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The World Bank in Russia

Russian Economic Report¹

The global recession has deepened, with larger than expected declines in output and employment in many countries, Russia included. Global output is now expected to decline full 2.9 percent in 2009, with high-income countries hardest hit. Real economy and social impact on Russia was also larger than anticipated just a few months ago. And Russia's real GDP in 2009 is likely to contract about 7.9 percent in 2009. Unemployment could rise to 13 and poverty to 17.4 percent by year end. And Russian middle class measured by household consumption is likely to shrink—by about 10 percent—from 55.6 to 51.2 percent (a decline of 6.2 million people). But the large stimulus package, gradual recovery of oil prices and lower inflation could bode well for the second half of the year, and the Russian economy could return to modest growth in 2010. But given the weak global demand, external environment for Russia will continue to be difficult over the next 18 months. Short-term policy emphasis continues to be warranted for social assistance, infrastructure and small and medium size enterprises. With more constrained financing environment for the government and the private sector in the post crisis period, Russia should accelerate structural reforms aimed at raising productivity and improving diversification and competitiveness.

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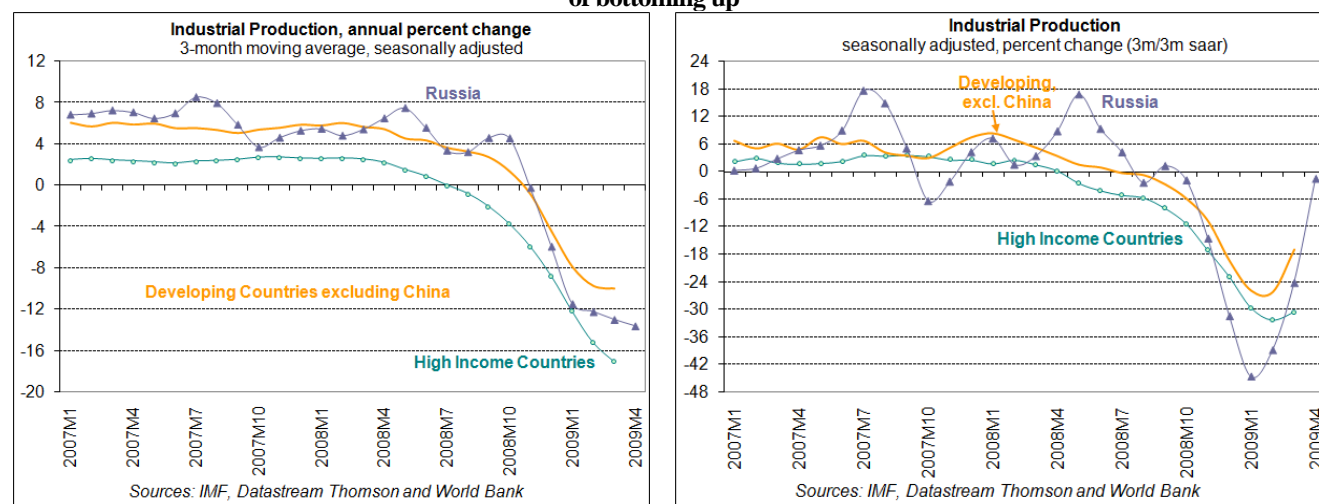
I RECENT ECONOMIC DEVELOPMENTS

Summary. The global recession has deepened, with larger than expected declines in output and employment in many countries, Russia included. Global output is now expected to decline full 2.9 percent in 2009, with high-income countries hardest hit. Real economy and social impact on Russia was also larger than anticipated just a few months ago. And Russia's real GDP in 2009 is likely to contract about 7.9 percent in 2009. Unemployment could rise to 13 and poverty to 17.4 percent by year end. And Russian middle class is likely to shrink—by about 10 percent—from 55.6 to 51.2 percent (a decline of 6.2 million people). But the large stimulus package, gradual recovery of oil prices and lower inflation could bode well for the second half of the year, and the Russian economy could return to modest growth in 2010. But given the weak global demand, external environment for Russia will continue to be difficult over the next 18 months. Short-term policy emphasis continues to be warranted for social assistance, infrastructure and small and medium size enterprises. With more constrained financing environment for the government and the private sector in the post crisis period, Russia should accelerate structural reforms aimed at raising productivity and improving diversification and competitiveness.

The impact of the global financial crisis escalated throughout the first quarter of 2009, with sharp contractions in developed and emerging markets, but the pace of contraction is bottoming out. Industrial production, trade, and global demand contracted sharply around the world at rates not seen since the Great Depression. Developed countries have been hard hit. Output in OECD countries fell by about 2.1 percent in the first quarter of 2009 (year-on-year), indicating a more severe contraction of economic activity and trade from the last quarter of 2008. In high-income countries, industrial production contracted by 17 percent (year-on-year, three-month moving average) as of March 2009—down from a recent peak of 2.7 percent growth in October 2007. In developing countries, excluding China, the decline reached 10 percent in March 2009, well below the levels observed in recent years (figure 1.1). According to the World Bank's current global forecast, global real GDP in 2009 is likely to decline by 2.9 percent in 2009, with particularly deep drops in industrial production. World trade is expected to decline by 9.7 percent.

But there are some positive signs—some “green shoots”—at the global level. The credit crunch seems to be easing, sovereign spreads are down, and a recent increase in oil prices has resuscitated investment sentiment towards resource-rich emerging markets (see *box 1.1*). In the first part of 2009 average oil prices rebounded from December lows on large OPEC production cuts. The average monthly crude oil prices reached USD 58 a barrel in May. But prices are facing resistance as large markdowns to global oil demand continue. The World Bank has revised its 2009 forecast for average crude prices (Brent, Dubai, and WTI) upward from USD 47.8 a barrel to the mid-USD 50s (box 1.1 and box figure 2). An increase in oil prices has strengthened investor confidence in resource-rich emerging markets, including Russia. As of June 1 the RTS index had climbed by 85 percent since the beginning of 2009, and the much broader MSCI Emerging Markets Index by 36 percent.

Figure 1.1. Economic activity in Russia and other countries collapses in Q4-2008 and Q1-2009, but there are early signs of bottoming up



Output and investment—contracting sharply

A worsening global environment—contracting global demand, falling commodity prices, and tightening of credit—has accelerated Russia’s economic downturn in the first quarter of 2009 (table 1.1). The estimated contraction in real GDP in the first quarter of 2009 was 9.8 percent, down from 8.7 percent growth during the same period in 2008 (Rosstat). Based on the most recent April-May data in the second quarter, real GDP is estimated to contract even further, driven by continued decline in industrial production (Figure 1.1).

Table 1.1. Main macroeconomic indicators, 2006-09

	2006	2007	2008	Q1-2009	Jan-Apr -09	Jan- May 09
GDP growth, %	7.7	8.1	5.6	-9.8	-9.8*	-10.1**
Industrial production growth, y-o-y, %	6.3	6.3	2.1	-14.3	-14.9	-15.4
Fixed capital investment growth, %, y-o-y	16.7	21.1	9.8	-15.6	-15.8	-17.7
Federal government balance, % GDP	7.4	5.5	4.0	-0.6	-3.3	-3.1
Inflation (CPI), % change, e-o-p	9.0	11.9	13.3	5.4	6.2	6.8
Current account, billion USD	95.6	76.6	98.9	11.1	n/a	n/a
Unemployment, % (ILO definition) (period average)	7.2	6.1	6.4	9.4	9.6	9.7
Memo: Oil prices, Urals (USD a barrel)	61.2	69.5	95.1	44.1	45.5	47.8
Reserves (including gold) billion USD, e-o-p	303.7	478.8	427.1	383.9	383.9	404.2

Source: Rosstat, CBR, Ministry of Finance, Bloomberg.

* Preliminary estimate by Ministry of Economic Development.

** Preliminary World Bank staff estimate.

Domestic demand—collapsing

Weak global demand and uncertainties combined with tighter credit and rising unemployment constrain both consumption and investment in Russia (figure 1.2). Household **consumption**—the main source of growth in recent years—remained resilient in the last quarter of 2008, when it grew more than 8 percent, but then it contracted by 2.2 percent in the first quarter of 2009 relative to the same period in 2008 according to the Ministry of Economic Development. A reversal in the growth of household consumption, in part due to a sharp increase in unemployment, is also reflected in falling retail sales (down by 1.1 percent in the first quarter) and sharply deteriorating consumer confidence. According to a Rosstat survey, the consumer confidence index reached negative 35 percent, levels last seen in 1999. A decline in **investment** that started already in the fourth quarter of 2008 as a result of liquidity problems in the banking sector has accelerated in the first quarter of 2009. According to the Rosstat estimates, total fixed capital investment, hit hard at the end of 2008, continued to contract by 15.2 percent in the first quarter of 2009.

Preliminary data for April and May show a further, sharp decline in aggregate demand in the second quarter of 2009 with deeper drop in **net exports** because of the collapse of external demand (Figure 1.1).

Box 1.1. Global environment and oil prices—outlook worse than anticipated

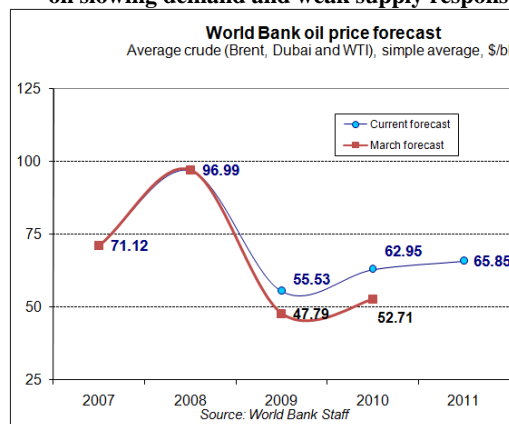
Capital flows to emerging markets remain very low, although they jumped to \$22 billion in April 2009, with all segments strengthening. Both bank lending and equity placements also increased over March. But even with the upturn, capital flows for the first five months of 2009 stood 59 percent below a year earlier. April saw an influx of bond issuance activity with five deals for a total of USD 5.4 billion, which was weighted heavily towards sovereign and quasi-sovereign issuers—including a USD 2.7bn issuance by Russia—as emerging market borrowers took advantage of improving market conditions. The upward trend continued in May with seven other countries coming to the market, among them Poland, Turkey, and South Africa. Meanwhile, syndicated bank loans rose slightly to USD 8 billion in May, but year-to-date bank lending activity remains subdued, running at only 25 percent of the volume reached in the same period of last year. Equity issuance rose to USD 6 billion, mainly due to surge of issuance from India. Russia reported no international IPO equity issuances in May (or since Aug-2008), while international bank activity has proven more resilient, with USD 584 million in new loans in May, the first since January 2009.

Box table 1. Capital flows to emerging markets down sharply in Q1 2009, but show some recovery in April-May

Gross capital flows to emerging markets								
\$ billion	2007		2008			2009		
	Q1	Total	Q1	Jan-May	Total	Q1	Apr	May
Total	156	652	103	194	389	45	13	22
Bonds	58	146	12	36	65	18	5	8
Banks	72	312	71	115	257	19	2	8
Equity	26	194	20	43	68	9	5	6
Lat. America	42	156	19	46	90	21	2	4
Bonds	20	45	5	16	20	10	2	1
E. Europe	79	247	36	66	157	5	4	7
Bonds	27	64	2	15	35	3	3	5
Asia	24	188	38	57	98	17	7	9
Bonds	8	23	3	3	7	5	1	1
Others	11	61	11	24	44	2	0	3

Source: World Bank Staff

Box figure 2. Oil prices projected to moderate on slowing demand and weak supply response

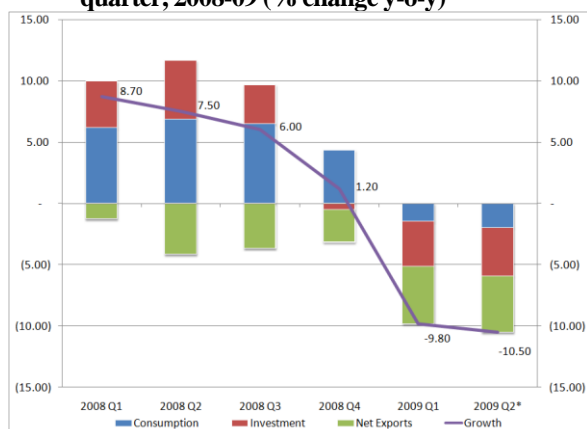


Oil prices stabilized in the early part of 2009, averaging USD 42.7/bbl through mid-March, but have steadily increased since then, topping USD 71.8/bbl in June. While oil demand remains very weak and inventories large, prices have been driven higher on expectations of economic recovery, the falling dollar, and broad-based investment in equities and other commodities. World oil demand plunged 3.6 percent in the first quarter, and the International Energy Agency projects an even steeper drop in the second quarter based on very weak U.S. data and a gloomy outlook for Europe—although non-OECD oil demand is picking up now. OPEC left quotas unchanged at its late-May meeting, and compliance to its cumulative cuts of over 4 million barrels per day since September has fallen below 80 percent. Oil prices are expected to moderate in the near term, given the weak demand environment, high levels of inventories—including 100 billion barrels stored in tankers at sea—and OPEC spare capacity sitting above 6 million barrels per day.

The Russian economy continued an across-the-board decline in output in the first quarter of 2009 (figure 1.3).

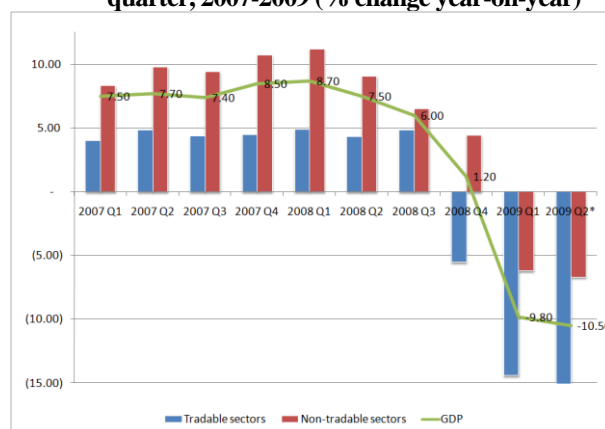
All major sectors reported a contraction in the first quarter of 2009 as a result of weak demand, low investment levels and collapsed industrial output. Adjustments in **tradables** are especially large due to deteriorating external environment and consumer confidence. Contractions in the tradable sector, estimated at 14.4 percent in the first quarter of 2009, were driven by a sharp fall in industrial production, 14.3 percent, especially in transport equipment and other sectors in manufacturing. **Non-tradables** continued to defy the trend of tradables by registering growth in the last quarter of 2008 but contracted 6.2 percent in the first quarter of 2009 (table 1.2). Driven largely by demand- and finance-sensitive retail and construction sectors, these contractions reflect an impact of economic shocks that are gradually filtering through labor and financial markets by higher unemployment, lower household incomes and tighter credit conditions. Construction sector, for example, reported a 20.9 percent decline in Q1-2009 relative to 2008, while transport contracted by 7.4 percent and retail trade by 4.9 percent in the first quarter of 2009.

Figure 1.2. Demand sources of Russia's real GDP growth, by quarter, 2008-09 (% change y-o-y)



Source: World Bank decomposition and estimates based on Rosstat data.
* World Bank staff projected estimate.

Figure 1.3. Sectoral sources of Russia's real GDP growth, by quarter, 2007-2009 (% change year-on-year)



Source: World Bank decomposition and estimates based on Rosstat data.
* World Bank staff estimates.

Table 1.2. GDP growth by main sectors, 2006–08 (value added)

	2006	2007	2008	Q1-2009
Total GDP growth	7.7	8.1	5.6	-9.8
Tradable sectors	3.4	3.9	1.8	-14.4
Agriculture, forestry	3.8	2.6	8.4	-2.4
Extraction industries	-3.3	-2.6	0.2	-2.2
Manufacturing	7.3	7.8	0.9	-23.5
Non-tradable sectors	9.7	10.3	7.4	-6.2
Electricity, gas, water production and distribution	5.7	-0.7	1.2	-5.3
Construction	11.8	9.3	13.2	-20.9
Wholesale and retail trade	14.1	13.7	8.4	-4.9
Transport and communication	9.6	3.4	6.9	-7.4

Source: Rosstat; World Bank staff calculations.

Preliminary data for the second quarter show no visible signs of recovery with the decline in tradables worsening.

The deceleration in tradable sector is expected to continue in the second quarter, mainly due to a record drop in manufacturing output by 25.1 percent in April and 23.7 in May (y-o-y). The deterioration of non-tradable sector is expected to continue in the second quarter of 2009 due to worsening of employment and decline in incomes. Retail trade and construction sectors are showing no visible signs of recovery – declining by 5.3 percent and 16.3 percent, respectively, in April, and by 5.6 percent and 21.9 percent, respectively, in May.

Manufacturing output experiencing record declines in the first four months of 2009 and is likely to contract further in 2009, reflecting weak domestic and external demand and financial constraints. According to recent statistics, manufacturing output dropped by 22 percent in the first four months, compared with the corresponding period of the previous year. The most significant declines were registered in the production of electro-technical and optical equipment (- 42 percent), transport and transportation equipment (- 36.4 percent) and machinery (-34.3 percent). In May, the fall in manufacturing registered a 23.7 percent drop (year-on-year). The fall in manufacturing in May was again lead by declines in production of machines and equipment (-46.9 percent), electro-technical and optical equipment (-44.0 percent), and transport and transportation equipment (-39.5 percent).

Not surprisingly, foreign direct investment inflows dropped significantly. According to recent estimates from Rosstat, FDI inflows for the first quarter of 2009 amounted to USD 3.2 billion, a decline of 43 percent from the first quarter of 2008. Most FDIs went to manufacturing industries with USD 1.4 billion or 41 percent of the total,

followed by extractive industries (USD 486 million), trade (USD 450 million), and real estate operations (USD 430 million).

Labor markets—adjusting downward sharply

A sharp downward adjustment in the labor market continued in the first quarter of 2009, following the dramatic decline in output. A sharp decline in output, especially in industrial sector, has considerably affected employment and incomes. According to Rosstat unemployment (ILO definition) increased to 10.0 percent by the end of Q1-2009, compared with 6.5 percent in the same period of 2008, and 7.8 percent at the end of 2008. It almost doubled relative to a record low of 5.4 percent in May 2008 (table 1.3). In April 2009 the number of unemployed has increased by another 200 thousand to 7.7 million (or 10.2 percent), although the rate of increase has notably reduced from an average of 700,000 a month during the first quarter of the year. Preliminary numbers for May 2009 indicate a decline in unemployment to 9.9 percent, which is likely a result of seasonal adjustment.

Table 1.3. Labor productivity, disposable income, wages, and unemployment

	2006	2007	2008	Q4-2008	Q1-2009	Jan-May 2009
GDP growth, %, y-o-y	7.7	8.1	5.6	1.2**	-9.8	-10.1
Total employment, million people	68.8	70.5	70.9	70.4	67.8	68.0
Employment growth, %, y-o-y	0.8	2.4	0.5	-0.4	-2.9	-3.4
Labor productivity growth, %, y-o-y	6.9	5.5	5.0	1.8	-6.7	-6.6***
Real disposable income growth, %, y-o-y	13.5	12.1	2.9	-5.8	-1.3	-0.4
Real wage growth, %, y-o-y	13.3	17.2	10.3	5.0	-0.8	-2.0
Average monthly wage, USD	391.9	532.0	694.3	668.2	490.8	531.0
Unemployment (% , ILO definition, e-o-p)	6.9	6.1	7.8	7.8	10.0	9.9

Source: Rosstat.

* Preliminary estimate by Ministry of Economic Development.

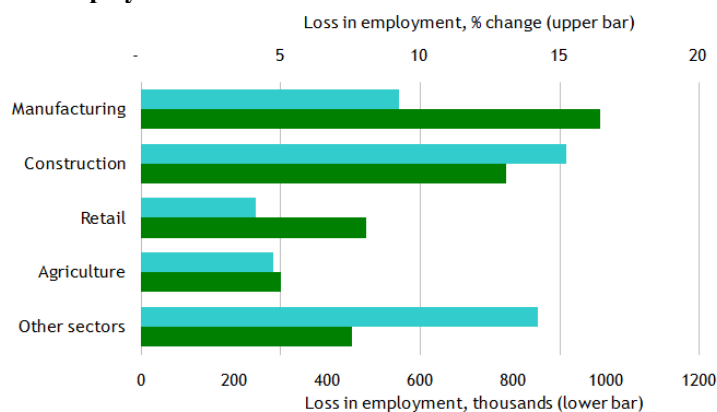
** Preliminary estimate by the World Bank staff.

*** Jan-Apr 2009

Rapidly rising unemployment and worsening enterprise finances reduced real wages in the first five months of the year, while real incomes remain almost flat for the period. In January-May 2009 real wages fell by 2 percent, compared with the same period in 2008. Real disposable income, by contrast, remained almost unchanged for the period, slipping 0.4 percent. Preliminary numbers show an *increase* in the stock of wage arrears by RUB 853 million in May relative to April. Currently most of wage arrears (74 percent out of RUB 8.8 billion) are in manufacturing, construction, and transport sectors. A recent labor dispute in city of Pikalyovo in the Leningrad Oblast (with a population of approximately 22,000) illustrates that aggregate statistics do not reveal large disparities in wage arrears among regions, especially in *single-factory* towns where the impact of wage arrears and unemployment is significant.

Aggregate unemployment in Russia could reach 13 percent in 2009 (figure 1.4). This estimate reflects both a contraction in employment as well as changes in the sectoral structure of employment. The sectors most affected will likely be manufacturing, construction and retail trade (figure 1.4). “Monocities” with large spatial concentration of these sectors are being particularly hard hit.

Figure 1.4 Projected loss of employment in Russia in 2009



Source: World Bank staff estimates.

Recent measures to mitigate the worsening of the labor market are undermined by those who do not register as unemployed. The share of unemployed who have registered remains below 30 percent of total number of unemployed. So, many unemployed lack access to formal safety nets that can mitigate the adverse social impact. There is also a risk that providing direct support to enterprises in order to minimize the risk of additional large layoffs could reduce their incentives to restructure and become more competitive. In the long run such support is both unsustainable and inefficient. This crisis is not only cyclical—it involves structural changes that would require enterprises to restructure and adapt to the changing global business environment.

Balance of payments—improving with rising oil prices

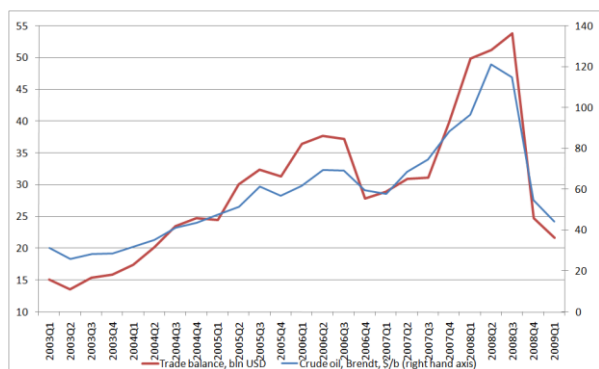
A drastic downward adjustment in the current account, caused by terms-of-trade shock and shrinking demand for Russian exports, appears to have ended in Q1-2009. CBR reported a USD 11 billion *surplus* on current account in Q1-2009—considerably lower than in Q1-2008 (USD 38 billion), but up by USD 3 billion from the last quarter of 2008. Much of the improvement stems from lower imports of services (from USD 18.4 billion in Q4-2008 to 11.9 billion in Q1-2009) (table 1.4 and figure 1.6). But trade balance continued to deteriorate in January - April, with decline in exports (by 47.4 percent in dollars terms) outpacing the import contraction (by 38.4 percent in dollar terms). The January-April 2009 trade balance was USD 26.4 billion, down from USD 64.7 billion in January-April 2008.

Table 1.4. Balance of payments (USD billions), 2006-Q1-2009

	2006	2007	Q1-08	Q4-08	2008 ^a	Q1-09
Current Account Balance	94.7	77.0	38.0	8.6	102.3	11.1
Trade Balance	139.3	130.9	49.9	24.7	179.7	21.7
Capital and Financial Account	3.3	85.7	-25.7	-136.9	138.8	-29.9
Errors and Omissions	9.5	-13.8	-5.8	-2.8	-8.9	-12.3
Change in Reserves (+ = increase)	107.5	148.9	6.4	-131.1	-45.3	-31.1

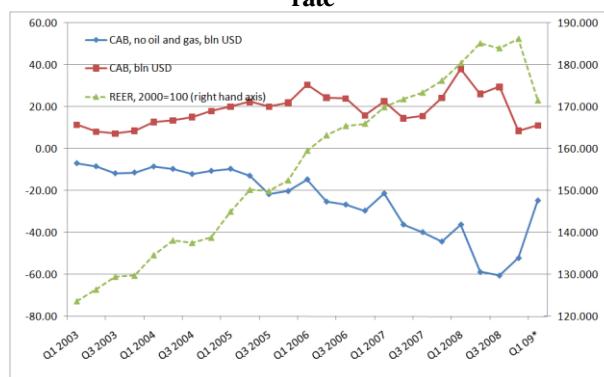
Source: CBR. ^a Preliminary estimates.

Figure 1.5. Oil prices and the trade balance



Source: CBR and World Bank staff.

Figure 1.6. Current account balances and the real effective exchange rate



Source: World Bank staff calculations based on Rosstat and CBR data. Note: Real effective exchange rates for 2009 Q1 include only January-February

A massive reversal of private capital inflows in the last two quarters of 2008 and January 2009 ended in mid February 2009 as CBR tightened monetary conditions and oil prices started to recover. In the first quarter of 2009, total net capital outflows from the private sector were about USD 39 billion, with USD 5.8 billion from the banking sector and USD 32.9 billion from the non-banking sector (table 1.5). Most of these outflows occurred in January and the beginning of February 2009, when market volatility considerably increased, reflecting worsening sentiments about the oil prices and the global economy. Since end-February, however, after the CBR had increased policy rates and withdrew liquidity from the repo market, capital outflows slowed, practically stopping in March and April. This reflects changing past market expectations about a future ruble depreciation in the context of rising oil prices. According to the unofficial estimates from the CBR, net capital outflows from the private sector were only USD 2 billion in April.

Table 1.5. Net capital flows (USD billions), 2006-Q1 2009.

	2006	2007	2008	Q1- 2008	Q4- 2008	Q1- 2009
Total net capital flows to the private sector	41.4	82.4	-132.7	-23.6	-130.6	-38.8
Net capital flows to the banking sector	27.5	45.8	-57.6	-9.9	-56.3	-5.8
Net capital flows to the non banking sector	13.9	36.6	-75.1	-13.7	-74.3	-32.9

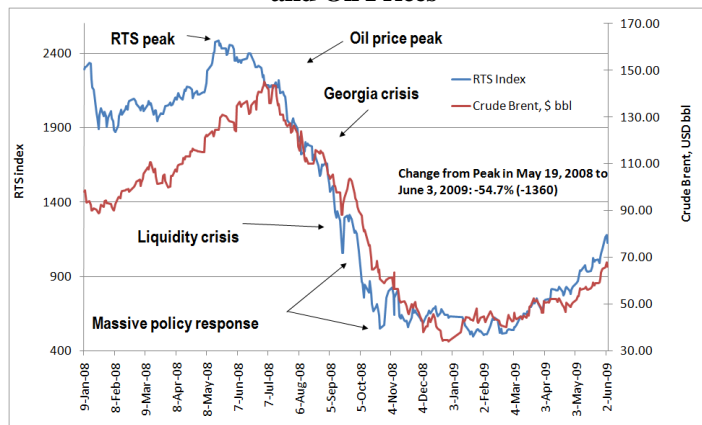
Source: CBR.

Total external public and private debt declined to USD 454 billion at the end of the first quarter from its peak of USD 547 billion in October 2008. Despite the market perception of sharply higher repayment risk and difficulties with refinancing external debt repayments were orderly in the last quarter of 2008 (USD 72 billion) and first quarter of 2009 (USD 34.7 billion). Repayment and rollover risks remain in the remainder of 2009, with the private sector having to pay off about USD 90 billion (out of which USD 38.4 billion by banks). Although the sovereign spreads are down, the banks' balance sheets are expected to further deteriorate as the share of non-performing loans (NPL) is mounting, eroding their capital, making it more difficult to meet their debt obligations. According to Moody's, the banking sector will need about USD 40 billion from external sources in the rest of the year. Tight liquidity in the international capital markets may hurt the ability of banks to refinance their debt obligations.

The Russian stock market—an important transmission channel of the crisis to the real economy—rebounded strongly on the back of a recent rise in oil prices (Figure 1.7). The Lehman Brothers' collapse in September 2008 triggered the global financial panic, stock market crashed around the world. But Russia's stock market in that period performed worse than most other countries, and its sovereign spreads were unusually high—despite strong pre-crisis macro fundamentals. The huge drop in the oil price—with its attendant effects in the Russian economy—shaped these Russia-specific market perceptions. With higher oil prices in the past two months, energy-dominated Russian stock market has rebounded. By mid June the RTS index had climbed by about 85 percent from its lowest point in

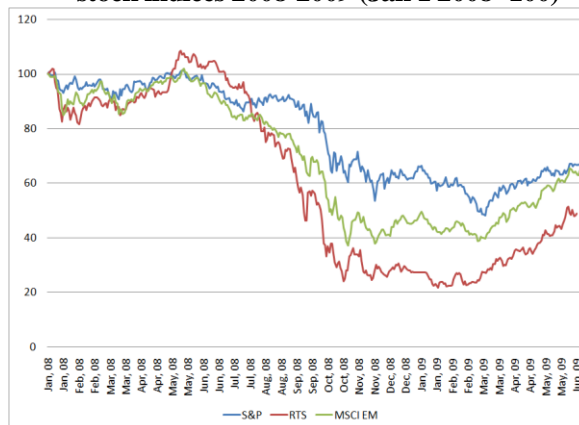
mid-February 2009. Just as the Russian stock market was one of the worst performers during the liquidity crisis in November 2008, it is now performing much better than other countries, at about 36 percent above the MSCI Emerging Markets Index.

Figure 1.7. Recent Changes in the Russian Stock Market and Oil Prices



Source: RTS, Thompson Datastream, World Bank staff calculations

Figure 1.8 RTS, S&P 500, MSCI Emerging Market stock indices 2008-2009 (Jan 1 2008=100)



Monetary and exchange rate policy—easing monetary conditions, higher exchange rate volatility

At the end of April 2009 the CBR started to loosen monetary conditions, lowering its policy rates—by 50 basis points at the end of April and by another 50 basis points in May and June—to 11.5 percent. The policy change was prompted by (lower than expected) inflation statistics. The CPI inflation decelerated to 0.6 in May after 0.7 percent in April (13.2 percent y-o-y) from 1.3 percent in March (14 percent y-o-y). Inflation is set to decelerate further during summer months due to lower import prices, depressed demand, and liquidity constraints. This may create room for the CBR to further cut the refinancing rate and improve credit conditions and credit availability in the economy with potentially favorable impacts on investments later in the year.

With higher oil prices putting upward pressure on ruble, the CBR can increase its foreign exchange reserves to avoid excessive appreciation of the currency that might undermine the economic recovery. The oil price is once becoming the key factor affecting investor’s behavior and exchange rate policy. Since March 2009 the CBR has bought about USD 30 billion on a net basis as investors shortened their dollar positions on the expectation of near-term ruble appreciation. This was especially evident in May when oil prices surpassed USD 60 a barrel. As a result, foreign currency reserves increased to USD 407 billion in mid-June from its low of USD 380.5 billion in March. In May 2009 alone the ruble appreciated by 6.7 percent against the USD and by 16.2 percent since its pick in mid February 2009. It appears that CBR is currently allowing a much greater volatility on the exchange rate market and is gradually moving to inflation targeting (as it was publicly announced by CBR officials). The exchange rate, however, is mostly driven by oil prices and not by medium term macroeconomic fundamentals. Therefore, CBR concerns about possible overvaluation of the exchange rate in the short term are warranted. Such overvaluation may which may hurt the recovery in the real sector, especially in export oriented industries and manufacturing.

Meanwhile the liquidity conditions remain fairly tight, while the interbank market continues to be constrained by escalating problems with non-performing loans and worsening balance sheets of banks. Monetization of the economy has marginally improved by end-April 2009—money supply (M2) increased by 4.5 percent since January 2009, but still remains 8.6 percent below its level at the end of 2008. Despite somewhat improved liquidity conditions in April and May 2009, credit markets in Russia are expected to remain tight and nonperforming loans will increase towards the year end (likely over 10% on average). The current level of non-performing loans at many

large banks has already reached 8 percent or higher, which may aggravate the still continuing confidence crisis. Given upcoming debt payments, some banks may require urgent recapitalization.

Fiscal policy—rising deficit and declining fiscal reserves as fiscal stimulus plans are implemented

According to preliminary estimates from the Ministry of Finance, consolidated budget was executed with a deficit of only 0.4 percent of GDP in January-April 2009 (table 1.6). This low deficit was mostly a result of advance transfers which regions received from the federal budget during the first quarter of 2009. The deficit of the **federal budget** totaled 3.3 percent in the same period. But without investment revenues from oil funds (Reserve and National Welfare Funds), which accrued to the budget in January 2009, the deficit totaled 5.7 percent of GDP, and non-oil deficit amounted to 11.9 percent.

Table 1.6. Consolidated budget: revenues, expenditures, and the fiscal surplus, 2007-09

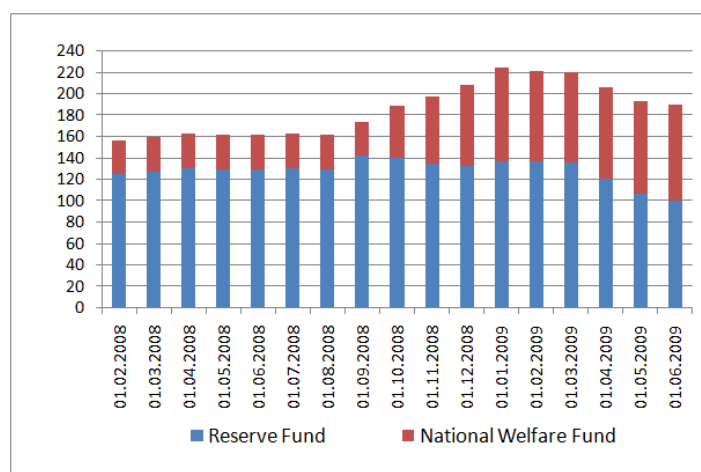
	2007 (actual)	2008 (actual)	Federal Budget Law (Nov)	Federal Budget Law Revised (Apr)	2009 Jan- April (actual)
Consolidated budget					
Revenues, % GDP	40.2	38.5	n/a	n/a	32.6
Expenditure, % GDP	34.1	33.7	n/a	n/a	33.0
Surplus, % GDP	6.1	4.8	n/a	n/a	-0.4
Non-oil balance, % GDP	-2.9	-5.8	n/a	n/a	
Federal budget					
Revenues, % GDP	23.6	22.3	21.2	16.6	19.8
Expenditure, % GDP	18.1	18.2	17.5	24.0	23.1
Surplus, % GDP	5.4	4.1	3.7	-7.4	-3.3
Non-oil balance, % GDP	0.6	-6.4	-5.4	-12.5	-11.9

Source: Ministry of Finance, Economic Expert Group (EEG).

For the year as a whole, lower economic activity and shrinking non-oil revenues and lower than expected revenue collection is resulting in further deterioration of fiscal position. In the amended 2009 Budget Law (approved in mid-April) the government assumed a GDP contraction of 2.2 percent, oil prices at USD 41 barrel (Urals) and a federal budget deficit of 7.4 percent. Now, the government estimates the GDP contraction in 2009 of at least 6 percent. Under this scenario, the deficit is likely to exceed 8 percent of GDP, if current expenditure targets are kept. However, a recovery in oil prices will have a significant positive effect on revenues—the impact of an increase in oil prices is large enough to offset a shortfall in revenues due to growth contractions. As a result, federal budget deficit in 2009 could turn out to be around 7.2 percent, largely financed by the Reserve Fund and limited domestic borrowing. With the fiscal deficit of that size and remaining downside risks in the global and domestic economy the space for more fiscal stimulus this and next year appears limited. With large part of the Reserve Fund exhausted by year-end, the government will likely have to borrow domestically and externally in 2010 in order to sustain even lower level of spending. With low external debt, Russia, however, has the room to borrow externally to finance its budget priorities and its large development financing needs, especially in infrastructure.

In mid-March 2009 the government started to use the Reserve Fund to cover its fiscal gap as it was planned in the amended 2009 Budget. In the March-May 2009 period, the Reserve Fund has lost USD 35.4 billion and currently stands at USD 101 billion (figure 1.9). The share already spent by the government constitutes 3 percent of GDP out of 7 percent planned for 2009.

Figure 1.9. Reserve and National Welfare Funds, USD billion



Source: Ministry of Finance

Policy challenges going forward

Russia faces a balancing act of limiting the larger-than-anticipated social impact of the crisis while controlling public finances and supporting economic recovery. There are policy risks associated with the departure from strong macroeconomic fundamentals and the delay implementing anti-crisis fiscal measures. While Russia's large fiscal reserves provides a financial cushion during the crisis, there is a possibility that the macro policy stance will weaken under expenditure pressures. Russia's large fiscal reserves do allow it a margin of maneuver to balance these risks during 2009. In 2010, in a likely scenario of sluggish global recovery and modest growth in Russia, Russia will face tightening budget constraint and will need to cut unproductive public expenditures and fiscal deficit and diversify its sources of financing. At the same time a delay in the WTO accession could undermine Russia's benefits from a rules based international trading regime (see box 1.2).

Russia is very close to meeting all conditions for WTO accession. Russia has agreed bilateral market access agreements with all the members of its WTO Working Party (possibly except Georgia). This is about 60 countries, the largest Working party on accession in WTO history. The multilateral negotiations have cleared almost all issues, including the once very difficult issue of intellectual property. Only three issues remain (the same three issues outstanding that existed last year):

- (i) How much trade distorting agricultural subsidies can be allowed? Russia wants \$9 billion per year (for production). Since actual subsidies are now at this level, this will be easier to negotiate.
- (ii) Export taxes on timber—discussions reopened recently with the EU, and
- (iii) Rules on state trading organizations.

Against this background, however, on June 10, 2009, Prime Minister Putin has declared that Russia, Belarus and Kazakhstan would abandon their separate accession talks in order to enter WTO as a customs union. Ministry of Finance indicated that new formal negotiations on WTO accession of the three countries would begin in 2010 when presumably the customs union would be made operational. The government has also stated that Russia would chair the grouping, meaning that Russia would de facto be in charge of the WTO discussions on behalf of the group. This surprise announcement raises a number of questions about the possible longer duration and details of the process ahead. So far, no customs union has acceded to the WTO, only individual countries. The new EUROSEC customs union is reportedly well along, but still far from complete. Customs unions in the developing world are full of exceptions to the common external tariff. Without a fully implemented common external tariff, the customs union can not commit to a tariff to the Working Party, which means its tariff offer will not likely be acceptable. Also, there are questions related to the services dimensions of the planned integration arrangement between the three countries as well as what WTO rules would be applied by members—weather the Russian partners would be treated as developed or developing countries as far as WTO is concerned. Finally, Russia and Kazakhstan are far along the individual WTO process while Belarus is not, which will seriously complicate and delay the process of entry for the customs union.

Fiscal sustainability requires that additional increases in expenditures are followed by reforms to broaden the revenue base and ensure greater efficiency in public and social programs. The President has recently announced that the average pension will increase by 30 percent in 2009 and 45 percent in 2010. Initially the government planned to introduce the new social security tax of 34 percent (to replace the current Unified Social Tax of 26 percent) already next year to partly cover additional social spending. This has now been put off until 2011 due to slower-than-expected economic recovery. Higher pensions without additional government revenues could erode government finances. The government might have to revert to domestic and external borrowing as the Reserve Fund is likely to be significantly exhausted in 2009 unless oil prices increase sharply. Second, the proposed policy will require considerable cut in other important lines of expenditures. Third, containing the social impact of the crisis and closing infrastructure bottlenecks will be more difficult with tightening budget constraints.

The authorities also need to address fundamental weaknesses in the banking sector. The weaknesses include excessive discretion by banks in determining their levels of loan provisioning, high lending concentration, especially in extractive and construction sectors, and large related-party lending. The authorities have also noted that the long-term stabilization of the banking system may require additional resources than currently provisioned in the budget. Accelerated consolidation of the banking system is needed.

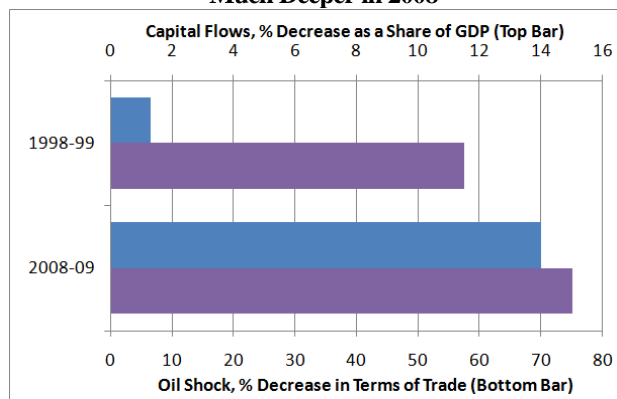
Box 1.3. Russia's Financial Crises of 1998 and 2008-09

Many financial crises, if not most, are fundamentally debt crises. Unsustainable build ups of public and/or private debt leading to repayment difficulties, financial sector vulnerabilities, “sudden stop” to new financing, defaults and fiscal and currency crises—all are part and parcel, in one way or another, of most financial crises. Despite important differences and different international contexts, Russia's twin crises of 1998 and 2008 appear to be no exception. In 1998, the lack effective fiscal management led to the rise in public sector debt that fed market perceptions of extreme vulnerability and led to repayment difficulties, sovereign default and a currency crash. In 2008, Russia's private sector had accumulated substantial short-term debt and many banks based their business model on borrowing from abroad at low interest rates, fueling a domestic lending boom, eventually leading to market perceptions of heightened risk at the onset of the global financial panic in September 2008. But Russia's recent crisis was also invariably related to the price of oil—its key export.

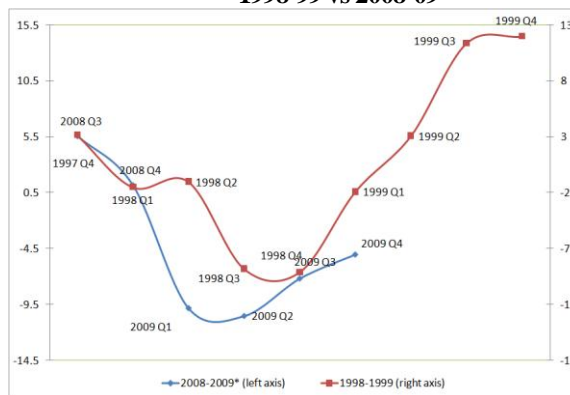
Interestingly, market perceptions of Russia's economy were quick to deteriorate during both crises, despite vastly different states of the economy and macroeconomic policies in the run up to the two episodes. Three shocks—oil price, capital flows and financing—were important in both crises. Note, however, that the oil and capital shocks were much larger in 2008 than in 1998 (Box figure 1).

The decline in growth in the current crisis is now comparable to that in 1998, but recovery will likely take longer. In 1998, the economy registered a rapid, V-shaped recovery from a low base. In 2009, by contrast, the growth decline is about as severe as in 1998, but recovery will take longer, mainly because the current external environment is much more difficult (see Box figure 2).

Box figure 1: Oil Price Drop and Capital Outflows Were Much Deeper in 2008



Box figure 2. Comparing Recovery Paths, 1998-99 vs 2008-09



1/ Oil prices: Change between Oct '97-Dec '98 versus Jul '08-Jan '09

2/ Capital flows: For 1998-99, e-o-p change from 1997 (USD -18.2 billion) to 1998 (USD -21.7 billion); for 2008-09, e-o-p change from 2007 (USD 81.2 billion) to 2008 (USD -130 billion)

Sources: Rosstat, Thomson Datastream, World Bank staff calculations.

Economic and Social Outlook for 2009-10

Given a much larger GDP contraction in the first quarter of 2009 than anticipated, Russia's economy is likely to contract by 7.9 percent in 2009, despite higher oil prices assumed in the current forecast. This represents a major downward adjustment from our forecast in April 2008, which saw output contraction at 4.5 percent. We remain of the view that most of the adverse impact in Russia is concentrated in the first two quarters of 2009. Depressed export demand, tight credits, declining investment, and compressed consumption will remain the major factors of output contraction this year. The speed of the subsequent recovery in Russia will to a great extent depend on the revival of the global demand and global financial system. The world growth is expected to be negative 2.9 percent in 2009, followed by a modest recovery of 2 percent in 2010 (table 1.7). If the federal government maintains its expenditure targets set by the amended budget law (expenditures of 24 percent of GDP), the estimated federal budget deficit is likely to be about 7.2 percent of GDP due to larger oil revenues. However, there are downside risks of additional expenditures related to the recapitalization of banking sector and additional social spending.

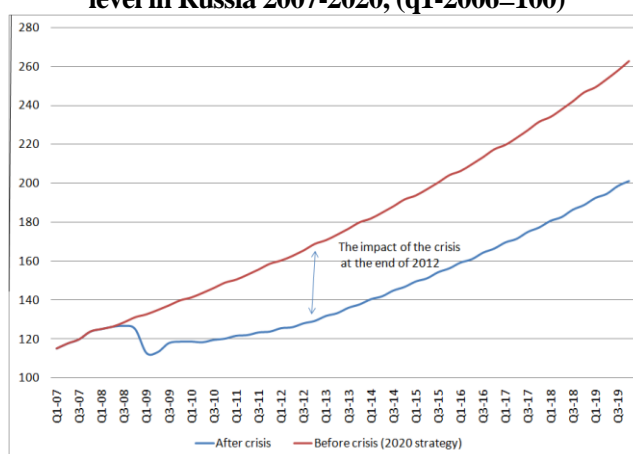
Table 1.7. Outlook for 2009-2010

	2009	2010
World growth, %	-2.9	2.0
Oil prices, World crude average, USD/bbl	56	63
GDP growth, %	-7.9	2.5
Federal government balance, %	-7.2	-6.0
Current account, USD bln.	32	36
Capital account, USD bln.	-60	-30

Source: World Bank projections.

Looking into medium term, with the current growth profile and possible growth of 3.5 percent in 2011 and 2012, real GDP levels in Russia will reach pre-crisis high only at the end of third quarter of 2012 (figure 1.10). Thus, the economic recovery is likely to be very gradual and prolonged. Long-term path of Russia's real GDP is now also likely to be quite different, constrained by more moderate global demand and financing than in the past years.

Figure 1.10. The impact of the crisis on the long-term development objectives in Russia: dynamics of GDP level in Russia 2007-2020, (q1-2006=100)



Source: World Bank projections. Strategy 2020

We maintain our inflation outlook broadly unchanged for 2009, while the balance of payments position is likely to stabilize if oil prices remain over USD 50 per barrel. We project end-year 2009 inflation at 11-13 percent, reflecting several opposing factors. Sharply slowing domestic demand and continuing credit crunch may contribute to a lower inflation. Considerable relaxation in fiscal stance and the use of the Reserve Fund, in particular, may lead to excessive liquidity in the economy and contribute to higher inflation. The surplus on the external current account

will contract significantly relative to 2008, but will stay in the range of USD 30–40 billion (2.5–3 percent of GDP) both in 2009 and 2010 (table 1.8). The capital account is projected to be in deficit of about USD 60 billion in 2009 and USD 30 billion in 2010, largely reflecting repayment obligations and low capacity of corporation and banks to rollover the existing debt. Non-debt related capital outflows are likely to moderate due to decreasing uncertainty regarding global economy and higher oil prices.

The social indicators are expected to continue deteriorating - real incomes are likely to fall further and the number of unemployed is expected surpass 13 percent by year-end. First quarter statistics indicate that enterprise finances continue to deteriorate, affected by lower profit margins and limited credit availability. Most sectors would continue to adjust their cost structures by cutting wages and reducing staff negatively impacting employment, income and poverty.

Impact on the Poor and the Middle Class

Larger economic contraction in 2009 will result in additional increase in the number of poor and shrinking of the middle class. Using the revised growth outlook, household survey data and national poverty lines,² the number of poor people in Russia will likely reach 24.6 million, an increase by 7.45 million relative to pre-crisis growth scenario for 2009. This increase is significantly larger than our previous estimate of an increase of 4.7 million under negative 4.5 growth scenario in the March Russian Economic Report. This translates into a likely end-2009 headcount poverty rate of 17.4 percent, an increase of 4.8 percentage points relative to the 2008 pre-crisis level.

Figure 1.11. Projected impact of the crisis on the poverty rate, percentage of people with income level below minimum subsistence, 2007-2009

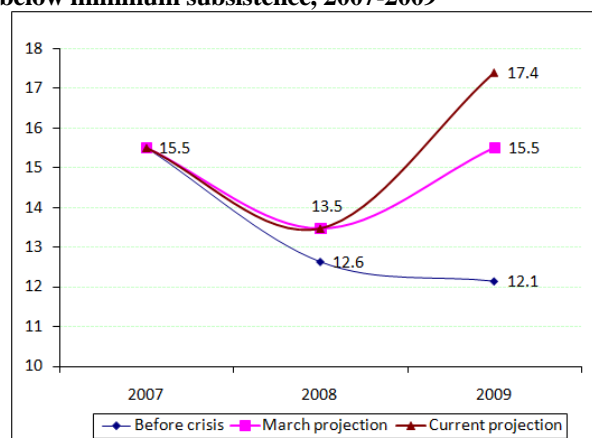
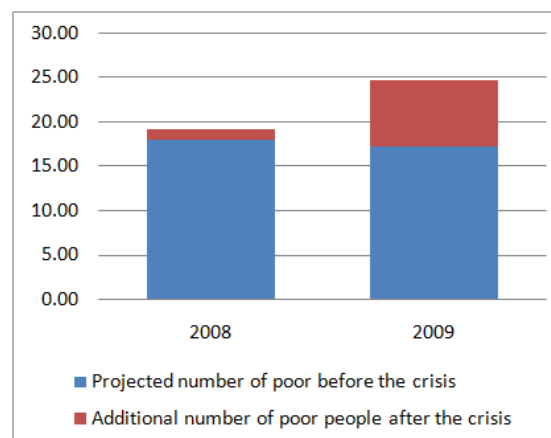


Figure 1.12 Projected number of poor people before and after the crisis (in millions), 2008-2009



Source: World Bank staff estimates based on aggregate output forecast and household survey data on employment and incomes

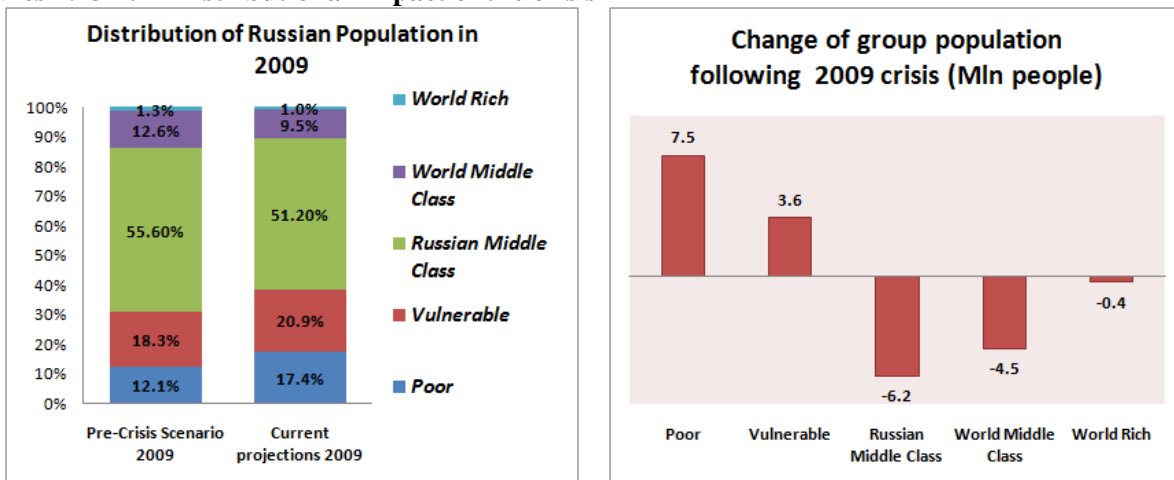
Combining poverty, vulnerability and “middle class” income groups together, Russian population can be divided into 5 main categories according the level of households’ consumption per capita. First, poor households are those with expenditures per capita below the poverty line set by the authorities. Second, vulnerable households those with per capita consumption higher than poverty line, but below 1.5 times the poverty line. Third, Russian middle class is defined as households with consumption per capita above 1.5

² Defined as the percentage of population with money incomes below subsistence minimum level set by the government of Russia. In the third quarter 2008, this line amounted, on average, to 4,630 rubles per person (about \$185).

times the poverty line and below “global middle class” consumption threshold³. And fourth, there is the global middle class and the “world rich” population⁴.

Financial crisis has significantly worsened not only poverty but also income distribution in Russia. Projected 7.9 percent reduction in real GDP in 2009 (in comparison to the pre crisis projected 6 percent growth) is causing huge changes in the composition of wealth and the overall income distribution. The share of vulnerable population has increased to 20.9 percent in comparison to 18.3 percent previously (an increase of 3.6 million people). And Russian middle class is likely to shrink—by about 10 percent—from 55.6 to 51.2 percent (a decline of 6.2 million people). The highest reduction in comparison to pre-crisis projections is observed in the world middle class category which has shrunk by 25 percent following the crisis.

Figures 1.13-1.14 Distributional Impact of the crisis



Source: World Bank staff estimates based on aggregate output forecast and household survey data on employment and incomes.

There are several reasons behind the dramatic increase in poor and large losses in the Russian middle class and the global middle class. The large increase in the poverty rates is due to the high concentration of low-income, vulnerable population in vicinity of the poverty line. Similarly, many middle class households are close to the vulnerable status. And global middle class in Russia is a relatively small group ranked near the top of the income distribution topping the county income distribution.

³ The “global middle class” might be perceived as a group of population capable to obtain high-quality international goods, buy foreign cars, travel internationally and get access to high-quality international services including international standards for higher education. The definition of the global middle class has been used in the World Bank’s Global Economic Prospect report (GEP 2007). It is based on the real purchasing power of the households with consumption per capita ranging between average consumption of Brazil and Italy expressed in the PPP terms. According to this definition, close to 8 percent of the world population is considered as global middle class.

⁴ For a broader analysis of Russian middle class see: Institute of contemporary development (2009), *Russia’s middle class: analysis of structure and financial behavior*, and also *Russian middle class at the peak of economic growth*.

II SPECIAL TOPICS

TESTING TIMES IN RUSSIA: HOW TO FACILITATE ACCESS TO ESSENTIAL DRUGS AND GET MORE VALUE OUT OF PHARMACEUTICAL EXPENDITURES?⁵

This chapter assesses how the current economic downturn is affecting drug prices and the affordability of medicines, particularly among vulnerable population groups. A related question concerns possible measures that could be adopted in Russia to facilitate access to essential drugs and ensure rational drug use. The chapter focuses on special issues of affordability and access. It also suggests the need for assessing the regulatory role of government in different areas of the pharmaceutical market. Such an assessment would provide policymakers, insurance providers, and healthcare institutions with an analysis of regulation's impact on efficiency, quality, equity, and cost control.

Pharmaceutical products are key elements in the provision of medical care—from prevention to diagnosis and treatment. Since the 1920s new drugs and better living conditions have accelerated the decline in death rates and improved overall social welfare. And since 1997 global drug sales have almost doubled, reaching about USD 902.4 billion in 2009.

Out-of-pocket payments account for most drug spending in Russia. In large measure this is due to the low public health spending (about 3.6 percent of GDP in 2008). That underlines the significant gap between the constitutional commitment to medical care services and the funding to pay for them. Indeed, while drugs are supposed to be provided to hospital patients free of charge, it is estimated that around 80 percent of in-patients still have to pay part of the cost of their medicines, and most outpatients must purchase them from pharmacies. The outpatient drug program under mandatory health insurance covers only around 16 million people, with more than half of them opting to receive cash rather than in-kind benefits under the 2005 “monetization” of prescription drug benefits. Those who continue with the in-kind benefit seem to be those with the greatest need for drugs. Although federal and regional governments have a list of essential drugs, even these are often paid by the patients out-of-pocket due to the financial constraints on public providers of care. This situation is aggravated in Russia by the ineffective enforcement of controls on wholesale and retail markups for medicines.

Household spending on drugs accounts for about 30 percent of total health expenditures in Russia, far above the 12 in OECD countries. This reflects the common observation that out-of-pocket pharmaceutical expenditures are high where per capita public health spending is low.

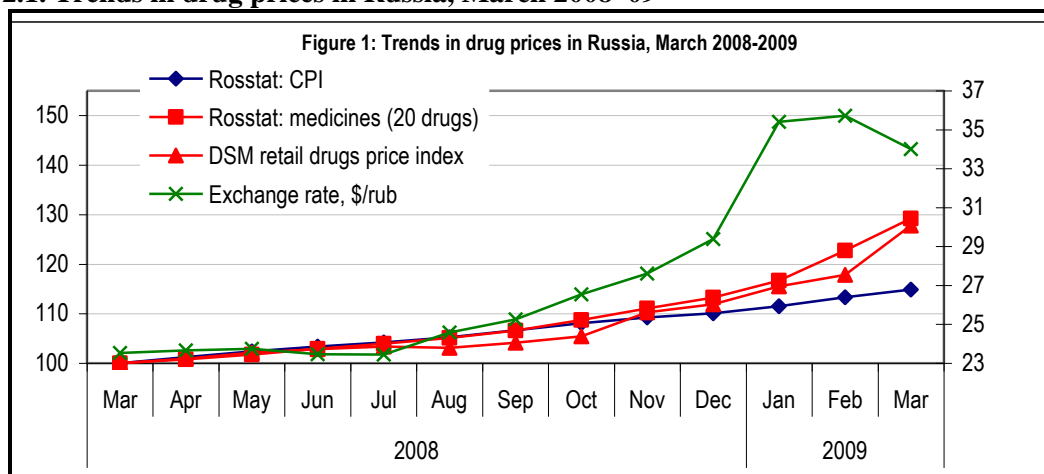
Recent evolution of drug prices in Russia

Drug prices in Russia have risen substantially since the onset of the crisis in September 2008, partly reflecting the depreciation of the ruble. While the official consumer price index (CPI) rose 15 percent between March 2008 and March 2009, retail drug prices rose 29 percent. Most of the relative increase in drug prices began after the start of the depreciation of the ruble (figure 2.1). The global price per standard unit index—defined as total reported sales divided by total volume for each country for each quarter—rose in

⁵ This chapter was prepared by Patricio V. Marquez, Lead Health Specialist, Europe and Central Asia, World Bank, and Mikhail Bonch-Osmolovskiy, Economist, ECSPE, World Bank, in consultation and with the advice from the following international pharmaceutical specialists: Albert Figueras, Catalan Pharmacological Institute, Barcelona, Spain; Rob Verhage and Wilbert Bannenberg, Health Research for Action (HERA), Suriname and the Netherlands; Martin Auton, Health Action International (HAI), Amsterdam, the Netherlands; Kalipso Chalkidou, National Institute of Health and Clinical Excellence (NICE), London, England; as well as Igor Sheiman, Professor of Health Economics, Higher School of Economics, Moscow, Russia. Additional comments were provided by Andrei Markov, Senior Human Development Specialist; Salman Zaidi, Senior Economist, ECSPE; Willy de Geynd, Lead Health Specialist (ret.); and Sevil Kamalovna Salakhutdinova, Health Specialist, World Bank.

the first quarter of 2009, compared with the first quarter in 2008.⁶ And more than in Romania and Ukraine, also hit hard by the crisis.⁷ Early indications are that prices in the private sector will continue to rise.

Figure 2.1. Trends in drug prices in Russia, March 2008–09



Source: Rosstat, www.gks.ru, DSM group: report www.dsm.ru.⁸

Drug prices not only increased substantially, but also varied substantially. Drugs can generally be prescribed and purchased as brand-name medications or as generic equivalents. Prices between these two types of drugs can vary significantly. Generic drugs generally are less expensive than brand-name drugs but usually are just as safe and efficacious. To assess recent drug price variability in Russia, the changes in median, minimum, and maximum distributor prices of equivalent drugs in St. Petersburg were examined.⁹ The assessment showed that overall median drug prices increased about 40 percent between March 2008 and March 2009, but the maximum prices, usually for brand-name drugs, increased by 105 percent on average. On the opposite end of the spectrum, the minimum prices, usually for generic drugs, increased 14 percent.

High overall variability is accompanied by higher variability in prices for the same class of drugs, and drug prices in Russia are much higher than in the international market. While the average ratio of maximum to minimum distributor prices for the same drug was about five times in March 2008, it increased almost ten times by March 2009.¹⁰ Comparison of median distributor prices in St. Petersburg with the international reference prices for 52 drugs shows that prices in Russia are on average three to four times higher than international reference prices.¹¹

How does the increase in drug prices affect Russian households? Rosstat data for 2006 indicate that about 95 percent of survey respondents who purchased medical drugs in the last three months paid out of pocket. The increase in drug prices can therefore have a significant impact on the budgets of families with chronically ill members who require a daily drug intake. According to data from the 2005 Russian Longitudinal Measurement Survey, more than 75 percent of households had a member with one or more

⁶ IMS Health, “Indicators for Tracking the Effect of the Economic Crisis on Pharmaceutical Consumption, Expenditures and Unit Prices,” report prepared for the WHO, May 20, 2009.

⁷ Global Price per Standard Unit Index, Q1–2009/Q1–2008. Global price per standard unit indexes are Russia 1.29, Romania 1.20, and Ukraine 1.19.

⁸ Rosstat monitors prices of 20 selected drugs. DSM group publishes Laspeyres, a retail price index for all drugs on the market, with weights proportional to sales volume in 2007.

⁹ Preselected list of 80 essential drugs from *PharmIndex* magazine, on March 2008 and March 2009. For each of the 80 drugs the minimum, median, and maximum prices of a daily dose of the drug were documented for this chapter.

¹⁰ For the five cases the maximum price was more than 50 times higher than the minimum published price: Ciprofloxacin -56 times, Acetylsalicylic acid -58 times, Loperamide -67 times, Omeprazole -144 times, Diclofenac -119 times. These medicines typically have very high brand premiums.

¹¹ International Drug Price Indicator Guide, <http://erc.msh.org>

chronic illnesses,¹² with two illnesses reported on average per household member. The average budget share of expenditures on drugs for the poorest 10 percent of the households that had to purchase drugs regularly was about 9 percent. As a result of the recent increase in drug price, the poor, on average, may have lost more than 1 percent of their total household expenditure. But as discussed below, this average hides the grim reality that the amount could be significantly higher for many households—because drug spending depends on the illness to be treated and the drugs prescribed.

Table 2.1 provides a conservative estimate of the potential monthly expenditures for treating several common chronic illnesses, for a typical household of two pensioners, each receiving a typical subsistence minimum pension of RUB 4000. This estimate is conservative because the real retail markups are estimated to be much higher than the one used for this note. The last two columns show the median price increases for the recommended drug treatment and the additional expenses that will have to be incurred by the household due to the price increases for several drugs. For example, the median price of “ademetonine,” one of the drugs commonly used to treat liver cirrhosis, increased by almost 2.5 times. This resulted in almost RUB 4,800 of additional expenditure for the monthly treatment of liver cirrhosis, relative to what Russians would have paid if the price of “ademetonine” had increased at the same 15 percent rate as the CPI. In other words, the cost of treating liver cirrhosis has risen from less than 50 percent to more than 110 percent of the hypothetical household budget.

If an outpatient drug benefit were introduced, under the Medical Program of State Guarantees poor or average households in Russia would benefit greatly not only in reducing their current cost of drugs but also in having fewer hospitalizations and higher productivity. Recent evidence indicates that drug affordability has likely fallen. Out-of-pocket drug purchases have already posted three consecutive quarters of declines since 2008. This may imply that many Russian are now unable to purchase needed medications, with negative short and medium term effects for patients and society. In the absence of coverage for outpatient drugs under the Medical Program of State Guarantees, price increases might simply deter Russians in need of medicines from acquiring drugs to control chronic diseases at an early stage (such as hypertensives, who have to take medications daily) and may require more expensive medical care later (such as unnecessary hospital admissions due to stroke).

¹² The questions were asked about heart, lung, liver, kidney, gastrointestinal, spinal, and other chronic illnesses.

Table 2.1. Estimated expenditure on drugs using median distributor prices

Condition	Suggested treatment	Suggested daily dose	Average monthly expenditure, rubles	Share of subsistence minimum budget for two pensioners, %	Median price 2009/median price 2008	Effect of price increase above the CPI increase, rubles
Liver cirrhosis	Ademetionine	1200 mg	8,874	111	2.48	+4,757
Stroke prevention	Clopidogrel	75 mg	3,478	43	2.51	+1,882
Stroke prevention	Aspirin	100 mg	90	1	1.10	-45
Arthritis	Diclofenac	100 mg	87	1	2.11	+39
Hypertension	Enalapril	20 mg	186	2	1.40	+33
Diabetes	Insulin soluble	50 ME	1,384	17	1.03	-168
Gastric ulcer	Omeprazole	20 mg	143	2	1.53	+36
Prostatitis	Tamsulosin	400 mcg	1,595	20	3.06	+996
Prostatitis	Terazosin	10 mg	1,250	15	1.38	+216
Ischemic heart disease	Trimetazidine	50 mg	238	3	0.97	-44

Source: Distributor prices published in “Pharmindex” on March 2009. A retail markup of 10 percent was used to estimate retail prices and calculate average expenditures. According to federal legislation in Russia, the maximum markup over the manufacturer’s price is 25 percent, and retail prices should not exceed wholesale prices by more than 30 percent for essential drugs; the limit is higher for other drugs. It is estimated that in general actual markups are much higher than the official ones.

A typical household drug expense or the cost of a subsidized drug program could, however, be lowered substantially, raising affordability. This could happen if drug prescription practices were based on evidence of demonstrated efficacy and safety of equivalent drugs, as well as on cost comparisons. For example, evidence is scant on the demonstrated efficacy and benefits of clopidogrel, a drug used in Russia for stroke prevention at a cost of RUB 1,481 a month. The alternative would be to use the safe, lower cost, and efficacious generic aspirin costing only RUB 50 a month as the “best buy” first-line drug for most patients. This would save RUB 1,431 a month while ensuring demonstrated benefits.

The cost-saving value of more rational drug prescription is demonstrated by the experience of different countries.¹³ Some countries require patients to pay larger copayments for brand-name drugs than for generic drugs under a pharmacy benefit design with at least three tiers of copayments. Insurance companies also are stimulating greater use of generic drugs by offering generic medications at no cost, sending coupons by mail for generics, and dispensing free generic samples to prescribing physicians. The success of these measures in the United States is noteworthy: while generic drugs account for about two-thirds of all prescriptions, they account for only 13 percent of the costs.¹⁴ In a number of European Union (EU) countries, such as Belgium, Portugal, Italy, the United Kingdom, Sweden, Spain, and the Netherlands, as well as in Australia and some

¹³ W.H. Sharank et al, “Patients’ Perception of Generic Medications,” *Health Affairs* (March/April 2009): 546–56.

¹⁴ IMS Health, “IMS Health Reports”; and K. Jaeger, “A Message from Kathleen Jaeger: It Pays to Invest in Generics,” *Pharmacy Times*, April 2006.

provinces in Canada, cost-effectiveness criteria are used to determine which drugs are eligible for reimbursement.¹⁵

The Russian government has options to improve the access and affordability of drugs. One option to explore is an essential outpatient drugs benefit package for priority, high-burden diseases, to be provided as part of the Medical Program of State Guarantees. It could include 70–100 essential medicines for high-burden chronic diseases, such as cardiovascular diseases, mental disorders, diabetes, chronic respiratory problems, digestive disorders, and frequent infections,¹⁶ selected on the basis of therapeutic efficacy, efficiency, and value-for-money. A similar approach is followed in several countries to optimize drug selection by targeting priority diseases. The recommendations of the National Institute of Health and Clinical Excellence (UK), based on comparative clinical and cost effectiveness data, become a legally enforceable patient entitlement. This policy has generated less variation in drug use, greater uptake for drugs evaluated and approved, and better drug prices obtained from industry.¹⁷

How much would a package of essential drugs cost? The per capita cost of an essential medicine package that follows the World Health Organization (WHO) Model Essential List¹⁸ can range from USD 10 to USD 100 a year in middle-income countries. And the average number of medicines used for first-line ambulatory treatment may not be higher than 50 to 100. So, it is possible to assume that the additional outpatient medicine benefit in Russia could cost between USD 30 and USD 60 per capita per year. These amounts would represent about 8–14 percent of Russia’s total per capita health expenditures of USD 367 in 2006, or about 0.33 percent of GDP, given the per capita GDP of USD 9,079 in 2007.

Funding options. Russia probably needs to spend more on health care than 3.6 percent of GDP.¹⁹ The major long-term drivers of healthcare spending—rising incomes, technological change and demographic change—all point to a significant long-term rise in healthcare spending. It is reasonable to assume that part of this increase should be met by public provision of health services, likely to remain an important pillar of the system, despite the expected growth of private financing and service provision. An increase in public expenditures would help address some long-standing problems in the health system, particularly ensuring proper funding for the constitutionally guaranteed free drug provision during hospitalization and the introduction of an outpatient essential drug program.

- **First, the proposed essential drug benefit could be funded by better allocation of public expenditures.** This requires improving the effectiveness of overall public expenditures, including a shift toward long-term needs of social sectors such as health and away from less productive categories of public expenditures (untargeted subsidies and transfers, general administration expenditures, and unproductive public investments). To promote rational drug use for priority, high-burden diseases on an outpatient basis, a tiered copayment arrangement could be developed to fully reimburse the cost of generic drugs but set high copayments for brand-name drugs to cover the cost differential. This would create a powerful incentive to shift toward higher use of generic equivalents.
- **Second, increasing taxes on cigarettes is another potential funding option.** This option is consistent with the International Framework Convention against Tobacco, ratified by the State Duma in April 2008.

¹⁵ A. McGuire, M. Drummond, and F. Rutten, “Reimbursement of pharmaceuticals in the European Union”, in *Regulating pharmaceuticals in Europe: striving for efficiency, equity and quality*, ed. E. Mossialos, M. Mrazek, and T. Walley (London: Open University Press 2004).

¹⁶ The 2005 World Bank report “Dying Too Young. Addressing Premature Mortality and Ill Health Due to Noncommunicable Diseases and Injuries in the Russian Federation,” provides health and economic arguments to concentrate on these diseases.

¹⁷ Personal communication with NICE officials on June 9, 2009.

¹⁸ The essential medicines list was developed by WHO in 1977 to help countries define medicines to treat with efficacy and appropriate safety 90 percent or most of the diseases (that is, excluding highly complicated cases at hospitals). The system has been adopted by more than 30 countries.

¹⁹ Marquez, P. et al., *Public Spending in Russia for Health Care: Issues and Options*, (Moscow: The World Bank, 2008).

Russia has room to increase the taxes on cigarettes because the average price of a pack of cigarettes is less than USD 2, compared with USD 12.95 in New York to USD 16.80 in London.²⁰ Most of the high cost in these cities is due to taxes (about 70 percent of the price). A good international example is the February 2009 decision by U.S. President Obama and the US Congress to renew and extend the Children's Health Insurance Program (CHIP) for poor children by using a 62-cent-per-pack increase in the federal taxes of cigarettes to fully fund the program.

- **A third option is to increase the excise tax on hard liquor, including beer.** Considered a beverage, beer is not taxed as liquor in Russia. Alternatively, this tax could simply be adjusted for inflation. In the United States it has been estimated that merely adjusting the excise tax on alcohol would raise USD 5 billion annually to help pay for universal health insurance.²¹
- **Fourth is the option of taxing high-sugar soft drinks.** This could, along with increases in the taxes of cigarettes and alcohol, simultaneously raise revenue and improve public health by reducing obesity. In the United States it has been estimated that more than USD 10 billion annually could be raised for health reform by introducing a tax of a penny per ounce.²²

Some of these taxes, which should also contribute to curbing risky behavior, could in principle be earmarked to fund the proposed essential drug benefit. But even without earmarking, they would contribute to higher general government revenues, raising the general capacity of the government to fund additional health expenditures such as these.

How to promote rational drug use in Russia? Evidence from other countries suggests that adopting an essential drug list does not necessarily lead to rational use of drugs. The measure has to be an integral part of revamped essential drug policies and procedures and federal and regional legislation and management covering drug administration and management, drug selection, drug prescribing, drug dispensing, and drug use and monitoring.²³

Better use of pharmaceuticals depends on clear understanding of why and how drugs should be used, and getting people to act on it. A key element to be emphasized is supporting related measures for service delivery to improve the prescription behavior of physicians and the adherence of patients to the prescribed drug regime.

Drugs are consumer goods with special characteristics that need to be considered when adopting policy measures aimed at containing costs, increasing drug access, or promoting their appropriate use. The main difference between drugs and other consumer goods is the role of patients and physicians during an episode of care. As consumers of medicines, the patients in few cases decide which medicines to buy, or choose from among different drugs. The physicians, as the "learned intermediaries," select and decide which drug to prescribe for the patient based on technical knowledge without considering the cost of the drugs.

A critical measure to complement outpatient drug benefits is the development of new methods and approaches to strengthen rational drug prescription processes. These could be in the form of new or revised evidence-based clinical guidelines to treat some diseases. And therapeutic pocket guides that offer quick consultation guidance to the doctors on how to treat the most common health problems. And continuing in-service medical education programs. In addition, electronic modules can be incorporated as part of health information systems to facilitate on-line consultations by physicians before prescribing. If

²⁰ For a good discussion on this option see Ross, HZ, Shariff, S., Gilmore, A., *Economics of Tobacco Taxation in Russia* (Paris: International Union Against Tuberculosis and Lung Disease, 2008).

²¹ "Paying for Health Reform", The Washington Post, May 19, 2009.

²² Ibid.

²³ W.H. Campbell, R.E. Johnson, and S.L. Levine, "Managing the Pharmacy Benefit in Prepaid Group Practice," in *Toward a 21st Century Health System*, ed. A.C. Enthoven and L.A. Tollen (San Francisco: Jossey-Bass, 2004).

physicians do not have enough technical knowledge or access to scientific information for making a critical appraisal of new medicines, the prescription process will be vulnerable to marketing by the pharmaceutical industry, and decisions might not be the best option for the patient and the health system.

The incentive framework for physicians also needs to be improved by regulating perverse financial incentives. These include prescribers earning money from the sale of medicines, encouraging overprescription. Generic drugs could be promoted by setting up performance-based payments—as in some Russian regions, such as the Chuvash Republic²⁴—to reward doctors for achieving programmatic targets, improving health outcomes, and lowering overall medical spending.

Another important related issue is the widespread perception among patients that generic drugs are cheaper because they are lower in quality and not as safe or efficacious. As done in other G8 countries, broader efforts by health insurance agencies, policymakers, and providers are needed to educate patients about generic medications, help them make informed decisions, and influence personal preferences for generic use, which in turn could improve adherence to essential medications.²⁵

It would be important that drug pricing and procurement reforms be developed to support the demand-side priorities of an outpatient essential drug list, targeting priority high-burden diseases, and related rational drug use measures. Indeed, proper consideration needs to be given to wholesaler and pharmacist markups; differential margins for a uniform drug-pricing framework; enforcement of price controls; procurement and tendering processes, including possible negotiated arrangements with producers and suppliers to contain drug price inflation; government taxes (such as a VAT on imported drugs); the competitiveness of the generics market; and the availability of pharmaceuticals in rural regions.

Conclusion

Reforming social programs, including health services, to improve the lives of Russian citizens is high on the government's agenda.²⁶ As argued in this chapter, incorporating outpatient drug benefits under a possible new Mandatory Medical Guarantee Program to focus on a limited number of essential drugs and cost no more than about 0.33 percent of GDP a year would make sense for efficiency and for equity. There is plenty of evidence worldwide to show that timely access to essential medicines yields large overall savings through fewer hospitalization, tips the balance in favor of survival when a person is affected by a chronic disease or prevents the disease altogether, and contributes to higher productivity when the patient is at work.²⁷ From an ethical and medical point of view, protecting or increasing expenditures on medicines is critical to avoid stopping the treatment of such conditions as tuberculosis and HIV/AIDS, and thus to prevent the onset of drug resistance. While the current economic downturn imposes rigid budgetary constraints, better access to and better use of pharmaceuticals under public subsidy arrangements should not be delayed—because in the medium term it would improve the health status of the Russian people, reduce the risk of impoverishment of vulnerable population groups, and enhance overall social welfare.

²⁴ Developed as part of the health system restructuring program supported under the World Bank-funded Health Reform Implementation Project over 2004–08.

²⁵ W.H. Sharank et al, “Patients’ Perception of Generic Medications,” *Health Affairs* (March/April 2009): 546–56.

²⁶ “Interview with Dmitry Medvedev, President of the Russian Federation,” *Financial Times*, March 24, 2008.

²⁷ “Prescription for change. A survey of pharmaceuticals,” *The Economist*, June 18, 2005.

RUSSIA NEEDS TO ACT SWIFTLY TO REDUCE VULNERABILITY TO ITS CHANGING CLIMATE

Contrary to popular perception, Russia faces significant threats from climate change, with a number of the most serious risks already in evidence.²⁸ Vulnerability over the next 10 to 20 years will be dominated more by socioeconomic factors and legacy issues—notably the dire environmental situation and the poor state of infrastructure—than by the changing climate. The next decade offers a window of opportunity for Russia to make its development more resilient to climate change while reaping numerous co-benefits.

Russia is the country most exposed to climate extremes in Europe and Central Asia. A recent report by the World Bank Group, *Adapting to Climate Change in Europe and Central Asia*, reviews what adaptation to climate change might mean for the region, including Russia.²⁹ This chapter focuses on the vulnerability of Russia to climate shocks, particularly in the oil and gas sector because of the melting of permafrost. It also briefly addresses the consequences for human health, water management, agriculture, forestry, and transport and other infrastructure.

Climate change—a major threat to Russia

Russia is facing warmer temperatures, a changing hydrology, and more extremes—floods, windstorms, heat waves, forest fires, and the melting of Arctic ice and permafrost. Already the frequency and cost of natural disasters have risen dramatically. And the concentration of greenhouse gases now in the atmosphere guarantees that similar or greater changes are yet to come—even if the world completely stopped emitting CO₂.

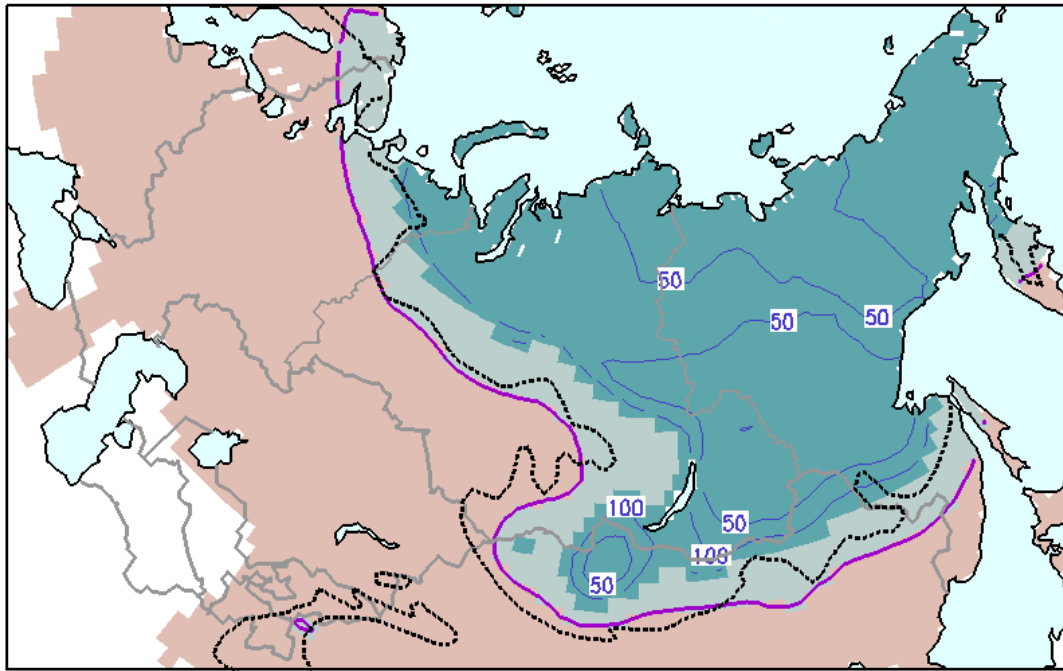
Both temperatures and precipitation are projected to change significantly over the coming decades. Temperatures will continue increasing everywhere, with the greater changes in the more northern latitudes. The northern are projected to see greater temperature changes in winter, and the southern, in summer. While some areas of Russian agriculture face the threat of drought, floods are expected to become more common and severe, especially winter flooding as less winter precipitation falls and is stored as snow. Events such as the snow-melt caused flooding of Lensk City in 2001 could become more frequent.

The melting of sea ice and the thawing of permafrost will accelerate. Arctic temperatures have been warming at about twice the global average, with significant impacts on arctic ice, the tundra, and the permafrost (Map 1). Ice cover in September (when the ice is at its minimum) is projected to decline 40 percent by mid century. Some models project that by the end of the century the Arctic will be completely ice-free in the summer. Russia's permafrost line is receding, and seasonal thaw depths are projected to increase by 30 to 50 percent by 2050. The melting of ice and permafrost is reducing biodiversity, eroding coasts, and collapsing buildings and infrastructure.

²⁸ This is derived from a recent World Bank report, *Adapting to Climate Change in Europe and Central Asia*, June 2009, website: www.worldbank.org/eca.

²⁹ The report was produced by the office of the Chief Economist of ECA. It was written by Marianne Fay, Rachel Block, Tim Carrington, and Jane Ebinger, drawing on the work of a larger team.

Map 3.1. Shifting boundaries and degradation of permafrost by mid-century



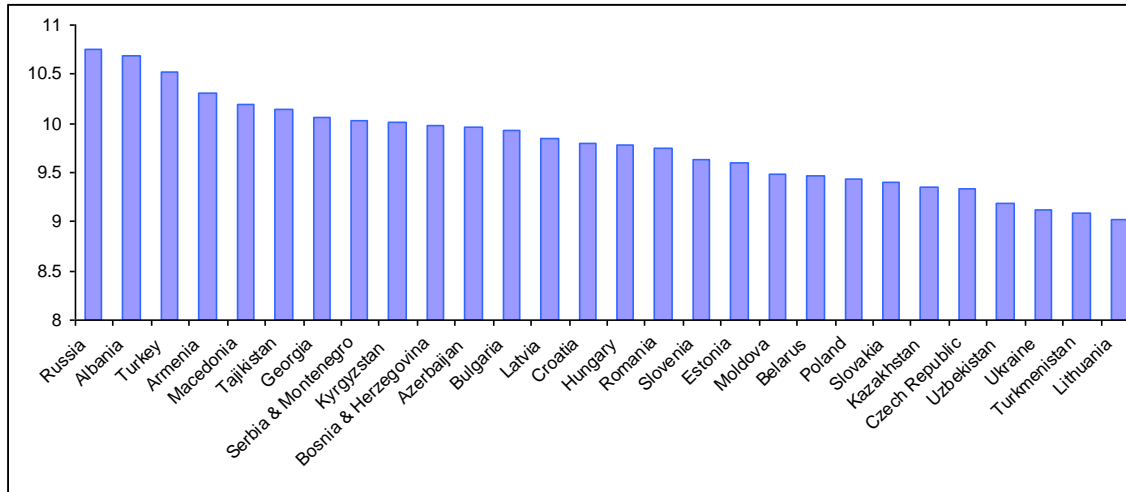
1 2 3 4 5

Source: Kattsov 2008. (1) seasonal thawing, (2) seasonal freezing, and (3) transition from the regime of seasonal thawing to that of seasonal freezing in the upper 3-meter layer. Contours show an increase of thawing depths (centimeters) relative to 1980–99; (4) the simulated current boundary of permafrost defined as the position of zero-degree isotherm at the 3-meter depth; (5) an approximate observed current position of the permafrost boundary.

Changes in sea level, another impact of climate change, will affect the Russian Arctic Ocean and Russia's three basins (the Baltic Sea, the Black Sea, and the Caspian). Sea levels have risen most in the Black Sea, threatening the numerous ports and towns along the coasts. In the Caspian Sea water levels are projected to drop by about six meters by the end of the twenty-first century, due to increased surface evaporation. This will imperil fish stocks and degrade coastal infrastructure. For St. Petersburg rising sea levels and more severe winds and precipitation pose the threat of catastrophic flooding.

Russia is highly exposed to climate change, but Russians are not yet concerned. An index capturing the strength of future climate change relative to today's natural variability suggests that Russia is the country most likely in all of ECA to experience the greatest increases in climate extremes by the end of the 21st century (followed by Albania, Turkey and Armenia, and, to a lesser extent, Macedonia and Tajikistan) (figure 3.1). Relative to the rest of the world, these countries are in the middle tier of exposure. But only 40 percent of Russians think climate change is a serious issue, compared with 70 percent of Turks (figure 3.2).

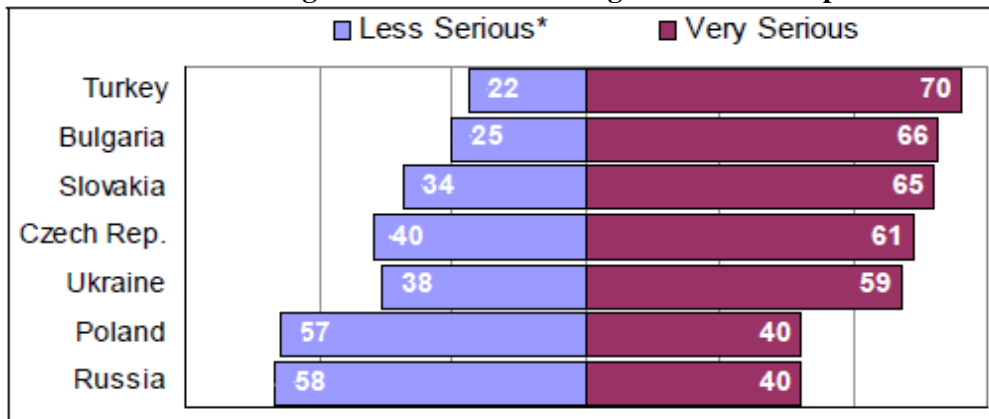
Figure 3.1. Index of increases in climate extremes by end-21st century



Note: The index combines the number of additional hot, dry, and wet years; hot, dry, and wet summers; and hot, dry, and wet winters projected over the 2070–2100 period relative to the 1961–90 period. As such, countries already experiencing substantial variability and extremes are less likely to rank highly on this index (for example, India and the Czech Republic have about the same score).

Source: Baettig, et al. (2007).

Figure 3.2. Global warming: How serious a problem?



Note: *Less serious = somewhat serious, not too serious, or not a problem.

Source: Pew Global Attitudes Project 2007.

Higher temperatures and changing hydrology are already affecting Russia’s forestry and agriculture.

Extreme events combined with earlier snowmelt and hot, dry summers have caused substantial tree loss and degradation. In Russia 20 million hectares were lost to fire in 2003 alone. The warming climate is also allowing the northward migration of pests and harmful plant species. For agriculture the projected impacts are mixed or uncertain in the Central and Volga regions.

Warmer weather and other factors associated with climate change are also affecting health. Malaria, eradicated in Europe, is making a comeback, as are a number of once rare infectious diseases. In addition to the warmer weather illnesses (malaria, intestinal diseases, and tick-borne encephalitis), flood-related illnesses such as dysentery are projected to rise. Hundreds of deaths in Moscow were attributed to the 2001 heat waves, which will occur much more frequently.

Vulnerability over the next 10 to 20 years will be dominated by socioeconomic factors and legacy issues

The dire environmental situation generated by chronic environmental mismanagement and the poor state of infrastructure are heightening Russia's vulnerability now and in the near future. It already suffers a serious adaptation deficit, even in its current climate. In many parts of Russia, dangerous facilities or dump sites were often located close to weather-sensitive sites or heavily settled areas. So, floods or extreme events can cause far greater damage than would be the case in other parts of the world. Similarly, the environmental legacy of central planning for agriculture—poor management of soil erosion, water resources, pest control, and nutrient conservation—has left the agricultural system especially vulnerable. Poorly constructed, badly maintained, and aging infrastructure and housing—a legacy of both the Soviet era and the transition years—are ill suited to cope with storms, heat waves, or floods, let alone protect people from such extreme events.

Climate change will make water and land management more complex. Over the next couple of decades nonclimatic factors, such as legacy issues and continuing unsustainable demand, will be the main drivers of water stress. Floods cannot be explained by increased precipitation alone—they result from a combination of heavy precipitation and poor land use and weak river basin management. Overall the climate-related changes to freshwater systems have been small compared with pollution, inappropriate regulation of river flows, wetland drainage, reduction in stream flow, and lowering the groundwater table (mostly due to extraction for irrigation). Clearly, more sustainable practices will be needed over the next decade before global warming's impacts become even more severe.

Infrastructure and housing are not well suited to adaptation. Poor quality housing will raise the human toll of climate change as heat waves turn poorly ventilated buildings into furnaces and heavy rains bring leaks and mold. This is a special problem for Russia's cities—which have a glut of aging Soviet-era buildings made with prefabricated concrete panels and in desperate need of refurbishment. Meanwhile, during the transition from central planning, Russia's abundant and overdimensioned infrastructure has suffered from years of underinvestment. Poor management often compounds the situation—especially in water and sanitation utilities.

Global warming has an especially negative effect on water systems—exacerbated by the inefficiency of most water utilities, which underprice water and suffer severe physical losses. This translates into high consumption and limited funding for upgrades and investments. Elsewhere across Russia, the power sector—hard pressed to respond to the peaks in electricity demand linked to rising summer temperatures—badly needs upgrading and expansion. In addition, extreme weather threatens the ability of networks to function as intended—especially aging and poorly maintained facilities.

Russia's transport infrastructure, with poorly maintained roads and structures, is also at risk. More intense and more frequent precipitation, as well as more winter precipitation as rain rather than snow, will make subgrade pavement less stable and weaken retaining walls. Long periods of droughts can lead to settling of the earth beneath the structures. More extreme temperatures will add to road deterioration. And the melting of permafrost is disturbing ice roads, which are critical to forestry and the oil and gas sector.

Extractive industries in the Russian Arctic and Siberia will face additional technical challenges but also some positive effects from global warming. Oil, gas, and mining impacts, largely confined to Arctic Russia and Siberia, will be both positive and negative. Zones of discontinuous permafrost are particularly vulnerable to rising temperatures; energy infrastructure and communities in these areas are potentially at risk. Ground settling due to permafrost melt is already damaging the structural integrity of buildings, roads, power/nuclear facilities, coal mines, and oil and gas transmission lines. Collapsing ground in Yakutsk has already affected several large residential buildings, a power station and runway at Yakutsk Airport. Further permafrost melting is likely to affect larger facilities, such as tank farms. Oil and gas pipelines will require special technical designs to prevent more pipeline breaks. But offshore exploration, production, and transport are likely to see some benefits due to reductions in sea ice, which will lengthen the navigation season in the Arctic Ocean.

It is tempting, though incorrect, to expect growth and prosperity to increase resilience to climate change. This is especially untrue in Russia, where growth has typically occurred at the expense of the environment, increasing vulnerability. Indeed, growth and economic development are in some cases exacerbating vulnerability—such as coastal developments around the Black Sea, where buildings are being erected on sites exposed to coastal surges and storms.

Even sectors that could stand to benefit from climate change are poorly positioned to do so

Agriculture’s unrealized food production potential is likely to remain so. Many have noted that warmer climate and abundant precipitation in Russia (and in Kazakhstan and Ukraine) could open a new agricultural frontier. Global studies about future food production have often assumed that Russia and other ECA countries will help offset the decline in world food production resulting from falling yields in lower latitudes. A key uncertainty is whether increased variability and extreme events might offset the improvements. More important, it seems unlikely that the region’s inefficiency and low productivity will be overcome any time soon. While world grain yields have been growing on average by about 1.5 percent a year, they have been falling or stagnant in these three countries, where productivity is far below that of Western Europe or the United States. Overcoming the productivity gap will depend on policy, technology, investment, support services, and crop management—not simply on climate conditions.

The next decade offers a window of opportunity for Russia to make its development much more resilient to climate change while reaping numerous co-benefits

Much of the adaptation needed to make Russia more resistant to climate change will have substantial co-benefits. Improved water resource management, better performing water utilities and energy systems, and upgraded housing and transport infrastructure are crucially needed, independent of climate change. The gains from improving agricultural practices are much more significant than the changes expected from climate change. In any case, Russia must clean up environmental hotspots, accelerate disaster management, and expand weather forecasting.

Climate change exposes Russia’s weaknesses and the costs and risks of them. But where to start? Consistent with the advice of many experts on adapting to climate change, Russia should focus on areas and sectors already vulnerable to today’s climate and on actions that have immediate positive impacts for the population. Many actions fall in the category of “no-regret”—that is, actions that are beneficial, whatever the climate change scenario.

But some decisions about long-term investments have to be made now—under conditions of uncertainty. Uncertainty can be paralyzing. It is one of the reasons that a high potential for adaptation does not guarantee adaptation action. A recent study of the United States—often assumed to have a high capacity for adaptation given its wealth, technical resources, and large size (allowing for both diversification and spreading of climate risk)—shows that many at-risk organizations and individuals are failing to adapt. The Army Corps of Engineers is rebuilding Louisiana’s levees to the same standards that failed during Katrina. Many Southwestern states are failing to incorporate climate change in their drought preparedness plans. In most cases, the reason for not changing standards or continuing to build in the same exposed location is uncertainty about “what to adapt to.” But some countries and communities are not waiting. Australia and the United Kingdom have developed methods, standards, and databases to help organizations and individuals develop adaptation plans.

One approach gaining traction is to focus on “robust strategies”—meaning strategies that are effective even in the face of an unpredictable future. This approach tries to answer the question: *What actions should we take, given that we cannot predict the future?* It views climate change policy more as a contingency problem (*what if?*) than an optimization problem (*what is the best strategy given the most likely outcome?*). Looking for robust, as opposed to optimal, strategies is essentially scenario-based planning and can help overcome the paralysis from uncertainty.

Perhaps the most critical lesson on how to develop adaptation plans is involving stakeholders. Stakeholders understand current vulnerabilities, the starting point for understanding future adaptation needs, and often have good ideas on how to reduce them. Involving stakeholders also improves the chance that the adaptation plan is implemented and that adaptation concerns are mainstreamed. This was the case in London where, five years after the *London's Warming* report, original stakeholders are still involved in implementing the city's adaptation strategy.

Russia needs to act, and it can learn from other countries on how to manage uncertainty and assemble the right information to guide climate-smart practices. Uncertainty should be a catalyst for action, not an excuse for inaction. Fixing the region's current weaknesses and tackling its dismal environmental legacy will have immediate and substantial benefits on the welfare of individuals and on future economic growth, regardless of climate change.

Table 1. General climate trends in Russia's subregions

Subregion	Current trends and weather related events	Projected temperature rise by 2050	Mean annual precipitation	Runoff	Rainfall intensity & variability	Interval between wet days	Heatwaves
Baltic Russia	Flood and landslide damage is significant in some parts.	1.9 °C, decrease in frost days	Increasing (6%) Wetter winter and spring	Increase (13%)	Increase		Increase
Central & Volga	No trends, flooding significant	1.9 °C, warmer winters, decrease in frost days	Winter and spring will be wetter	Increase (7%)	Increase.		Increase
North Caucasus	Increasingly wet over the past century	1.6 °C, decrease in frost days	Unclear	Decrease (12%)	Increased and more variable	Decrease	Increase
Siberia & Far Eastern Russia	Significant warming and wetting in the past century.	2.4 °C, decrease in frost days.	Increase (11%), particularly in winter (17%)	Increase (22%)	Increase	Decrease	Increase
South Siberia	Warming and wetting trend over the past century. Floods and landslides.	2.1 °C	Increasing (8%)	Increase	Increase	Decrease	Unclear
Urals and West Siberia	Significant wetting in past century. Floods and landslides.	2.2 °C, decrease in frost days.	Increase (9%), winter (15%).	Increase (10%)	Increase	Unclear	Increase

Source: Derived from climate summary tables (Westphal 2008).

Output Indicators	2008								2009					
	2006	2007	Jan	Feb	Mar	Apr	May	Dec	2008	Jan	Feb	Mar	Apr	May
GDP, % change, y-o-y 1/	7.7	8.1	-	-	8.5	-	-	1.1	5.6	-	-	-9.8	-9.8 6/	-10.1 7/
Industrial production, % change, y-o-y	6.3	6.3	4.5	7.5	6.5	9.2	6.7	-10.3	2.1	-16.0	-13.2	-13.7	-16.9	-17.1
Manufacturing, % change, y-o-y	8.3	9.5	4.0	11.2	10.4	14.5	10.0	-13.2	3.2	-24.1	-18.3	-20.5	-25.1	-23.7
Extraction of mineral resources, % change, y-o-y	2.5	1.9	0.6	2.3	-0.7	0.4	0.1	-2.3	0.2	-3.6	-6.0	-1.8	-1.8	-3.4
Fixed capital investment, % change, y-o-y	16.7	21.1	21.6	26.0	23.1	25.1	18.7	-7.5	9.8	-15.5	-14.1	-15.4	-15.8	-23.1
Fiscal and Monetary Indicators														
Federal government balance, % GDP 1/	7.4	5.5	10.4	8.2	7.2	9.0	8.2	4.0	4.0	15.0	2.5	-0.1	-3.3	-3.1 5/
Consolidated budget balance, % GDP 1/ 2/	8.5	6.1	-	-	12.1	-	-	4.8	4.8	23.2	6.0	2.8	0.1	n/a
M2, % change, p-o-p 3/	43.6	51.3	-2.7	1.3	2.3	-0.3	2.8	2.0	27.2	-11.1	0.3	0.8	1.9	n/a
Inflation (CPI), % change, p-o-p	9.0	11.9	2.3	1.2	1.2	1.4	1.4	0.7	13.3	2.4	1.7	1.3	0.7	0.6
GDP deflator 1/	15.5	13.9	-	-	20.7	-	-	18.8	18.8	-	-	5.7	-	-
Producer price index (PPI), % change, p-o-p	10.4	25.1	1.6	0.7	0.7	4.5	3.5	-7.6	-7.0	-1.8	2.8	4.1	2.4	0.6
Nominal exchange rate, average, Rb/USD	27.1	25.6	24.5	24.5	23.8	23.5	23.7	28.1	24.8	31.5	35.8	34.7	33.6	32.1
Real effective exchange rate, 2000 = 100 (IMF)	163.4	172.7	179.9	179.5	181.5	184.1	184.8	181.7	183.2	169.9	156.8	163.5	n/a	n/a
Real effective exchange rate, % change, p-o-p (IMF)	9.5	5.7	1.6	-0.2	1.1	1.4	0.4	-1.4	6.1	-6.5	-7.7	4.3	n/a	n/a
Reserve Fund, bln USD e-o-p	-	-	127.8	130.5	129.8	129.3	129.3	137.1	137.1	137.3	136.3	121.1	106.8	101.0
National Wealth Fund, bln USD, e-o-p	-	-	32.2	32.9	32.7	32.6	88.0	88.0	88.0	84.5	83.9	85.7	86.3	89.9
Reserves (including gold) billion \$, end-o-p	303.7	477.9	488.4	494.9	512.6	532.5	546.0	427.1	427.1	386.9	384.1	383.9	383.9	404.2
Balance of Payment Indicators														
Trade Balance, billion \$	139.2	128.7	18.9	14.5	16.5	14.9	18.2	4.6	176.5	7.7	5.3	6.8	6.7	n/a
Share of energy resources in export of goods, %	63.3	61.5	-	-	68.8	-	-	63.0	65.9	-	-	59.6	n/a	n/a
Current Account, billion \$	95.6	76.6	-	-	37.5	-	-	7.7	98.9	-	-	11.1	n/a	n/a
Export of goods, billion \$	303.9	354.0	34.5	35.7	39.9	40.3	42.6	28.5	469.0	18.0	18.7	21.2	21.2	21.3
Import of goods, billion \$	164.7	225.3	15.6	21.2	23.4	25.3	24.4	23.9	292.5	10.3	13.4	14.4	14.4	14.6
Gross FDI, bln USD 1/	13.7	27.8	-	-	5.6	-	-	27.0	27.0	-	-	3.2	n/a	n/a
Average export price of Russia's oil, \$/bbl	56.2	64.4	84.3	84.7	91.0	95.8	105.0	44.8	91.2	40.1	40.6	40.9	48.3 5/	54.8 5/
Financial Market Indicators														
Average weighted lending rate for enterprises, % 4/	10.5	10.8	10.4	11.0	11.3	11.2	11.0	15.5	15.5	17.1	16.6	16.1	16.0	n/a
CBR refinancing rate, %, end-o-p 6/	11.0	10.0	10.0	10.3	10.3	10.5	10.5	13.0	13.0	13.0	13.0	13.0	12.5	12.0
Real average rate for Ruble loans, % (deflated by PPI)	-1.8	-3.4	-11.6	-11.8	-12.2	-12.4	-11.0	24.3	-6.8	30.4	27.2	22.5	24.9	n/a
Stock market index (RTS, ruble term, eop)	1,921.9	2,290.5	1,907.0	2,063.9	2,053.9	2,122.5	2,459.9	631.9	631.9	535.0	544.6	689.6	833	1088
Enterprises Finances														
Share of loss-making companies 1/	29.7	23.4	34.3	33.0	34.3	33.3	31.3	25.2	25.2	38.9	38.5	39.5	n/a	n/a
Share of credits in capital investment 1/	14.3	15.5	-	-	17.3	-	-	17.6	17.6	n/a	n/a	22.6	n/a	n/a
Profitability (net profit/paid sales), % 1/	25.6	36.8	58.0	39.1	32.1	32.5	34.3	21.5	21.5	-25.8	0.2	12.1	n/a	n/a
Income, Poverty and Labor Market														
Real disposable income, (1999 = 100%)	219.1	245.6	189.4	229.9	234.3	255.1	245.4	325.6	252.2	170.0	232.8	233.1	178.1	246.6
Average dollar wage, US \$	391.9	532.0	603.4	636.6	687.6	699.3	701.1	738.0	694.3	483.5	478.7	512.8	548.0	587.2
Unemployment (%), ILO definition)	7.2	6.1	6.6	7.1	6.5	6.0	5.4	7.8	7.8	8.7	9.5	10.0	10.2	9.9

Source: Goskomstat, CBR, EEG, IMF, staff estimates.

1/ Cumulative from the year beginning

2/ Starting 2006 incl. extrabudgetary funds

3/ Annual change is calculated for average annual M2

4/ All terms up to one year

5/ Estimates, Economic Expert Group, cumulative from the year beginning

6/ Estimates by Ministry of economic development

7/ Estimate by World Bank