan, and Azerbaijan and in trade with non-CIS countries. That is, the VAT is collected when goods are imported from CIS countries, while goods exported to CIS countries (except Russia and Georgia) are not taxed. Belarus maintains country-of-origin principle with Russia and Georgia.

20. According to the Resolution No. 72 of the Council of Ministers dated January 22, 2002 "On the time of value added tax payments the budget" the VAT is calculated by the taxpayer, and paid to the budget no later than the 22<sup>nd</sup> day of the month following the month for which the tax is due. Besides, current payments are made on specific dates depending on the amount of the tax: (i) every five days when the amount of the tax for the preceding month was over 5,000 BV; and (ii) every ten days when the amount of the tax for the preceding month was from 3,000 to 5,000 BV.

#### **D. Excises**

21. A new version of the Law of Belarus "On Excises" went into effect on January 1, 1998, in an effort to harmonize the legislations of Belarus and Russia.

22. According to the law, uniform excise rates are effective throughout all of Belarus both for goods produced by payers of excises and for goods carried into the customs territory of Belarus and (or) sold in the customs territory of Belarus by payers of excises.

23. Excise rates on goods are established as an absolute amount per physical unit of measurement of excisable goods (fixed rates, or specific rates) or as percentages of the value of goods (ad valorem rates). Excise rates are set by the council of ministers in coordination with the president.

24. To permit unification of legislation of Belarus and Russia, excises on goods carried in from CIS countries are offset. Thus the amount of excises payable on excisable goods originating and carried in from CIS states is decreased by the amount of excises actually paid in the country of their origin. This provision is applied on the conditions of reciprocity by a procedure determined by the Council of Ministers.

25. The list of excisable goods may be redefined by the National Assembly at the request of the President.

26. As of January 2003 the following excise rates apply:

Belarus: Excise Rates

Excise Goods	Excise Rates
<i>Alcohol products(*)</i> (except for liquor and vodka products with the ethyl spirits share up to 28 percent; cognacs, brandy, calvados; wines and wine drinks ethyl spirits share of which doesn't exceed 20 percent; wines based on food concentrates and natural raw material, as well as alcohol drinks (ethyl sprits share not more than 7 percent); solutions containing spirits(**), except for those containing denatured additives, medicinal, preventive and diagnostic products, perfume and cosmetic products registered under the acting order.	3.9 euros per liter of 100 percent ethyl spirits contained in a finished product.
Cognac	2.9 euros per liter of 100 percent ethyl spirit contained in a finished product.
Liquor and vodka products with up to 28 percent of ethyl spirits share.	2.8 euros per liter of 100 percent ethyl spirits contained in a finished product.
Brandy, calvados, and cognac drinks.	1.8 euros per liter of 100 percent ethyl spirits contained in a finished product.
<i>Wines:</i>	
Vermouths and wines, except for natural, sparkling and fizzy wines and champagne.	0.5 euros per liter of 100 percent ethyl spirits contained in a finished product.
Specific fruit and original grape wines	1 euro per liter of 100 percent ethyl spirits contained in a finished product.
Natural grape and fruit wines, sparkling and fizzy wines	0.15 euros per liter.
Sparkling wines and champagne.	0.5 euros per liter.
<i>Drinks:</i>	
Alcohol drinks with ethyl spirits content of up to 7 percent.	0.9 euros per liter of 100 percent ethyl spirits contained in a finished product.
Wine-type drinks based on food concentrates and natural materials (except for imported ones).	2.1 euros per liter of 100 percent ethyl spirits contained in a finished product.
Wine-type drinks with ethyl spirits content of up to 20 percent (made of fruit and grape)	3.5 euros per liter of 100 percent ethyl spirits contained in a finished product.
Wine-type drinks based on natural materials and food concentrates, made by extracting of dried vegetable materials with water-spirits liquid on the basis of ferment hydrolysis, except for imported one	1.7 euros per liter of 100 percent ethyl spirits contained in a finished product.
Beer	0.04 euros per liter.
<i>Spirits:</i>	
Ethyl spirits from food materials.	1.8 euros per liter of 100 percent ethyl spirits.
Raw spirits from food materials provided to Belarusian enterprises for further rectification.	0 euros per liter of 100 percent ethyl spirits.

Excise Goods	Excise Rates
Rectified spirits provided by Belarusian enterprises for alcohol production (fermented spirit-containing fruit-and-berry drinks, vinegars).	0 euros per liter of 100 percent ethyl spirits.
Hydrolytic spirits for technical purposes.	0.1 euros per liter.
Spirits-containing solutions (infusions, extracts, aromatic spirits), provided by Belarusian enterprises for nonalcoholic (soft) drink production.	0 euros per liter.
<i>Tobaccos:</i>	
Pipe tobacco	17.5 euros per kg.
Smoking tobacco, except for one used as a raw material for tobacco products manufacturing.	8.8 euros per kg.
<i>Cigars:</i>	
Cigarillos	0.5 euros per one cigar.
Cigarettes with filter	3.5 euros per 1,000 cigarillos.
Cigarettes without filter	1.8 euros per 1,000 cigarettes.
Cigarettes (with a cardboard holder).	0.8 euros per 1,000 cigarettes.
Jewelry (including those with diamonds).	0.5 euros per 1,000 units.
Mini-buses and cars including those re-equipped into trucks(***) (8702, 8703, and 8704 CIS nomenclature codes), except for cars used for prevention and rehabilitation purposes for disabled:	5 percent.
Having engine power up to 67.5 kwt (90 hp)	0 euros per 0.75 kwt.
Having engine power from 67.5 (90 hp) to 112.5 kwt (150 hp)	0.4 euros per 0.75 kwt.
Engine power of more than 112 kwt (150 hp)	4 euros per 0.75 kwt.
Crude oil except for crude oil imported to Belarus and produced in Belarus and delivered by "Belarusneftj" and "Belgeologiya" production amalgamations for refining.	16.5 euros per ton.
<i>Gasoline:</i>	
Gasoline (except for Octane types АИ-91, А-92, АИ-93, АИ-95, А-96, А-98).	95 euros per ton.
АИ-91, А-92, АИ-93 type gasoline.	120 euros per ton.
АИ-95, А-96, А-98 type gasoline.	135 euros per ton.
Commodity diesel fuel.	60 euro per ton.

(\*) Except for wine materials and cognac spirits.

(\*\*) Except for spirit-containing solutions with ethyl spirits share up to 12 percent.

(\*\*\*) Mini-buses include vehicles for carrying not more than 17 people (including a driver), as well as trucks with capacity of no more than 1.25 tons, including those re-equipped from mini-buses.



### **E. Import Duties**

27. In accordance with the Agreement on the Customs Union, customs borders were abolished between Belarus and Russia, and customs rates were changed so as to be similar. Import duty rates were revised in December 1997 and May 1998. Customs duty rates effective in Belarus and Russia are now almost completely the same.

28. Import duty rates set by government Resolution No. 865 of June 28, 2002 "On the Approval of Import Duty Rates" apply to countries that have been granted most-favored-nation treatment by Belarus.

- Goods originating and entering the Belarus customs territory from countries to whom Belarus applies a free trade regime in trade and economic relations are exempted from customs duties, except for white sugar (Commodity Nomenclature code 1701 99 100), imported to the Belarus customs territory from countries that are not included in Euro-Asian economic community and originating in these countries is subject to import customs duties set up at established rate;
- Goods originating from countries to whom Belarus applies a free trade regime in trade and economic relations and being imported to the Belarus customs territory from third countries are subject to import customs duties at rates established the this Resolution;
- Goods originating from countries where in trade and political relations Belarus applies the most favored nation status and being imported to the Belarus customs territory are subject to customs duties established b this Resolution;
- Goods originating from Belarus and being imported to the Belarus customs territory are subject to import customs duties established b this Resolution, except for goods imported from countries to whom Belarus applies free trade regime in trade and economic relations and the are imported under the agreement on a free trade zone;
- Goods originating from countries to whom Belarus does not apply a most-favored-nation status in trade and political relations, or goods for which the country of origin is not identified and imported to the Belarus customs territory are subject to import customs duties at rates that are double the rates established by this Resolution.

29. Articles entering from and originating in developing countries enjoying preferential treatment are subject to import duties amounting to 75 percent of those set by the Resolution (for 104 countries), while articles entering from and originating in least developed countries enjoying preferential treatment by Belarus are not subject to customs duties (for 47 least developed countries). For articles originating in all other countries, or articles for which the country of origin is not established, the customs duty rates are doubled.

30. When articles entering Belarus under the conditions of free circulation are declared, import duties are paid before or at the moment of customs clearance of such articles.

## F. Real Estate Tax<sup>1</sup>

31. Real estate tax is paid by legal entities, including enterprises with foreign investments and foreign legal entities, as well as the subsidiaries, representative offices, and other structural subdivisions of legal entities possessing an independent (separate) balance sheet and a settlement (current) account, and also by participants in joint ventures that generated gross revenues from such activities, and by individuals. The tax levied on the value of productive and nonproductive fixed assets owned or possessed by the taxpayers, on the value of unfinished construction projects, and on the value of buildings belonging to individuals. The annual real estate tax rate is set at 1 percent for legal entities. The annual real estate tax applied to the value of residential buildings, garden sheds, and garages belonging to individuals, of buildings belonging to garage construction cooperatives and gardening partnerships established with private contributions from citizens, and of buildings used by unincorporated by entrepreneurs for their own activities is set at 0.1 percent.

32. Tax exemptions are granted to 17 types of assets including social and cultural facilities, productive assets of organizations belonging to societies for the disabled, facilities used for environmental protection, privatized apartments in apartment houses, dwellings and buildings belonging to old-age pensioners and certain categories of disabled persons, etc.

33. Since January 1, 1997, the real estate tax has been transferred in its entirety to budgets of the *oblasts* and the city of Minsk. Local soviets of deputies have the right to grant concessions, and to set and change the due dates for the payment.

## G. Land Tax

34. The tax is levied on land plots, possessed, used, or owned. The tax is paid by legal entities and individuals (including foreign ones) to whom land plots are granted for possession, use, or ownership.

35. The amount of land tax is determined depending on the quality and location of the land plot, and it does not depend on the results of the business or other activity of the landholder, the land user, or the landowner. The tax on land zoned for agricultural use is determined from data of the land cadastre. The tax is established in the form of annual fixed payments per hectare of land area.

36. Certain categories of citizens are exempt (including war veterans, old-age pensioners, disabled persons, and citizens who suffered from the disaster at the Chernobyl Nuclear power station).

37. Pursuant to Article 8 of the Law of Belarus "On the Budget of the Republic of Belarus for 2003," in 2003, the total amount of land tax proceeds is subject to the transfer to regional budgets and the Minsk city budget.

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<sup>1</sup> It should be noted that legislation of Belarus uses the term "real estate tax," not "property tax."

38. In accordance with Article 46 of the Law of Belarus "On the Budget of the Republic of Belarus for 2003," local governments have the right to increase (decrease) rates, grant concessions, and set and change the land tax payment due dates. However, the land tax rates for individual tax payers can be increased (decreased) by not more than two times.

39. Land tax on plots of land for temporary use, plots of land not returned on time, and illegally occupied land, as well as land plots exceeding the established space norms is levied at the rate 10 times higher than the standard rate.

#### **H. Tax on the Use of Natural Resources**

40. The tax is paid by legal entities, including enterprises with foreign investments and foreign legal entities, their subsidiaries, representative offices, and other structural subdivisions of entities with separate (individual) balance sheet and settlement (current) account, partners in a joint-venture agreement who are authorized to conduct joint business or who received a gain from said venture prior to its allocation, and individual entrepreneurs.

41. The tax on natural resources is levied on: (i) the volume of resources extracted from the environment; (ii) the volume of refined oil and petroleum products; and (iii) the volume of discharges (releases) of pollutants into the environment.

42. The tax consists of payments for exploitation of natural resources and for discharges of pollutants into the environment within set limits, for excessive exploitation of natural resources and for discharges of pollutants into the environment beyond approved limits, and for refining of oil and petroleum products.

43. The rates of the tax on the extraction of natural resources and on discharge of pollutants into the environment are set by the Council of Ministers of Belarus. For the refinement of 1 ton of oil product, the tax is levied at the rate of 1 euro. A tax of 15 times the base rate is levied for discharges of pollutants into the environment above the established limits. A tax of 10 times the base rate is levied for exceeding the established volumes of the extraction of natural resources.

44. Legal entities funded by the budget of Belarus are tax exempt. The tax is collected at preferential rates: (i) for water released for the commercial, drinking, and fire-fighting water supply of the public, and employees of enterprises, institutions, and organizations; (ii) for a sand and gravel-sand mixture for use in road construction; and (iii) for water used by fish breeding facilities and reservoirs, released to legal entities and individuals for the production of livestock-breeding and agricultural production.

45. In accordance with Article 8 of the "Law on the Budget of the Republic of Belarus for 2003," in 2003, the total amount of tax on extracted natural resources proceeds (ecological tax) is subject to transfer to regional budgets and the Minsk cit budget. In accordance to Article 46 of the 2003 Budget Law, local governments have the right to increase (decrease) rates, set and change payment due dates for the payment of the tax on extracted natural resources except for the tax on oil, and on the extraction of table and potassium salt.

## I. Contributions to Social Security

46. Contributions to the Social Protection Fund of the Ministry of Labor and Social Protection of Belarus are made by legal entities and individuals.

47. The following mandatory payments of social security contributions from the wage bill were established for employers and for cooperatives, enterprises, and companies under a collective form of ownership paying mandatory contributions on behalf of employees working under a labor contract:

- for public associations of disabled persons and pensioners, and for enterprises holding full title to such public associations—4.7 percent; for residential, housing construction, and garage construction cooperatives not deriving income from their activity, and from gardening partnerships 5 percent;
- for the bar association—5 percent;
- for employers for whom disabled persons account for not less than 50 percent of the average listed number of employees—20.4 percent;
- for economic agents engaging predominantly in agricultural production—30 percent; and
- for all other employers (including with foreign investments and for citizens of Belarus)—35 percent.

48. Mandatory contributions are set in the following amounts for individuals and legal entities:

- for entrepreneurs—15 percent of income;
- for members of peasant (owner-operated) farms—15 percent of income;
- for creative workers—15 percent of income;
- for enterprises with foreign investments (for foreign citizens)—5 percent of the wages of foreign citizens; and
- an insurance premium amounting to 1 percent of earnings is set for working citizens.

## **J. Payroll Contributions to the Chernobyl Fund**

49. The emergency tax for recovery from the Chernobyl accident has been collected since 1991. The tax is of a temporary nature and is established by laws of Belarus on the budget for each calendar year. Since 1992, the base for the tax has been the payroll fund. In the "Law on the Budget of Belarus for 2003," the emergency tax and mandatory contributions to the Employment fund were unified into a single tax at the rate of 5 percent (4 percent for the emergency tax and 1 percent for the Employment fund) of the wage bill with a single schedule of exemptions.

50. The taxpayers of the emergency tax are all legal entities, including foreign ones, their subsidiaries, representative offices, branch offices, and other structural subdivisions possessing a separate (individual) balance sheet and settlement (current) and other accounts, and partners in joint ventures agreements who are authorized to conduct joint business or who received a gain from said venture prior to its allocation, regardless of form of ownership, carrying out business activity.

51. Eight categories of enterprises and organizations are fully exempt (and three groups of organizations are partially exempt) from the payment of the emergency tax and mandatory contributions to the State Employment Fund. These include enterprises and organizations of certain categories of disabled citizens, collective farms, state farms, peasant (owner-operated) farms, interfarm enterprises and organizations, agricultural cooperatives, general-education schools, social and cultural enterprises and institutions, etc.

## **K. The Road Fund**

52. The following are earmarked for the road fund:

- the tax on the acquisition of motor vehicles, which are subject to mandatory registration;
- user fees for motor highways;
- deductions from profits from the operation of motor vehicles;
- travel charges for heavy and oversized transportation vehicles on public-use highways;
- tolls collected on the M1/E30 highway Brest—Minsk—border of the Russian Federation; and
- unrequited capital receipts.

53. In accordance with the Article 24 of the "Law on the Budget of Belarus for 2003," legal entities and their affiliations and subdivisions that have separate balance sheets, current accounts or an account abroad, participants in joint ventures that realized gross revenues from their operations are obliged to pay a single tax for the agricultural support fund and the road fund at the rate of 2 percent of sales of goods, labor and services (in the case of banks, non-bank financial organizations, excluding the National Bank of Belarus, this tax is on income net of expenditures on interests and fees and other banking expenses; in the case of trading, catering and service companies, the tax is paid on gross income, while insurance and reinsurance companies pay this tax on balance sheet profits). Each of the two funds receives 50 percent of collected revenues from this single tax.

54. Fees on income from operating motor transportation are paid by motor transportation enterprises and organizations regardless of form of ownership and business conditions, and by enterprises and organizations (except agricultural enterprises) possessing automotive departments and lease motor vehicles, in an amount of 2 percent of income from operating motor vehicle transportation.

55. Tax from sales of automobile fuel is paid by legal entities including entities with foreign investment, and foreign legal entities, subsidiaries, representative offices and other structural subdivisions of legal entities possessing a separate balance sheet and a settlement or an other bank accounts, entrepreneurs and parties of a simple partnership who are authorized to conduct joint business or received the gain from this business prior to its allocation, and who sell gasoline in Belarus.

#### **L. Fund for the Support of Agricultural Producers**

56. The Republican Extrabudgetary Fund for Support of Agricultural and Food Producers has been in operation since 1995. Since 1998, the fund has been a state earmarked budgetary fund. The income of the fund is formed by deductions made by all legal entities of Belarus and their structural subdivisions, regardless of the form of ownership, that have distinct (separate) balance sheets, settlement (current) accounts and other accounts, and certain parties to joint venture contracts in the amount of one percent of the proceeds from sales of products, work, and services. Budgetary appropriations for the payment of subsidies and price differentials are not taken into account when the amount of deductions to the above fund is determined. As mentioned above in the section on the road fund, the 2001 law on the budget merged taxes for the road fund and the agricultural support fund into a single tax at the rate of 2 percent.

57. Several groups of organizations are exempt from paying the single tax earmarked for the road fund and agricultural support fund. These include budgetary organizations, housing organizations, and enterprises engaging in construction, repairs, and maintenance of public-use highways.

### **M. Earmarked Budgetary Funds of Local Governments Used to Fund the Expenses of Maintaining Departmental Housing**

58. On January 1, 1998, earmarked budgetary funds were created by local soviets of peoples' deputies to fund the expenses of maintaining public housing. As of January 1, 2001, according to the Law on the budget (Article 11), the tax earmarked for this purpose was unified with fees for earmarked budgetary funds of local governments for the stabilization of agricultural production, as well as the fees for the maintenance and repair of the housing fund. The unified tax was levied on all legal entities of Belarus and their structural subdivisions, regardless of forms of ownership, possessing an independent (separate) balance sheet and a settlement (current) account, and engaging in business. The tax was levied at the single rate of 2.5 percent of the sale of products, work, and services.

59. Collections from this fund are distributed as follows:

- 40 percent to the earmarked local funds for the stabilization of agricultural production;
- 20 percent to the earmarked local housing-investment funds; and
- 20 percent earmarked fee for maintenance and repair of public housing.

60. Exemptions and preferences on this tax are analogous to the aforementioned single tax earmarked for Republican budget funds—the road fund and the agricultural support fund—levied at the rate of 2 percent on sales of goods, labor and services.

61. In accordance with the Decree No. 19 of the President of the Republic from July 19 to December 31, 2001, foreign legal entities carrying out entrepreneurial activity on the territory of Belarus are also subject to the taxes earmarked for the republican road fund and agriculture support fund, and local earmarked tax for local housing investment funds, maintenance and repair of public housing and local funds for stabilization of agricultural production.

### **N. Other Funds**

62. The 2003 Budget Law, like the budget laws of previous years, allows the formation of innovation funds at the expense of deductions in the amount of up to 0.25 percent of the cost of goods and (or services), attributing them to cost.

63. The legislation allows increased rates of deductions to the innovation funds for certain organizations, starting from 0.5 percent for organizations that belong to the ministry of housing and communal services and up to 20 percent for organizations of the ministry of energy. However, the increased deductions to the innovation funds should not lead to the growth in prices and tariffs for goods and services.