

Section 3. The Real Sector

3.1. Production Macrostructure

3.1.1. GDP Production: Dynamics and Structure

Production and Services

In the 1999-2002 period, a high rate of growth was observed in Russia's national economy. The economic upturn occurred in conditions of a favorable situation on the international markets and socioeconomic stability on the domestic scene. In 2002, growth in the GDP amounted to 4.3 percent, growth in investment in fixed capital, to 2.6 percent and growth in gross industrial output, to 3.7 percent. With the performance being continuously high, as compared to the international dynamics, there are grounds to estimate the showing as satisfactory.

In the 1999-2002 period, there was a change in proportions between different branches of the economy. While the total growth in output amounted to 35.8 percent in that period, the volume of market services grew by 21.0 percent; freight turnover with commercial carriage increased by 19.0 percent on the 1998 figure, commodity turnover with wholesale trade, by 60 percent, and the volume of communications services, by fifty percent. In the post-crisis period, retail trade has been among the fastest-growing branches of the economy. The 1998-1999 period saw an over ten percent reduction in the volume of retail trade on the 1997 figure, however, as households' effective demand was gradually restored in the following three years thanks to policy aimed at increasing households' real incomes, the volume of retail trade grew faster than the GDP. In 2002, the commodity turnover index was 131.6 percent as compared to the 1999 figure, while the GDP only grew by 19.2 percent in that period.

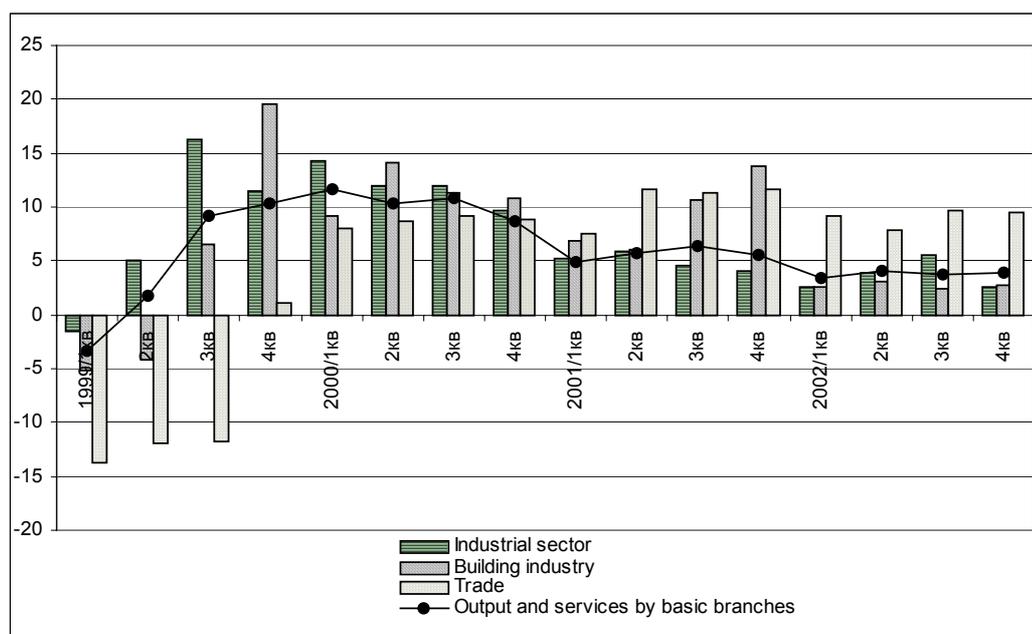
The dynamics of the GDP have been positive since the second quarter of the Year 1999 thanks to growth in output in the industrial sector, building industry and agriculture. In 2002, industrial output was 45.7 percent higher than in 1998, agricultural output, 22.6 percent higher and the volume of construction work, 33.1 percent higher. In the industrial sector, a thirty-year high in the average annual growth rate (6.4 percent) was registered in the 1999-2002 period. During that period, investment in fixed capital grew faster than the GDP for the first time in ten years.

At the same time, comparative analysis of the macroeconomic performance observed in each year in that period reveals gradual slowing down of the growth rate. While in 1999-2000 annual growth rate of the GDP amounted to 8.5 percent, in 2001-2002 it amounted to 4.3 percent.

In economic growth in the 1999-2002 period, several distinct stages were observed, which were characterized by predominant influence on growth of different sets of factors:

- Late in 1998 and in the first half of 1999 there were extensive launches of products serving as substitutes for imported goods (these were stimulated by devaluation of the ruble); during that period, imports were sharply reduced and the growth in wages and salaries was comparatively slow; prices of natural monopolies' products were comparatively low;

- Starting from the second half of 1999, growth in external demand was registered thanks to favorable change on the world fuel, energy and primary goods markets;
- Starting from the third quarter of 1999, growth in domestic investment demand was observed thanks to growth in enterprises' incomes;
- Starting from the second half of 2000, growth in consumer demand was registered thanks to growth in households' incomes;
- Starting from the fourth quarter of 2000, the rate of industrial growth started slowing down due to fast growth of costs (which was caused by a rise in rates and fees charged by the natural monopolies) and gradual restoration of the former import rate;
- Starting from the beginning of 2001, decline in investment activity was observed due to change in the relative domestic and international prices;
- Starting from the beginning of 2002, slowing down of the growth rate in the industrial sector was observed due to factors that had taken shape in the above period.



Source: State Committee of the Russian Federation for Statistics

Fig. 1. Dynamics of output and services by basic branches of the national economy in 1999-2002, percent of the figure of the corresponding quarter of the previous year.

The extensive growth in output observed in the 1999-2000 period can be explained by an extremely favorable combination of external and domestic factors. The dynamics and proportions of production and ultimate consumption were greatly influenced by increased efficiency of domestic businesses caused by devaluation of the ruble and by favorable change on international fuel and primary goods markets. In the 1999-2000 period, average annual rates of growth in industrial output amounted to 11.1 percent. That period saw both expansion of the domestic market thanks to extensive development of manufacturing industries and growth in demand in investment goods on the part of the export-oriented sector.



At first, the situation favored manufacturers of consumer goods who are traditionally mostly active on the domestic market. In 1999-2000, growth in output of consumer goods amounted to 13.1 percent, which was a higher rate than that observed with the industrial sector as a whole and with growth in retail trade. Growth in the extractive sector was slower. In the 1999-2000 period, the average annual growth in output of fuel industry amounted to 3.5 percent. In that period, output of metallurgical industry was influenced by growth in domestic and international demand in structural materials.

The dynamics and proportions of production and ultimate consumption in 1999-2000 were greatly influenced by extensive growth in incomes of the national economy. In conditions of highly favorable international prices of hydrocarbon primary goods and metals, sharp growth in income from foreign economic activities and profitability of production, the exporting sector initiated expansion of demand in capital goods. Manufacturing industry's demand in domestically made equipment and intermediate goods also grew as the process of modernization and restructuring of production was stepped up. In the 1999-2002 period, growth in output in engineering amounted to over 46 percent on the 1998 figure. Growth in domestic demand had a favorable effect on growth in metallurgical, chemical, timber and building materials industries. In 2002, the volume of output of structural materials was nearly 33 percent bigger than in 1998.

However, the growth in investment demand that was observed late in 1999 and in the first six months of 2000 subsequently dwindled. Starting from the fourth quarter of 2000, the economy's incomes began to go down; simultaneously, there was a reduction in investment activity. In 2001, the rate of growth in investment in fixed capital went down by over 50 percent, to 8.7 percent, as against 17.4 percent in 2000; in 2002, it shrank to 2.6 percent.

In 2002, services growth rate exceeded commodity output growth rate for the first time since the 1998 default: with services branches, the growth rate amounted to 5.1 percent, as against 3.7 percent in the previous year. The dynamics of the volume of market services were particularly strongly influenced by growth in the volume of communication services and growth in commodity turnover in retail trade. With commodity branches, slowing down of growth was observed in 2002. Commodity output grew by 3.1 percent in 2002, as against 6.5 percent in the previous year. While in 2001 overall growth in commodity output was primarily attained through increased output in agriculture and building industry, in 2002 the industrial sector made the greatest contribution to that growth. In 2002, growth in the volume of construction work amounted to 2.8 percent, as against 8.7 percent in 2001. Starting from the third quarter of 2002, the amount of value added in agriculture went down, though, on the whole, the value of that parameter remained positive. The index of growth in agricultural output in 2002 amounted to 101.7 percent, as against 107.5 percent in the previous year. Starting from the second quarter, value added in the industrial sector grew faster than in agriculture and building industry, and that compensated for reduced growth rates in other commodity branches.

In 2001-2002, as the situation on international markets changed, economic policy priorities gradually shifted towards expansion of domestic end demand. When economic growth began in Russia, opportunities were created for raising of the living standards. While in 1999-2000 ultimate consumption by households was limited due to a low level of their effective demand, in 2001-2002 the situation changed. In the past two years, the ultimate consumer demand grew thanks to a 40-percent increase in real wages and real pensions on the 2000 figure and gradual abatement of inflation. With growth in households' incomes, retail trade became the fastest growing economic branch leaving building industry and the

came the fastest growing economic branch leaving building industry and the industrial sector behind.

Table 1

**Dynamics of the principal macroeconomic parameters in the 1997–2002 period,
percent of the previous year's figure**

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|--|-------|-------|-------|-------|-------|-------|
| Gross domestic product | 100.9 | 95.1 | 105.4 | 109.0 | 105.0 | 104.3 |
| Commodities output and services by basic branches отраслей | - | 94.2 | 104.6 | 108 | 105.7 | 103.9 |
| Industrial output | 102.0 | 95.1 | 111.0 | 111.9 | 104.9 | 103.7 |
| Investment in fixed capital | 95.0 | 93.3 | 104.1 | 117.4 | 108.7 | 102.6 |
| Agricultural output | 101.3 | 86.8 | 104.1 | 105.0 | 106.8 | 101.7 |
| Freight turnover | 96.6 | 96.6 | 105.8 | 104.8 | 103.1 | 105.6 |
| Commodity turnover with retail trade | 104.7 | 96.7 | 93.9 | 108.8 | 110.7 | 109.1 |
| Foreign trade turnover | 101.7 | 84.7 | 86.7 | 129.7 | 105.4 | 107.8 |
| Real available cash incomes | 106.3 | 83.8 | 86.4 | 109.5 | 105.8 | 108.8 |
| Consumer prices index | 111.0 | 184.4 | 136.5 | 120.2 | 118.4 | 115.1 |

Source: The State Committee for Statistics of the Russian Federation

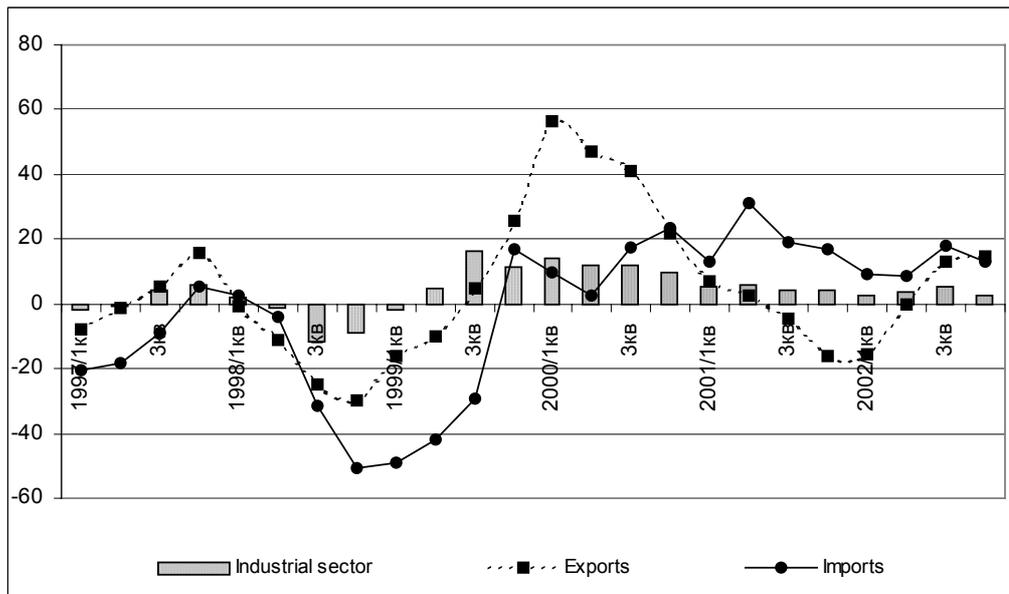
In 2001-2002, in a situation where consumer demand increased and growth in the industrial sector slowed down, imports of consumer goods grew faster than domestic production. Starting from mid-2000, the share of imports in overall consumer commodity resources has been growing. Strengthening of the ruble also contributed to expansion of imports. While reduction of the rate of exports in the 2001-2002 period can be explained by change of the situation on international primary goods markets, extensive growth in exports in the past two years has been caused by purely domestic problems.

Slowing down of industrial growth in the past two years shows that domestic businesses have not undergone such restructuring as would help create new competitive markets of domestic produce. As soon as the protection afforded to domestic markets by an artificially low exchange rate of the ruble began to slacken, it became obvious that Russian-made goods had not become more competitive than before. In fact, the proportion between domestic output and imports is the same as before the 1998 crisis. Due to orientation towards the traditional positions on international primary goods and fuel markets and lack of a long-term strategy for development of manufacturing branches of industry, financial and credit institutions have taken but a cautious stance on the issue of participation in financing of the real sector of the national economy.

Due to the primary goods exporting model, the rates of economic growth and the dynamic of foreign-trade turnover tend to level. Throughout 2002, the dynamics of output and structure of Russia's national economy were influenced by a favorable situation on international markets, which stimulated exports. In the second half of 2002, exports came to play an even more important role than before. In that period, unlike 2001, output in the export-oriented sector grew faster than output in the industrial sector as a whole. While the overall industrial sector output grew by 3.7 percent, output of the traditional exporting branches grew by 4.3 percent. While in 2001 expansion in extracting branches accounted for around one third of output growth in the industrial sector, in 2002, contribution by fuel industry and metallurgical industry accounted for nearly 50 percent of the growth in output in the industrial sector as a whole. As a result, manufacturing industries' influence on the general dynamics



became less pronounced. With influence of consumer branches remaining on the same level as in 2001 and contribution by investment branches reduced nearly by half as compared to the previous year, the nature of manufacturing industries' development was influenced by competing imports. Manufacturing industries' output went up by 3.4 percent; imports grew by 12.5 percent. In the structure of retail market resources, material and technical resources market and investment goods market, the share of imported goods grew continuously throughout the Year 2002.



Source: The State Committee for Statistics of the Russian Federation

Fig. 2. Dynamics of growth in exports, imports and output in 1995-2002, percent of the figure of the corresponding quarter of the previous year.

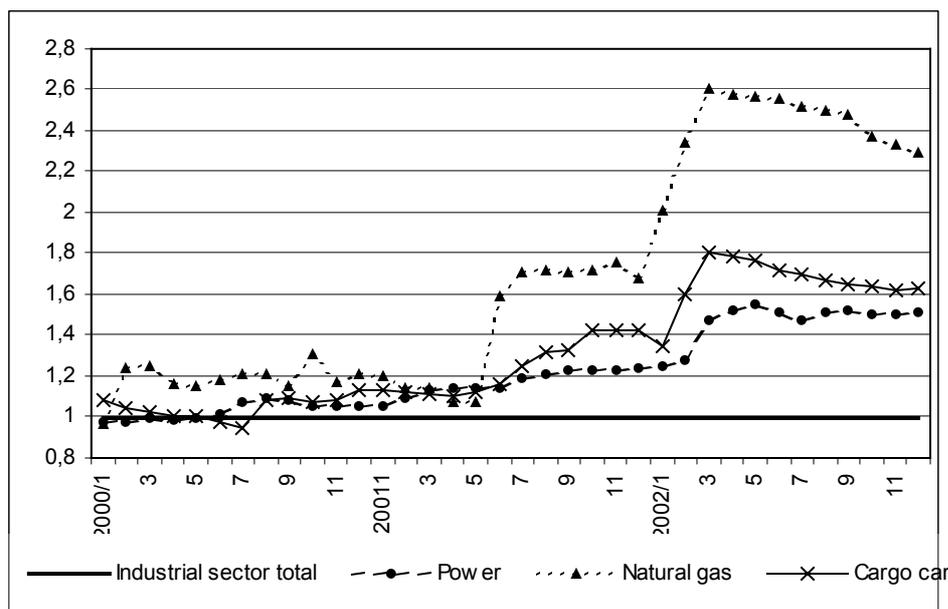
In 2001-2002, dynamics of economic growth were also influenced by changes in price proportions. While in 1999 and up till mid-2000, the dynamics of prices and tariffs charged by natural monopolies were but moderate, in the second half of the Year 2000 the situation changed. In 2000, natural gas prices were increased by 60 percent on the 1999 figure, cargo carriage tariffs, by 50 percent and prices charged by manufacturers in the industrial sector, by 31.6 percent. At the same time, growth in power rates exceeded growth rate of producer prices in the industrial sector by a mere 8.3 percent.

The Year 2001 saw widening of the gap in growth rates of prices of industrial manufacturers' produce and those of rates and prices charged by natural monopolies. The aggregate growth in manufactured goods prices amounted in 2001 to 10.7 percent, while the rates charged for power grew by 30.2 percent, prices charged for natural gas, by 41.5 percent and carriage charges by 38.2 percent. At the same time, growth in prices of intermediate goods and end products slowed down. With iron and steel industry, growth in prices amounted to 3.5 percent; in engineering, to 16.5 percent; in light industry, to 10.9 percent; and in food industry, to 15.0 percent; in nonferrous industry, prices went down by 10.6 percent.

April 2002 saw a sharp rise in producer prices in the industrial sector. That was a natural reaction to the rise in rates and prices charged by natural monopolies. In January-February 2002, gas prices went up by nearly 40 percent; in February, carriage tariffs were raised by 18.9 per-

cent. In April, growth in producer prices in the industrial sector amounted to 2.2 percent; from that time on, producer prices grew faster than consumer prices. Another reason behind that change in proportions of prices was last May's 8-percent rise in fuel prices, which, on the one hand, was aimed at leveling of domestic and international prices in conditions of change on international markets and on the other hand, stimulated by growth in domestic demand for gasoline. It is also to be noted that in May 2002 a 20-percent price rise on the FOREM wholesale power market was effected (it had been postponed since March 1, 2002). The above had a particularly adverse effect on fuel-consuming and power-consuming branches and industries. In the year in question, the total growth in prices of natural gas amounted to 30.2 percent; growth in power rates, to 27.3 percent; and growth in carriage tariffs, to 38.6 percent. After the sharp rise in industrial producers' prices in the second quarter, in the remaining months of 2002 gradual slowdown of growth in such prices was observed. Seeking to preserve their markets, end demand branches pursued cautious pricing policies. Growth of prices in engineering industry amounted to 10.6 percent, in light industry, to 5.3 percent and in food industry, to 5.8 percent.

In 2002, growth rates of manufacturers' prices (17.1 percent) were higher than those of consumer prices (15.1 percent). However, looking at a longer period, one can see that growth in consumer prices after the 1998 crisis was still greater than that in industrial producers' prices. In four years (August 1998-August 2002), producer prices grew by 240 percent, while consumer prices, by 280 percent. So, increased growth rates of manufacturers' prices can be seen as a mere closing of the gap.



Source: The State Committee for Statistics of the Russian Federation

Fig. 3. Dynamics of growth in natural monopolies' prices in 2000-2002, compared to industrial manufacturers' prices, percent of the December 1999 figure, industrial sector = 1

It is to be noted that in spite of increased growth rates of industrial producers' prices, the process of normalization of the structure of payments, growth of the share of cash payments for industries' produce and reduction in the volume of legal entities' arrears continued in 2002.



Manufacturing Sector

Structural change in production was determined by changes on the domestic and international markets. During the 1999-2001 economic upsurge, the rates of growth in manufacturing industries were higher than those in extracting industries. Analysis of changes in the structure of the industrial sector shows that overall growth in output was almost totally attained through fast growth in branches oriented towards the domestic market. Structural changes in the industrial sector in that period were accompanied by faster than the average growth in the investment complex. Upturn in investment activity, which began in 1999, stimulated faster growth in engineering industry and building materials industry and higher demand in construction work. Growth in investment demand also stimulated development of branches producing intermediate goods.

However, starting from the second half of 2000, factors slowing down development of manufacturing industries came to prevail. Faster than the average growth in prices of primary energy carriers, growth in the real exchange rate of the ruble and a rise in wages and salaries brought about changes in the competitive situation on the domestic market. As a result, starting from the fourth quarter of 2000 reduction in the growth rate of profit and investment in end demand branches was observed.

In addition to market fluctuations, deeper-going limitations showed up. Opportunities for further increase of output are but limited due to the obtaining technical and economic parameters of industries' fixed capital and lack of equipment. In such a situation, level of business activity depends on the extent of utilization of competitive production facilities and efficiency of storekeeping.

Analysis of utilization of production capacities shows that a considerable portion of production facilities cannot be used in production due to their physical wear or functional depreciation. The rate of utilization of production capacities considerably differs with different branches of industry. With primary industries, where the share of value added is low, the rate of utilization of equipment is much higher than with manufacturing industries. There can be considerable differentiation even within the same branch of industry, depending on the type of prices. Extensive utilization in production of reserve capacities permitted resumption of economic activity, yet, it is to be remembered that there are certain limitations to utilization of equipment.

In extractive industries, growing demand can in most cases be met through use of the existing capacities, since quality of primary materials depends on the nature of the deposit, rather than on the method of extraction. In such industries, use of new technologies mostly helps reduce costs, raise labor productivity, increase output of co-products and the like. In extractive industries the ratio between the rate of wear and rate of utilization of production capacities is such that the loads on equipment can be seen as critical.

In manufacturing industry, especially in advanced technology production, potential for increasing output depends on quality of the equipment and technologies used. Due to a high rate of wear of fixed capital in manufacturing branches, the rate of utilization of equipment is the lowest there, that is also a factor limiting potential for further growth in output.

The relationship between the wear rate and age structure parameters evidences urgent need for speeding up of modernization. Engineering still ranks among the branches of industry with the lowest levels of utilization of production capacities. The long investment pause caused conservation of the structure of engineering; in conditions of switchover to an invest-

ment-based economic growth model, lack of machinery and equipment has become a factor hampering expansion of production. The situation has been made even worse by the fact that quality of engineering products is below the market standards and for that reason engineering industry cannot assure such sales volumes as would yield sufficient funds for large-scale investment in modernization of its production capacities.

Change in the dynamics and structure of domestic demand was accompanied by intensification of competition between domestic manufacturers and between domestically produced and imported substitute goods. The situation has been complicated by the fact that with growth in households' incomes and reduction in price-related competitive advantages formerly enjoyed by domestically produced goods imports of both consumer and investment goods tend to grow. The above circumstances have brought about slowdown in growth in manufacturing branches of industry, which branches have been ever more dependent on the dynamics of investment demand and innovation development strategy. The obsolete fleet of equipment and technologies and low labor productivity have put significant limitations on expansion of the aggregate supply and change in its structure. Considering the above and with the market capacity being high and effective demand being gradually restored, it is hardly surprising that foreign manufacturers have expanded their presence on the market. Abatement in domestic manufacturers' investment activity has resulted in loss of much of the ground previously gained and change in the competitive environment.

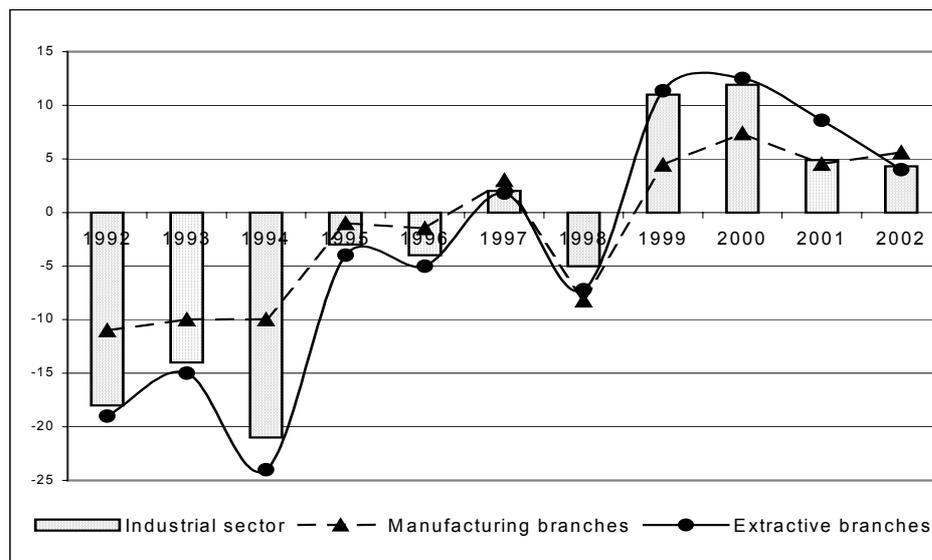


Fig. 4. Change in the dynamics of extractive and manufacturing branches of industry in 1992-2002, percent of the previous year's figure.

In 2002, considerable slowdown was observed in branches of the investment complex. In engineering industry, growth in output amounted in 2002 to 2.0 percent, as against 7.0 percent in 2001 and 20.0 percent in 2000. The state of investment engineering branches is such that it poses limitations to potential for urgently needed modernization and restructuring of production on a new technological basis; the obsolete structure currently observed in engineering can only reproduce obsolete forms of reproduction.



Table 2

Dynamics of gross industrial output in 1998-2002, breakdown by the production complex, percent of the previous year's volume

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------------------------|------|-------|-------|-------|-------|
| Industrial sector | 95.4 | 111.0 | 111.9 | 104.9 | 103.7 |
| Fuel and energy complex | 97.5 | 100.9 | 103.9 | 104.6 | 104.3 |
| Metallurgical complex | 93.5 | 113.4 | 115.5 | 102.4 | 104.5 |
| Chemical and timber complex | 94.3 | 121.4 | 113.0 | 105.3 | 101.9 |
| Investment complex | 92.8 | 116.0 | 119.0 | 106.9 | 102.1 |
| Consumer complex | 97.1 | 104.8 | 114.7 | 107.7 | 105.5 |

Source: Calculated using data of the State Committee for Statistics of the Russian Federation

Performance by engineering industry was affected by change in the structure of demand in machinery. While in 1992-1998 the dynamics of growth in engineering industry primarily depended on automotive industry's dynamics, in the past four years the situation changed. That period saw fast development of instrument-making industry, communication industry and heavy engineering producing investment goods for transport, agriculture and oil industry. As domestic engineering industries gained an edge on their foreign competitors in prices, growth was observed in output of equipment for the consumer complex. Continuing their work on optimization of capacities, restructuring of assets and certification and introduction of new types of machinery, engineering industries managed to increase output of import substitutes.

Table 3

Dynamic of output with different engineering branches, percent of the previous year's level

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|--|-------|-------|-------|-------|-------|
| Industrial sector, total | 94.8 | 108.1 | 109.0 | 104.9 | 103.7 |
| Engineering industry, | 92.5 | 115.9 | 115.5 | 107.2 | 102.0 |
| Including: | | | | | |
| Railway machine-building | 87 | 108.9 | 107.4 | 126.0 | 121.7 |
| Metallurgical machine-building | 70.6 | 91.8 | 130.2 | 86.1 | 82.6 |
| Electrical industry | 85.7 | 127.0 | 130.1 | 112.6 | 93.8 |
| Machine-building for chemical industry and oil industry | 96.1 | 120.7 | 119.5 | 121.6 | 96 |
| Machine-tool building and tool engineering | 82.3 | 99.6 | 111.5 | 99.4 | 81.7 |
| Instrument-making industry | 103.4 | 140.8 | 118.4 | 98.0 | 90.9 |
| Automotive industry | 88.5 | 114.7 | 103.3 | 101.7 | 97.8 |
| Communication industry | 93.7 | 95.7 | 330.0 | 90.0 | 174.6 |
| Production of tractors and other agricultural machinery | 70.7 | 159.3 | 148.4 | 129.1 | 77.6 |
| Machine-building for light industry and food industry and production of household appliances | 90.6 | 115.8 | 109.5 | 107.1 | 115.9 |

Source: The State Committee for Statistics of the Russian Federation

However, in spite of the above positive trends, engineering industry's contribution to overall growth in industrial output is still much less than that of extractive industries. The two reasons behind this are the nature of this country's economic development since the 1960s and the specifics of the market situation in the past few years.

Thanks to growth in consumer demand, business activity in the consumer sector was maintained at the former level. Even though the growth rate slightly went down in 2002, consumer industries' contribution remained on the same level as before. The slowdown in

output of consumer goods can be explained by a 3.4-percent recession in light industry (on the previous year). While in foods turnover domestic manufacturers' positions remain stable, the situation on the non-foods market has been characterized by fast growth in imports. Light-industry output only grew faster than textiles imports and nonfoods turnover for a brief period of time; it was over by the third quarter of 1999. With change in the competitive environment and growth in imports' efficiency, the tendency towards ousting of domestically produced goods gained momentum. As can be seen from experience, sheer devaluation with no purposeful restructuring policy pursued did not improve domestic manufacturers' competitive ability, and that has caused instability in light industry's output dynamics.

The high rate of consumer branches' influence on the overall dynamics of output has been maintained through their faster growth, as compared to the primary goods complex and the investment complex. The consumer complex's output index amounted to 105.5 percent in 2002. As can be seen, the proportions of domestic industrial output were particularly strongly influenced in 2002 by reduction in the investment complex's share. It is to be noted that the change in the structure of production in the past few years has been mostly caused by change in the market situation and did not concern the material and technical basis of production. So, it can be concluded that the possible limits to development of the manufacturing sector have been determined by the accumulated potential.

Oil and Gas Sector

In 2002, the situation of Russia's oil sector was greatly influenced by the situation on the global oil market. Since over 60 percent of oil produced in Russia has been exported, either in the raw state or refined, and on the domestic market oil is sold at prices considerably lower than the international prices, the international level of prices is the principal factor determining the income and financial situation of Russia's oil industry.

The landslide of international oil prices in the fourth quarter of 2001 (when the average price of OPEC basket oil went down to 18.3 USD a barrel) induced OPEC countries to pass on November 14, 2001 a decision on additional reduction in oil production by 1.5 million barrels per day for six months starting from January 1, 2002. However, unwilling to have its share of the international markets reduced, OPEC made implementation of that decision conditional on non-OPEC oil producers' readiness to effect aggregate reduction in oil production by 500 thousand barrels per day. In response, Russia declared its intention to reduce its international sales by 150 thousand barrels per day for the first quarter of 2002, Norway declared reduction of production by 150 thousand barrels per day for the first half of 2002, Mexico declared reduction in exports by 100 thousand barrels per day also for the first half of 2002, Oman and Angola also declared reductions in output, though on a lesser scale (in Oman oil production was reduced by 40 thousand barrels per day, while in Angola, by 22.5 thousand barrels per day). As can be seen, in 2002, OPEC chose to focus on stabilization of prices and securing of short-term income rather than launch a price war (as some experts had predicted), that is, dumping for the purpose of expanding of OPEC's share of the global market.

Thanks to the reduction starting from January I, 2002 in production and export of oil by OPEC countries and some non-OPEC oil producers and also a slight upturn in major industrialized countries' national economies, growth in international oil prices was observed in the first quarter of 2002. In March, oil prices on the international markets reached the level of



24-25 dollars a barrel. In April-July, OPEC countries' oil stabilized at the level of 24-25 dollars a barrel, that is, were in the middle of the price range (22-28 dollars a barrel) maintained by OPEC (see *Table 4* and *Fig. 5*). In August, as a result of global reduction in oil production (which primarily occurred due to slump in production in Iraq and in the North Sea region) oil prices began to grow reaching the level of 27-28 dollars a barrel. On September 19, 2002, a regular OPEC conference passed a decision on maintenance till the end of the year of the oil production quotas introduced on January 1, 2002.

However, as oil production in Venezuela and oil exports from that country dropped dramatically as a result of a nation-wide strike (according to the US Department of Energy, oil production went down from 2.9 million barrels per day early in December to 0.6 million barrels per day by the end of that month), oil prices on the international markets went up and the OPEC basket oil prices exceeded the ceiling of the price range set by that organization. In December 2002, Brent oil sold at 28.67 dollars per barrel, while OPEC basket oils, at 28.21 dollars a barrel. The high level of international oil prices in the closing months of 2002 can to a certain extent be explained by the expected US invasion of Iraq.

*Table 4***International oil prices in 1997–2002, dollars a barrel**

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 1 st quarter | 2002 2 nd quarter | 2002 3 rd quarter | 2002 4 th quarter | 2002 |
|---|-------|-------|-------|-------|-------|------------------------------|------------------------------|------------------------------|------------------------------|-------|
| Prices of Brent oil, the UK | 19.12 | 12.72 | 17.97 | 28.50 | 24.44 | 21.09 | 25.07 | 26.91 | 26.81 | 25.02 |
| Prices of Urals oil, Russia | 18.33 | 11.83 | 17.30 | 26.63 | 22.97 | 19.72 | 23.60 | 25.81 | 25.55 | 23.73 |
| Prices of OPEC oil basket | 18.68 | 12.28 | 17.47 | 27.60 | 23.12 | 19.92 | 24.42 | 26.15 | 26.63 | 24.34 |
| Average price of oil imported in the US | 18.50 | 12.08 | 17.22 | 27.72 | 22.01 | 19.33 | 23.84 | 25.88 | 25.74 | 23.77 |

Source: OECD International Energy Agency, U.S. Department of Energy.

The two principal reasons behind international oil prices remaining rather high for a better part of the Year 2002 were the policy pursued by the OPEC and a certain upturn in global economy. In the US (which accounts for over 25 percent of the world consumption of oil), GDP growth rate went up from 0.3 percent in 2001 to 2.4 percent in 2002. Overall growth in the global economy was, however, held back by low growth rates in Europe and recession in Japan. As a result, according to the OECD International Energy Agency, the rate of growth in global demand in oil amounted to 0.5 percent in 2002, being only slightly higher than in the previous year (see *Table 5*). With OECD countries, a 0.2-percent reduction in demand in oil was observed in 2002. The most significant increase in demand in oil was observed in China (5.7 percent). In Europe, demand in oil went down by 0.7 percent in 2002. Of industrialized countries, Japan had the greatest reduction in demand (2.2 percent on the previous year's figure). According to the US Department of Energy, in the US demand in oil went up by 0.5 percent (in 2001, there was a 0.3-percent reduction in such demand in that country).

Unlike 2001, in 2002 growth in global demand in oil was accompanied by a considerable reduction in global oil production. While OPEC countries dramatically reduced oil production for the purpose of assuring the desired level of oil prices, in some other countries oil production was considerably increased. According to the International Energy Agency, oil production in OPEC countries was reduced from 30.11 million barrels per day in 2001 to

28.54 million barrels per day in 2002, that is, by 1,57 million barrels per day. Outside OPEC, significant increase in oil production was observed, especially in Russia where it was the largest. Oil production was also considerably increased in Canada, China, Brazil and Angola. In 2002, aggregate oil production by non-OPEC countries went up by 1.38 million barrels per day on the 2001 figure. So, reduction in oil production in OPEC countries was largely neutralized by increased deliveries from non-OPEC countries (see *Table 6*). As a result, OPEC countries' share in world oil production went down from 40.1 percent in 2000 to 39.2 percent in 2001 and to 37.3 percent in 2002.

Table 5

Structure and dynamics of global demand in oil in 2001–2002

| | Demand, mil. barrels per day | | Annual change, mil. barrels per day | | Annual change, % |
|--|------------------------------|-------|-------------------------------------|------|------------------|
| | 2002 | 2001 | 2002 | 2001 | 2002 |
| World, total | 76.87 | 0.28 | 0.39 | 0.4 | 0.5 |
| North America | 23.95 | -0.18 | 0.09 | -0.8 | 0.4 |
| Europe | 15.88 | 0.20 | -0.11 | 1.3 | -0.7 |
| OECD countries in the Asian Pacific Region | 8.50 | -0.08 | -0.05 | -0.9 | -0.6 |
| China | 5.15 | 0.09 | 0.28 | 1.8 | 5.7 |
| Countries in the former USSR territory | 3.76 | 0.07 | 0.07 | 1.8 | 1.9 |
| Middle East | 4.96 | 0.14 | 0.12 | 3.0 | 2.5 |
| Other Asian countries | 7.47 | 0.02 | 0.09 | 0.7 | 1.2 |
| Africa | 2.51 | 0.03 | 0.03 | 1.4 | 1.2 |
| South America | 4.70 | -0.03 | -0.13 | -0.7 | -2.6 |
| For reference: OECD countries | 47.60 | -0.07 | -0.08 | -0.1 | -0.2 |

Source: OECD International Energy Agency.

Table 6

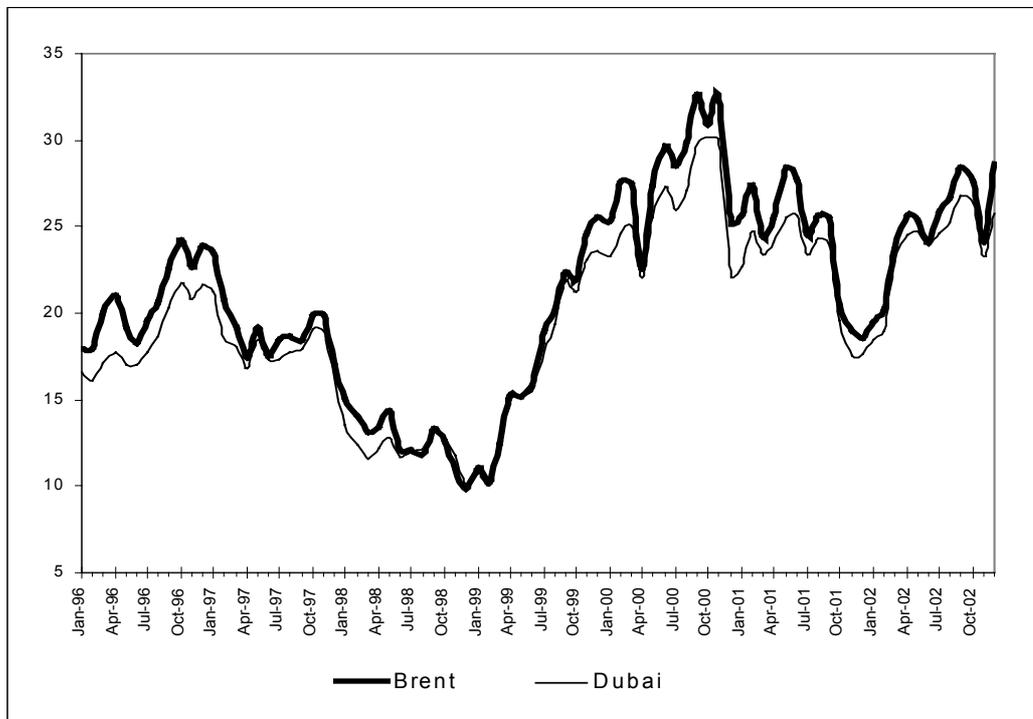
Structure and dynamics of global oil production in 1999–2002, million barrels per day

| | 1999 | 2000 | 2001 | 2002 |
|--|-------|-------|-------|-------|
| World, total | 74.20 | 76.72 | 76.78 | 76.58 |
| Growth/reduction on the previous year's figure | -1.40 | 2.52 | 0.06 | -0.20 |
| OPEC countries | 29.40 | 30.80 | 30.11 | 28.54 |
| Growth/reduction on the previous year's figure | -1.40 | 1.40 | -0.69 | -1.57 |
| Non-OPEC countries | 44.80 | 45.92 | 46.66 | 48.04 |
| Growth/reduction on the previous year's figure | 0.00 | 1.12 | 0.74 | 1.38 |

Source: OECD International Energy Agency.

In 2002, development of Russia's oil and gas sector was largely determined by continuation of the processes that had begun in 2000-2001. In 2000-2001, both oil industry and Russia's national economy as a whole greatly benefited by the extremely high international oil prices, which situation afforded extremely favorable opportunities to Russia's oil sector. That period saw considerable growth in oil industry's output and profit, as well as in investment in oil industry. While in 2000 growth in production of oil and gas condensate on the previous year's volume amounted to 6 percent, in 2001, to 7.7 percent. It is to be noted that in 2001, unlike 2000, growth in oil output was mostly attained through commissioning of new oil wells, built thanks to investment made in the 2000-2001 period. While in 2000, oil extraction from formerly idle oil wells whose operation had been resumed amounted to 12.0 million

tons, or 68.3 percent of that year's growth in oil production, in 2001 that figure was 5.7 million tons, or 23.5 percent of that year's growth in oil production. The share of idle oil wells in the fleet of production oil wells went down from 24.3 percent in 1999 to 22.5 percent in 2000 and to 21.5 percent in 2001. A sharp upturn in investment activity was observed; volumes of production petroleum drilling and exploration petroleum drilling went up (on the previous year's figure) by 67.5 percent and 27.8 percent, respectively, in 2000 and by 8.4 percent and 15.6 percent, respectively, in 2001. The number of new oil wells made operational went up by 53.7 percent in 2000 and by 18.6 percent in 2001. The aggregate growth in oil and gas condensate output in the 2000-2001 period amounted to 14.1 percent, while growth in the volume of production petroleum drilling, to 96.1 percent, growth in the volume of exploration drilling, to 33.1 percent and growth in the number of new oil wells put into operation, to 84.6 percent.



Source: OECD International Energy Agency

Fig. 5. International oil prices in 1996-2002, USD per barrel

There was also an improvement in qualitative and quantitative performance of oil refining industry, which can largely be explained by modernization of oil-refining facilities. In 2000, new primary oil refining facilities with an aggregate capacity of 0.35 million tons were made operational, while in 2001, facilities with an aggregate capacity of 6.5 million tons. Fineness of oil refinement was increased to reach 71 percent, the share of lead-free motor gasoline in total output of motor gasoline went up to 97.9 percent, while the share of high-octane gasoline, to 46.7 percent.

In 2002, the same tendency for growth in output of oil and petroleum products as had taken shape in the 2000-2001 period dominated development of the oil and gas sector (see *Table 6*). According to the Ministry of Energy of the Russian Federation, total oil and gas condensate output amounted to 379.6 million tons in 2002, having grown by 9.0 percent on the previous

year's figure (that was the highest growth rate in the entire post-reform period). Largest oil outputs were achieved by the following oil companies: LukOil (77.5 million tons), YUKOS (69.9 million tons), Surgutneftegaz (49.2 million tons), Tyumen Oil Company (37.5 million tons), Sibneft (26.3 million tons) and Tatneft (24.6 million tons). Operators of projects based on output-sharing agreements only produced 2.0 million tons in 2002, or 0.5 percent of the total oil output in Russia. The volume of primary oil refining was increased by 3.3 percent, output of motor spirit, by 4.9 percent, output of diesel oil, by 4.7 percent and output of residual fuel oil, by 7.1 percent. For the first time in years, growth in output of natural gas was observed (by 1.9 percent). At the same time, due to limited export opportunities, saturation of the domestic market and drop in international oil prices late in 2001 and early in 2002 (in the fourth quarter of 2001 and in January-February of 2002, average prices of Russian oil on international markets amounted to 18-19 USD per barrel), a slump in investment activity was observed: the volume of production petroleum drilling went down by 16.8 percent in 2002 on the previous year; the volume of exploration drilling, by 40.2 percent, while the number of new oil wells put into operation, by 21.9 percent. The share of idle oil wells in the fleet of production oil wells, which had been reduced to 21.5 percent late in 2001, went up to make 23.1 percent by the end of 2002.

In oil refining industry, new primary oil refining facilities with an aggregate capacity of 1.5 million tons were made operational in 2002 (in 2001, facilities with an aggregate capacity of 6.5 million tons), and catalytic cracking facilities with an aggregate capacity of 2.5 million tons (in 2001, facilities with an aggregate capacity of 0.5 million tons). At the same time, fineness of refining of raw oil went down from 70.7 percent in 2001 to 69.7 percent in 2002. Output of petroleum products with the use of deepening technologies went up by 0.4 percent, while output of high octane motor gasoline was increased by 9.9 percent (its share in total production of motor spirit going up from 47.1 in 2001 to 49.3 in 2002).

Table 7

Output of oil, petroleum products and natural gas, percent of the previous year's figure

| | 1999 | 2000 | 2001 | 2002 |
|-----------------------------------|-------|-------|-------|-------|
| Oil and gas condensate | 100.5 | 106.0 | 107.7 | 109.0 |
| Primary refining | 102.9 | 102.7 | 103.2 | 102.0 |
| Motor spirit | 102.2 | 103.6 | 100.6 | 103.1 |
| Diesel oil | 104.2 | 104.9 | 102.0 | 103.5 |
| Fuel oil | 94.8 | 98.3 | 104.2 | 104.8 |
| Natural gas, billion cubic meters | 99.7 | 98.5 | 99.2 | 102.8 |
| Oil gas, billion cubic meters | 103.2 | 102.5 | 105.0 | 107.1 |

Source: The State Committee for Statistics of the Russian Federation, Ministry of Energy of the Russian Federation

Table 8

Proportions of output, consumption and export of energy carriers in 1997–2002

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 (estimate) |
|-----------------------------|-------|-------|-------|-------|-------|--------------------|
| Oil, million tons | | | | | | |
| Output | 305.6 | 303.4 | 305.0 | 3232 | 348.1 | 379.6 |
| Export, total | 126.9 | 137.1 | 134.5 | 144.5 | 159.7 | 180.0 |
| Export to non-CIS countries | 109.8 | 117.9 | 115.7 | 127.6 | 137.1 | 148.6 |
| Export to CIS countries | 17.1 | 19.2 | 18.8 | 16.9 | 22.7 | 31.4 |



| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 (estimate) |
|---|-------|-------|-------|-------|-------|--------------------|
| Net export | 119.0 | 129.2 | 128.5 | 138.7 | 154.7 | 173.8 |
| Domestic consumption | 132.2 | 125.1 | 120.5 | 123.0 | 122.9 | 122.3 |
| Net export, % of output | 38.8 | 42.4 | 42.1 | 42.9 | 44.4 | 45.8 |
| Petroleum products, million tons | | | | | | |
| Export, total | 60.6 | 53.8 | 56.9 | 61.9 | 70.8 | 83.7 |
| Export to non-CIS countries | 58.4 | 51.2 | 53.9 | 58.4 | 68.3 | 81.2 |
| Export to CIS countries | 2.2 | 2.6 | 3.0 | 3.5 | 2.5 | 2.5 |
| Net export | 56.6 | 51.0 | 50.3 | 61.5 | 70.5 | 83.5 |
| Oil and petroleum products, million tons | | | | | | |
| Net export of oil and petroleum products | 173.4 | 178.3 | 184.5 | 200.2 | 225.2 | 257.3 |
| Net export of oil and petroleum products, percent of oil output | 56.7 | 58.8 | 60.5 | 61.9 | 64.7 | 67.8 |
| Natural gas, billion cubic meters | | | | | | |
| Output | 571.1 | 591.0 | 590.7 | 584.2 | 581.5 | 594.5 |
| Export, total | 200.9 | 200.6 | 205.4 | 193.8 | 180.9 | 187.0 |
| Export to non-CIS countries | 120.9 | 125.0 | 131.1 | 133.8 | 131.9 | 134.8 |
| Export to CIS countries | 80.0 | 75.6 | 74.3 | 60.0 | 48.9 | 52.2 |
| Net export | 196.4 | 197.6 | 201.3 | 189.7 | 176.9 | 183.0 |
| Domestic consumption | 374.7 | 393.4 | 389.4 | 394.5 | 404.6 | 411.5 |
| Net export, percent of output | 34.4 | 33.4 | 34.1 | 32.5 | 30.4 | 30.8 |
| Overall | | | | | | |
| Output of oil and natural gas, million tons of oil equivalent | 819.6 | 835.3 | 836.6 | 849.0 | 871.5 | 914.7 |
| Net export of oil, petroleum products and natural gas, million tons of oil equivalent | 350.2 | 356.1 | 365.7 | 370.9 | 384.4 | 422.0 |
| Domestic consumption of oil and natural gas, million tons of oil equivalent | 469.4 | 479.2 | 470.9 | 478.1 | 487.1 | 492.7 |
| Net export of oil, petroleum products and natural gas, million tons of oil equivalent, percent of output of oil and natural gas | 42.7 | 42.6 | 43.7 | 43.7 | 44.1 | 46.1 |

Source: The State Committee for Statistics of the Russian Federation, Ministry of Energy of the Russian Federation, State Committee of the Russian Federation for Taxation, our own calculations

Analysis of data on production and exports of oil and petroleum products (see *Table 8*) shows that practically all the oil produced in 2002 was exported, either as crude oil or as petroleum products produced from it. According to preliminary estimates, net oil and petroleum products exports amounted in 2002 to 257.3 million tons, growing by 32.1 million tons on the previous year's figure (in that growth, increase in exports of oil accounted for 19.1 million tons, while increase in exports of petroleum products, for the remaining 13.0 million tons). Just like in the 2000-2001 period, growth in exports stimulated a considerable increase in output in 2002. As a result, the share of net exports of oil and petroleum products went up to 67.8 percent of oil production. As a result of increased demand in natural gas, both on domestic and international markets, output of natural gas was increased in 2002, for the first time in years, and the share of net export in the total natural gas output went up to 30.8 percent. There was also a considerable growth in investment activity in the gas sector. In 2002, the volume of production natural gas drilling grew by 60.9 percent on the previous year's figure.

While in 2000 domestic oil prices in USD equivalent tended to grow nearly reaching the pre-devaluation level, in 2001 fast growth in oil output in conditions of limited domestic demand resulted in overproduction and hence in drop in domestic oil prices, both in real and in nominal terms. Domestic oil price in dollar equivalent went down from 56-58 USD per ton early in 2001 to 49.9 USD per ton in December. Gasoline prices, which had hit the high (200 USD per ton) in the fourth quarter of 2000, went down throughout 2001 reaching the 151.5 USD per ton level by the end of the year. The domestic gasoline price thus went below the pre-devaluation level (see *Table 9*). After the above period of reduction of domestic oil and petroleum product prices, which continued into the opening months of the Year 2002, in spring of 2002 the tide changed due to increased costs and rise in international prices. Beginning from April 2002, continuous growth in oil prices was observed (both in rubles and in USD equivalent); beginning from May, gasoline prices started growing, too. Towards the end of the year, oil and petroleum product prices stabilized. At the same time, there was still a considerable gap between domestic and international oil prices; in 2002, the difference was in the area of 35-40 percent. Natural gas prices nearly reached the pre-devaluation level in 2002.

Table 9

**Domestic oil, petroleum product and natural gas prices,
USD equivalent, in 1997–2002 (enterprises' average wholesale prices, USD per ton)**

| Year | Month | Oil | Motor spirit | Diesel fuel | Fuel oil | Natural gas, USD/ thousand cubic meters |
|-------|-----------|------|--------------|-------------|----------|---|
| 1997 | December | 63.1 | 169.6 | 170 | 73.8 | 6.6 |
| 1998 | December | 16.4 | 63.4 | 52.9 | 22 | 2.1 |
| 1999 | December | 37 | 171.9 | 125 | 46.1 | 2.2 |
| 2000 | December | 54.9 | 199.3 | 185 | 79.7 | 3.1 |
| 2001 | December | 49.9 | 151.5 | 158.5 | 47.1 | 4.8 |
| 2002 | March | 39.4 | 113.2 | 119.3 | 33.8 | 6.3 |
| 2002 | June | 49.4 | 166.7 | 171.4 | 75.9 | 6.3 |
| 2002 | September | 59.5 | 184.2 | 154.3 | 77 | 6.2 |
| 2002. | December | 60.7 | 168.8 | 153.8 | 66.1 | 5.9 |

Source: Calculated using data of the State Committee for Statistics of the Russian Federation

Despite the limitations on export of oil imposed in the 1st quarter of 2002 (which limitations were imposed in conformity with Russia's obligations to reduce supplies of oil to the international market in support of the OPEC's effort to bring international oil prices back to the level which would be acceptable to oil-producing countries), in January-November 2002 export of oil and petroleum products was larger than the volume of the corresponding period in 2001 by 12.7 percent and 18.2 percent, respectively (*Table 10*). In January-November 2002, the share of export in production of fuel oil, diesel fuel and motor spirit amounted to 66.6 percent, 54.4 percent and 11.7 percent, respectively (It is to be noted for the sake of comparison that in 1999 the share of export in production of motor spirit amounted to a mere 7.2 percent.) In January-November 2002, export of oil in value terms amounted to 110.2 percent of the level of the corresponding period in 2002. In January-November 2002, the total value of export of oil and main types of petroleum products amounted to 34.9 billion USD, which was 11.6 percent more than the figure of the corresponding period in 2002.

*Table 10***Export of oil, petroleum products and natural gas from Russia,
% of the volume of the corresponding period of the previous year**

| | 2001 January-November | 2002 January-November |
|-------------------------------------|----------------------------------|----------------------------------|
| Oil export, total | 111.0 | 112.7 |
| including: | | |
| Export to non-CIS countries | 108.0 | 108.4 |
| Export to CIS countries | 133.9 | 138.7 |
| Export of petroleum products, total | 111.5 | 118.2 |
| including: | | |
| Export to non-CIS countries | 113.7 | 119.0 |
| Export to CIS countries | 72.5 | 100.7 |
| Gas export, total | 92.5 | 103.4 |

Source: The State Committee for Statistics of the Russian Federation

The total volume of export of oil and petroleum products increased from 230.5 mil tons in 2001 to 236.7 mil tons (preliminary estimate) in 2002, that is, by 14.4 percent. Export of crude oil still accounted for a larger portion (70%) of the total volume of export of oil and petroleum products, while diesel oil and fuel oil accounted for most of the export of petroleum products. Export of natural gas grew by 3.4 percent. The greater portion of energy carriers (83% of oil, 97% of petroleum products and 72% of gas) was exported to non-CIS countries. In January-November 2002, the share of export of oil and petroleum products in Russia's volume of export amounted to 36.4 percent.

Reduction in import of petroleum products which had begun late in 1998 as a result of devaluation of the ruble and due to high prices on oil on the international market continued. In January-November 2002, import of petroleum products decreased by 49 percent on the volume of the corresponding period in 2001, in particular, import of motor spirit went down by 65 percent on the 2001 volume, while the share of import in gasoline supply fell from 0.4 percent in 2001 to 0.1 percent in 2002 (it is to be noted for the sake of comparison that in the first half of 1998 (that is, prior to the devaluation of the ruble) the share of import in gasoline supply amounted to 8.7 percent).

Analysis of dynamics of Russia's oil export for a long period of time reveals that in 2002 the total net export of oil and petroleum products exceeded (according to preliminary estimates) the 1990 level (246.3 mil tons) for the first time in the past few years. However, it is still below the 1988 level when the record-high volumes of export of oil (291.6 mil tons) were registered. In oil exports, absolute reduction in the volume of export of crude oil and increase in the volume of export of petroleum products (which volume had been continuously growing since 1996) was observed. The share of petroleum products in oil export grew from 18.2 percent in 1990 to 32.5 percent in 2002 (Table 11). Due to a drop in domestic consumption of oil (according to our calculations it went down from 269.9 mil tons in 1990 to 122.3 mil tons in 2002, that is, by more than 50 percent) the share of export of oil and petroleum products in oil production increased from 47.7 percent to 67.8 percent in that period. Unlike export of oil and petroleum products, net export of natural gas did not exceed in the past few years the volume of the second half of 1990s, though the share of net export in natural gas output is still somewhat higher than the pre-reform level (30.8 percent in 2002, as against 28 percent in 1990).

Table 11

Structure of net export of oil and petroleum products

| | 1990 | | 2002 (estimate) | |
|----------------------------|----------|-------|-----------------|-------|
| | Mil tons | % | Mil tons | % |
| Oil and petroleum products | 246.3 | 100.0 | 257.3 | 100.0 |
| Oil | 201.5 | 81.8 | 173.8 | 67.5 |
| Petroleum products | 44.8 | 18.2 | 83.5 | 32.5 |

Source: The State Committee for Statistics of the Russian Federation, the State Customs Committee of the Russian Federation, the OECD International Energy Agency and our own calculations.

In 2002, the aggregate net export of oil, petroleum products and natural gas reached the 1990 level (while still remaining below the 1988 level). In our estimate, it rose from 407.6 mil tons of oil equivalent in 1990 to 422.0 mil tons of oil equivalent in 2002 (that is, there was a 3.5 percent increase). The share of net export in the aggregate production of oil and natural gas rose from 37.3 percent to 46.1 percent. This shows that in a way the oil and gas sector became more export oriented than it was in the pre-reform period, however, it is to be remembered that such growth in the share of export can mostly be explained by drop in production of hydrocarbons due to decrease in the rate of their domestic consumption and the volume of such supplies to CIS countries and Baltic states and worsening of conditions of production, rather than by growth in export volumes in real terms (which growth was rather insignificant).

Thanks to oil prices on the international market being high for the better part of the Year 2002 the oil sector received high revenues. In January-November 2002, aggregate revenues from export of oil and petroleum products amounted to 34.9 billion USD. In January-October 2002, the total profit (balance financial result) of oil industry, including oil production industry and oil refining industry, amounted to 3.49 billion USD. It is to be noted that oil industry accounted for 31.3 percent of the total profit of the industrial sector and 13.2 percent of the overall profit of Russia' national economy (in 2001, those figures were 39.4 percent and 20.7 percent, respectively). Reduction in the volume of profit of oil industry was largely caused by introduction (from January 2002) of a mining tax in respect of oil, which tax is charged at a higher rate than the three types of charges which were levied earlier (charge for use of mineral wealth, deductions for reproduction of mineral and other natural resources and oil excises), high export duties and growing production costs.

Revenues of the oil sector as a whole helped secure high budget revenues and permitted oil companies to stabilize the situation with accounts payable to suppliers and reduce their arrears to the budget. By the end of October 2002, arrears (US dollar equivalent) of oil industry to budgets of all levels amounted to 0.1 billion USD which was a many-year low (*Table 12*). By the end of October 2002, overdue debts of oil industry in respect of bank loans and credits went down to 78.8 mil USD, which was a considerable reduction. The share of oil industry in the total volume of overdue debts of branches of the economy in respect of bank loans and credits decreased from 7.6 percent in October 2001 to 2.0 percent in October 2002.

Table 12

Oil industry's financial performance in the 1997-2002 period, billion USD

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002* |
|--|-------|-------|-------|-------|-------|--------|
| Revenues form export of oil and main types of petroleum products | 21.09 | 13.96 | 18.82 | 34.89 | 33.43 | 34,90. |

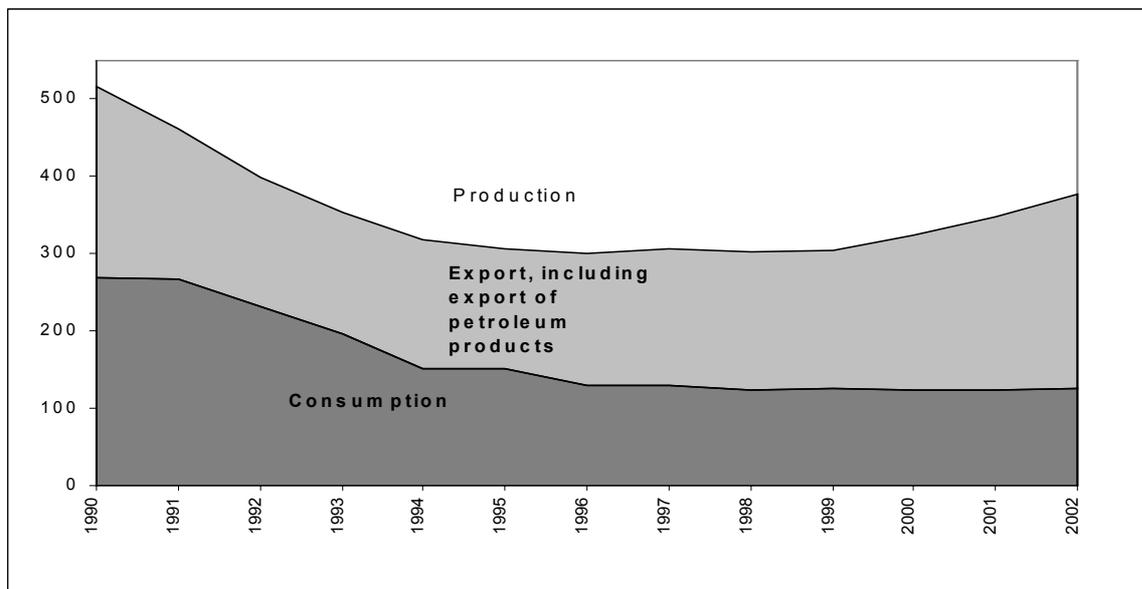


| | | | | | | |
|--|------|------|-------|-------|------|------|
| Profit (balance financial result) | 3.52 | 0.60 | 6.32 | 10.42 | 8.14 | 3.49 |
| Overdue accounts payable (as of the end of the year) | 6.79 | 2.41 | 1.61 | 1.35 | 1.01 | 1.01 |
| including: | | | | | | |
| debts to suppliers | 2.38 | 0.94 | 0.7.2 | 0.55 | 0.52 | 0.53 |
| debts to budget | 2.53 | 0.66 | 0.43 | 0.27 | 0.15 | 0.10 |

*Data for the Year 2002: revenues from export of oil and petroleum products in January –November, profit in January –November and overdue accounts payable as of the end of October.

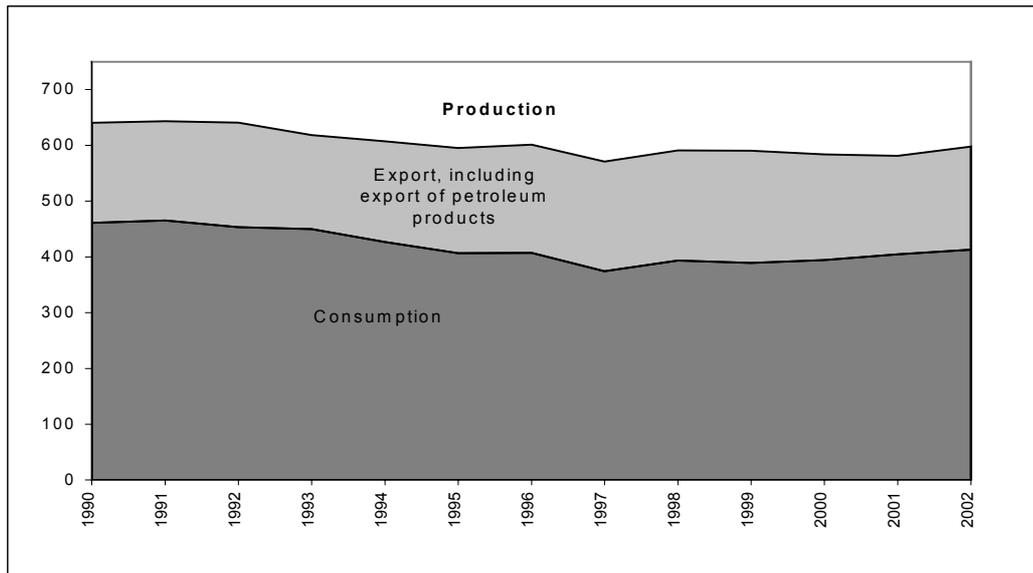
Source: Calculated using data of the State Committee for Statistics of the Russian Federation.

Change in such principal parameters of development of the oil sector as characterize the volume of production and sales on the domestic and international markets, pricing, investment activity and the situation with payments and settlements is illustrated in Fig. 6-14.



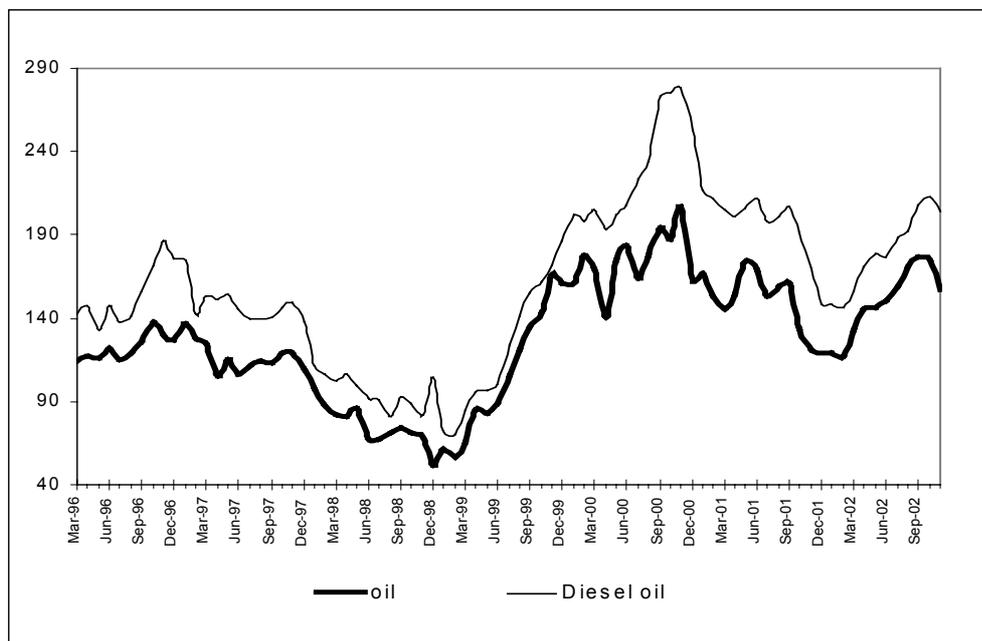
Source: The State Committee for Statistics of the Russian Federation, the State Customs Committee, the International Energy Agency and our own calculations.

Fig. 6. Production, consumption and export of oil in the 1990-2002 period, mil tons.



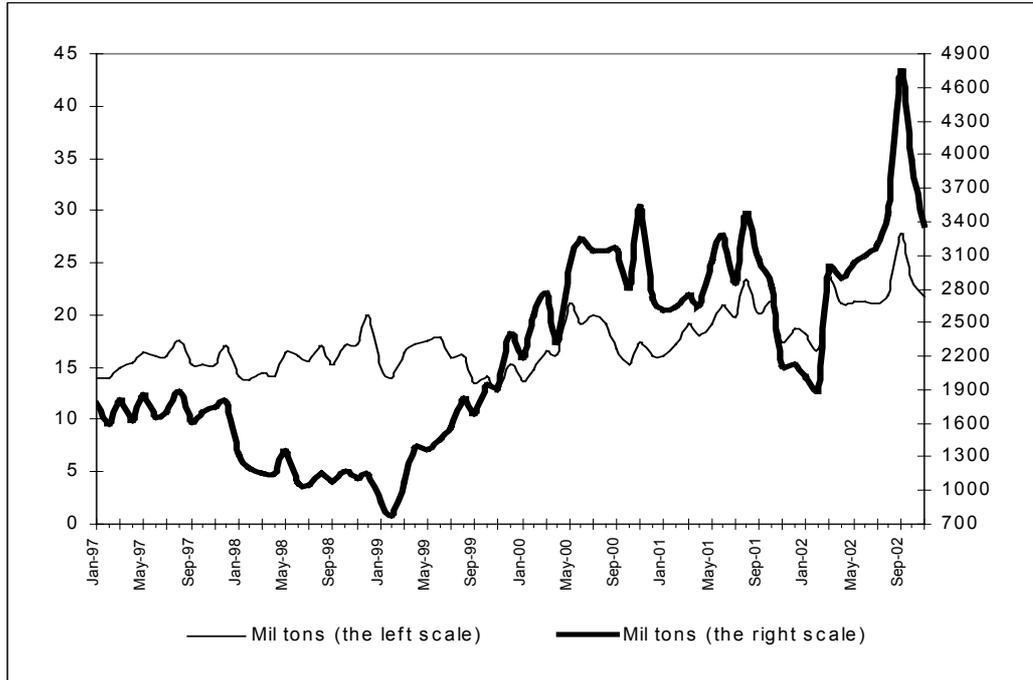
Source: The State Committee for Statistics of the Russian Federation, the Ministry of Power Industry, the State Customs Committee, the International Energy Agency and our own calculations.

Fig. 7. Production consumption and export of natural gas in the 1990-2002 period, billion cubic meters.



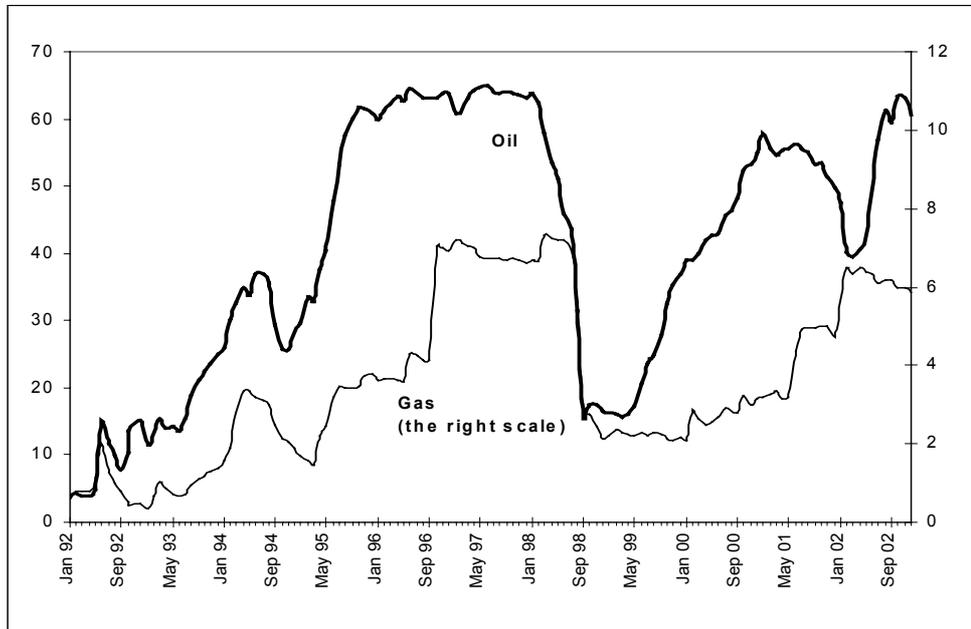
Source: Calculated using data of the State Committee for Statistics of the Russian Federation.

Fig. 8. Average export prices of oil and diesel oil in the 1996-2002 period, USD/tons



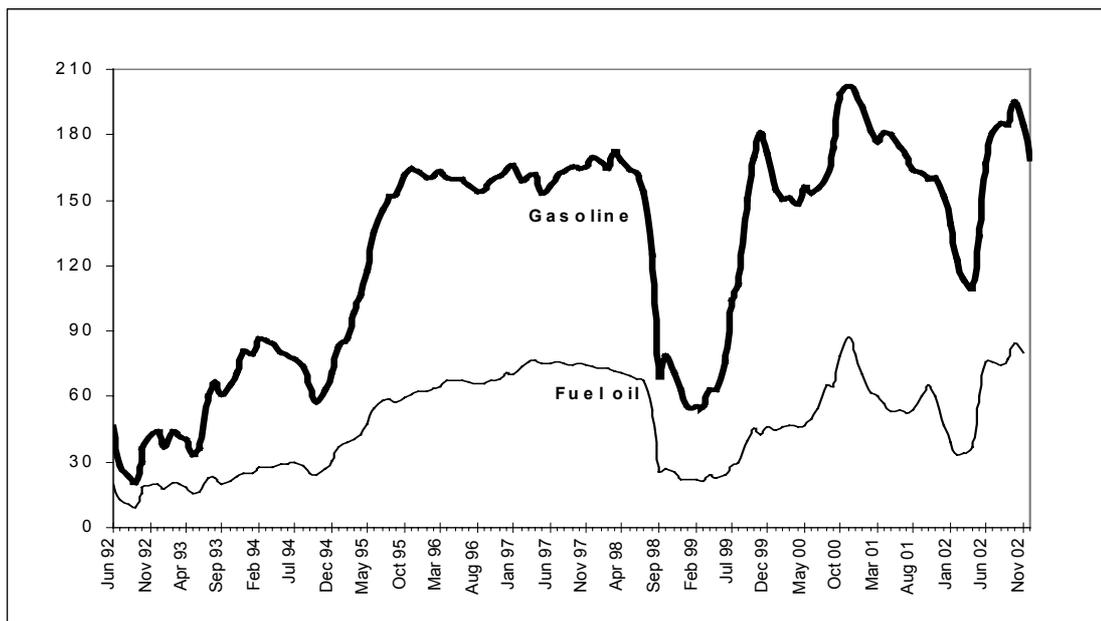
Source: Calculated using data of the State Committee for Statistics of the Russian Federation.

Fig. 9. Export of oil and petroleum products in the 1997-2002 period, physical and in value terms (mil tons, mil USD)



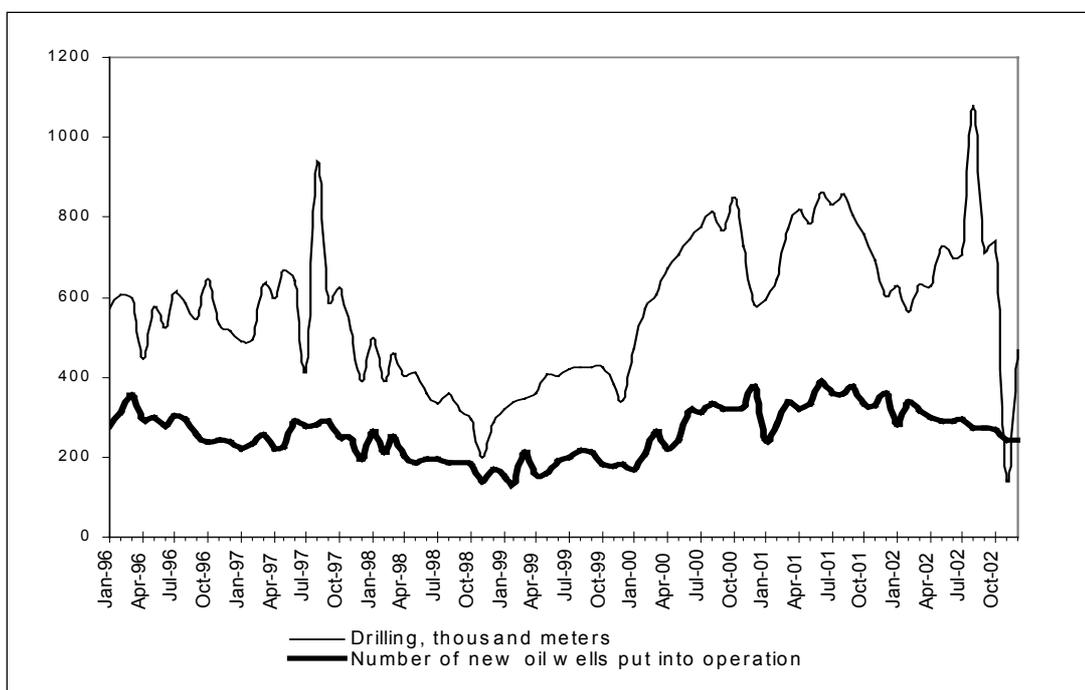
Source: Calculated using data of the State Committee for Statistics of the Russian Federation.

Fig. 10. Industries' average wholesale prices on oil and gas (USD equivalent) in the 1992-2002 period, USD per tons, USD per thousand cubic meters



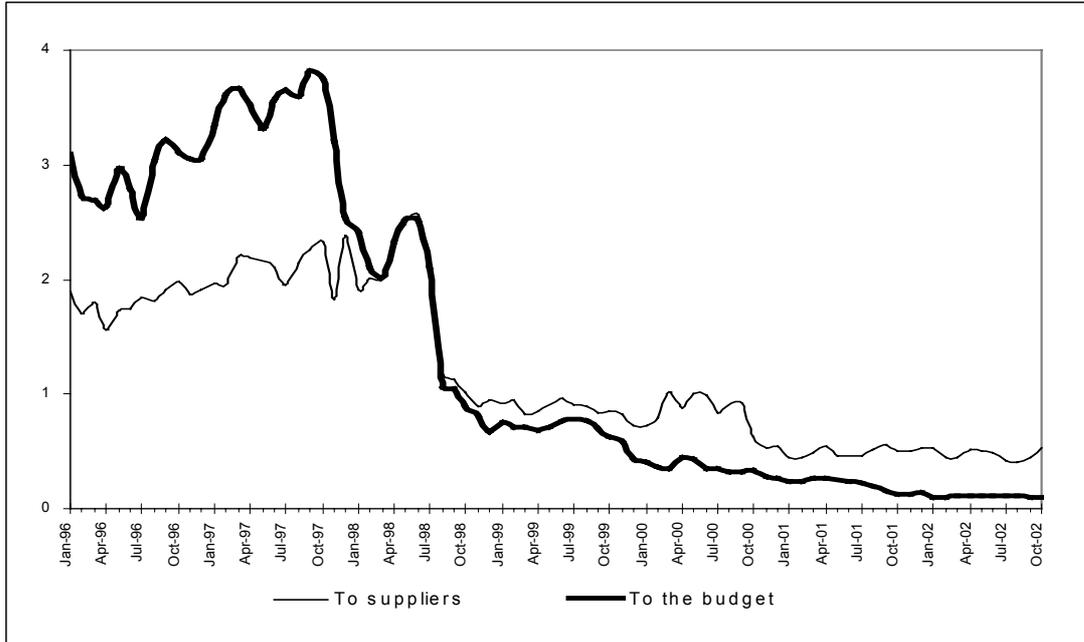
Source: Calculated using data of the State Committee for Statistics of the Russian Federation.

Fig. 11. Industries' average wholesale prices (the USD equivalent) on gasoline and fuel oil in the 1992-2002 period, USD per tons



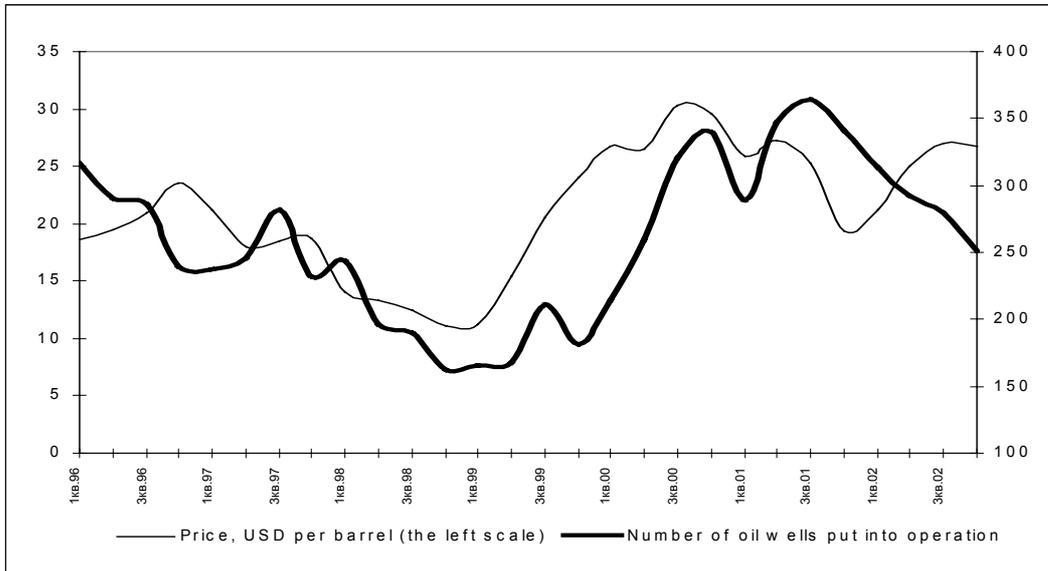
Source: the State Committee for Statistics of the Russian Federation.

Fig. 12. Production drilling and numbers of oil wells put into operation in the 1996-2002 period



Source: Calculated using data of the State Committee for Statistics of the Russian Federation.

Fig. 13. Oil industry's arrears to suppliers and to budgets of all levels in the 1996-2002 period, billion USD.



Source: the State Committee for Statistics of the Russian Federation and the International Monetary Fund.

Fig. 14. International prices on oil and number of new oil wells put into operation in the 1996-2002 period.

3.1.2. Use of the GDP: Dynamics and Structure

Analysis of the economic situation in Russia reveals that the share of ultimate consumption in the GDP was largely influenced by growth in income. In the 2000-2002 period, one of the specific features of development of the Russian national economy consisted in domestic demand growing faster than foreign demand. In 2002, the share of domestic demand in the GDP increased to 90.0 percent, as against 87.1 percent and 79.9 percent in 2001 and 2000, respectively.

Table 13

**Structure of use of the Gross Domestic Product in the 2000-2002 period,
breakdown by the quarter, % of the total**

| | 2000 | | | | 2001 | | | | 2002 | | | |
|-------------------------------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| | quarters | | | | | | | | | | | |
| | I | II | III | IV | I | II | III | IV | I | II | III | IV* |
| Used GDP | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Expenses on ultimate consumption | 63.6 | 60.8 | 56.0 | 66.3 | 64.8 | 66.8 | 60.1 | 69.0 | 69.8 | 70.6 | 71.0 | 69.2 |
| Households | 48.2 | 44.7 | 42.3 | 47.3 | 51.2 | 49.6 | 46.2 | 51.9 | 54.8 | 51.4 | 54.0 | 50.9 |
| Public institutions | 13.2 | 15.0 | 12.7 | 17.7 | 12.6 | 15.9 | 12.8 | 15.7 | 13.7 | 17.7 | 15.8 | 16.8 |
| Gross accumulation | 12.2 | 17.8 | 25.4 | 17.2 | 16.9 | 19.0 | 28.5 | 21.8 | 19.4 | 18.4 | 18.9 | 20.8 |
| Gross accumulation of fixed capital | 10.6 | 13.8 | 16.3 | 20.2 | 12.9 | 16.2 | 17.2 | 23.0 | 13.2 | 16.0 | 14.7 | 21.6 |
| Net export | 25.5 | 21.4 | 18.6 | 16.5 | 18.3 | 14.2 | 11.4 | 9.2 | 10.8 | 11.0 | 10.1 | 10.0 |

* Preliminary data.

Source: The Ministry of Economic Development of the Russian Federation, the State Committee for Statistics of the Russian Federation.

With expansion of business activity in Russia's national economy, growth in investment demand brought about nearly a 20 percent increase in the physical volume of the GDP. However, with shift in redistribution of GDP resources towards the investment component and the rest of the world in the 1999-2000 period, reduction in the share of expenses on ultimate consumption of material wealth and services was observed. The existing level of effective demand on the consumer market limited further growth in output of foods and volumes of services. As a result, the share of aggregate expenses on ultimate consumption in the GDP decreased by 6.9 points in 2000. In that situation, the government's policy aimed at raising wages and pensions had a favorable effect on economic development. In 2001, with a stable growth in wages and pensions, households' real income grew by 5.8 percent. The share of expenses on ultimate consumption increased by 3.8 percent on the 2000 figure; it is to be noted that such an increase was initiated by a faster than the average growth in households' expenses.

In 2002, shift in proportions of use of the GDP took place in a situation where consumer demand was growing faster than demand in investment. Growth in consumer demand can be regarded as a factor compensating for slowdown of growth in investment demand. Expansion of retail trade turnover and growth in output of domestic consumer goods point clearly to a positive change in households' living standard. In 2002, growth in households' expenses on ultimate consumption was estimated at the level of 8.5 percent. Retail trade turnover increased by 9.1 percent on the 2001 figure. Unlike 2001, the volume of foods purchased by households grew faster than that of non-foods. In 2002, turnover of retail trade in foods increased by 9.7 percent and that in non-foods, by 8.5 percent, as against 7.2 percent and 12.7

percent in 2001, respectively. Change in consumer behavior can be explained by change in proportions of prices of the principal commodity groups. In 2002, consumer prices increased by 15.1 percent, as against 18.6 percent in 2001. From the beginning of 2002, prices on foods grew at a higher rate than those on non-foods.

With the existing level of households' income, change in proportions of prices of commodity groups ceased formation of pent-up demand in durables and, as a result, the existing level and dynamics of households' savings were preserved. In the 2000-2002 period, the share of consumer expenses in the volume of households' cash expenses decreased; in 2002, it amounted to 72.8 percent, as against 74.4 percent in 2001 and 78.4 percent in 1999. At the same time, the share of savings in the total volume of households' cash expenses increased by 2.0 points in the past two years and amounted to 16 percent in 2002. The volume of individuals' savings in rubles and foreign currency deposited with credit institutions increased by 38.8 percent and 26.2 percent, respectively. It is to be noted that such a growth in the volume of savings takes place in a situation where ever greater differentiation of households by the level of their income is observed and concentration of income with the high-income population group. At the same time, it needs to be pointed out that in the past few years reduction in the number of households with income below the subsistence level has been observed. In 2002, persons with income below the subsistence wage level numbered 35.8 million (25.0 percent of the total population), as against 39.4 million (27.3 percent) in 2001 and 41.9 million (28 percent) in 2000.

Reproduction conditions which took shape by the end of 2001 had a decisive effect on the dynamics of economic growth in the first half of 2002. In the 1st quarter of 2002, the volume of investment in fixed capital was less than 50 percent of the volume of such investment in the 4th quarter of 2001. According to preliminary data, in 2002 the volume of investment in fixed capital increased by 2.6 percent, while households' ultimate consumption, by 6.9 percent.

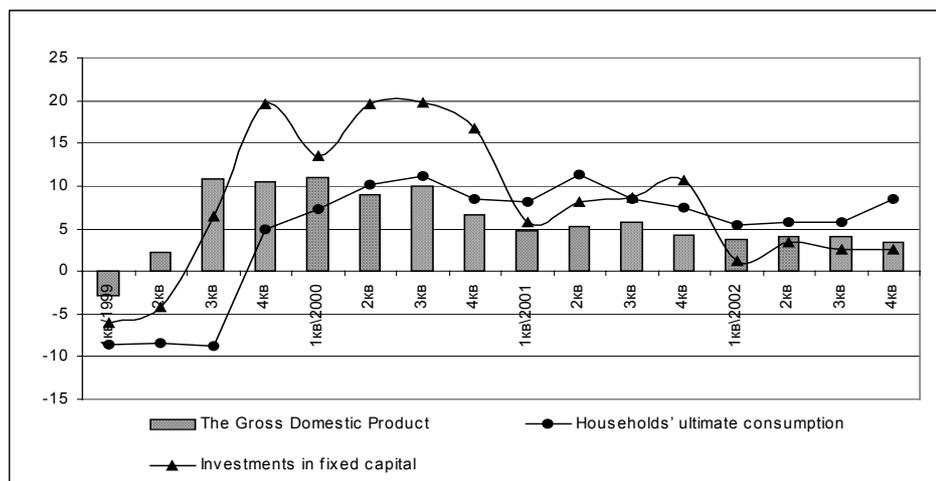


Fig. 15. Change in dynamics of use of the GDP, breakdown by the component in the 1999-2002 period, % of the level of the corresponding quarter in the previous year.

Change in dynamics and structure of formation of the GDP in relation to income in the 2001-2002 period was caused by the fact that wages grew faster than labor productivity and profitability of production decreased due to change in domestic price proportions.

Undoubtedly, in 2001 amendment of tax legislation and de-bureaucratization had a positive effect on the rates of economic growth. However, one can hardly expect large-scale institutional reforms to pay off soon in terms of higher efficiency in utilization of resources. This is illustrated, in particular, by the widening gap between the rates of growth in wages and those in labor productivity. In 2002, there was particularly no growth in labor productivity. Whereas in the 2000-2001 period, the above gap could be explained by 'legitimization' of wages and salaries, in 2002 it was largely caused by shortage of skilled workers at industries. That factor is likely to have an ever more important role to play in the near future and the issue of raising of labor productivity will be of great importance.

In 2002, the share of hired workers' wages and salaries increased by 2.0 points on the figure of the corresponding period in 2001 and its share in the GDP amounted to 47.1 percent. Extensive growth in the level of wages and salaries which account for over 80 percent of households' cash income has had a favorable effect on the sociopolitical situation. Such a growth in the share of wages and salaries in the volume of households' cash income was a result of growth of the proportion of workers' pay in the real sector of the economy. In 2002, the share of social transfers amounted to 14.9 percent, increasing by 1.7 points on the 1999 figure. At the same time, general growth in income was hindered by a relative decrease in the rates of growth in income from private enterprise. With growth in the volume of income from private enterprise observed in absolute terms, by the beginning of 2002 its share in the total volume of cash income decreased by 0.3 points on the 1999 figure and amounted to 12.1 percent.

With expansion of production and growth in demand in labor, the situation on the labor market is improving; workers can be confident that they can get a job. The above growth in demand in labor was initiated by creation of a large number of jobs in the services sector.

In 1999, growth in the number of workers employed in the national economy amounted to 0.2 million, while in the 2000-2002 period, to 0.4 million. The number of unemployed (calculated using ILO methods) fell to 5.7 million (8.0 percent of the able-bodied population), as against 7.5 million on the average in 2000 (10.5 percent) and 9.3 million on the average in 1999 (13.0 percent).

Reduction in the number of registered unemployed from 1.3 million in 1999 to 1.1 million in 2001 can be explained by growth in demand in labor force. In 2002, the number of registered unemployed grew to 1,3 million, which growth was related to an increase in the amount of the minimum unemployment benefit calculated on the basis of the subsistence wage and official registration of a certain number of formerly unregistered unemployed persons seeking entitlement to the increased unemployment benefit. In addition to that, the number of registered unemployed is growing because only registered unemployed persons are entitled to specific social aid, such as subsidization of housing rents and utilities rates and also because enterprises get rid of redundant labor force (workers working reduced hours or being on unpaid leaves).

Table 14

**Formation of the gross domestic product, breakdown
by the source of income, % of the total**

| | 2001 | | | | 2002 | | | |
|--|----------|----|-----|----|----------|----|-----|----|
| | Quarters | | | | Quarters | | | |
| | I | II | III | IV | I | II | III | IV |
| | | | | | | | | |



| | | | | | | | | |
|---|------|------|------|------|------|------|------|------|
| Total GDP, | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| including: | | | | | | | | |
| Hired workers' pay (including hidden pay) | 44.1 | 45.5 | 42.4 | 47.9 | 46.4 | 47.1 | 47.0 | 48,9 |
| Net taxes on production and import | 13.7 | 17.4 | 13.7 | 16.8 | 12.9 | 15.2 | 14.9 | 16,8 |
| Gross profit of the economy and gross income from mixed sources | 42.2 | 37.1 | 43.9 | 35.3 | 40.7 | 37.7 | 38.1 | 34,3 |

Source: The State Committee for Statistics of the Russian Federation and the Ministry of Economic Development of the Russian Federation.

At the same time, the widening gap between the level of wages and the level of labor productivity caused growth in production costs and reduction in the rate of profitability. Reduction in the profit rate was also caused by growth in the volume of material expenditure due to an increase in wholesale prices and tariffs on consumable material resources, in a situation where growth in industrial producers' prices was less dramatic. In addition to that, the profit rate was affected by the situation on international markets, which was rather unfavorable for certain Russian exporters. As a result, the share of gross profit and gross income from mixed sources in the GDP decreased by nearly 2 points on the 2001 figure.

In a situation where the rates of development of infrastructure branches are faster than dynamics of production output, the share of the industrial sector in the total volume of profit of branches of the economy fell to 40 percent, as against 54.6 percent in 2001. Dynamics of formation of gross profit in the industrial sector were characterized by continued growth in the share of branches of the fuel and energy complex and primary industries at the expense of manufacturing industries. According to calculations, the share of extractive industries and primary processing of raw materials accounted for two-thirds of the total volume of profit in the industrial sector.

As the situation on international markets improved, starting from the beginning of 2002 the rate of decrease in balance profit slowed down with each new quarter, as compared to the figures of the corresponding periods in the previous year. In 2002, the share of gross profit in the GDP fell from 40.7 percent in the 1st quarter to 37.7 percent in the 2nd quarter and 34.3 percent in the 4th quarter, while the profit rate in the industrial sector went down from 18.0 percent in 2000 and 14.7 percent in 2001 to 8.9 percent in January-September 2002.

With profitability of production and export going down, in 2002 the share of gross savings and accumulations in the GDP tended to decrease again. In 2002, the share of savings in the GDP amounted to around 32 percent, as against 34.9 percent in 2001, while the share of gross accumulations in capital assets in the GDP stabilized at the 2001 level. In 2002, with the existing level of income all obligations in respect of financing of budget expenditure and servicing of the public debt were met in a timely manner.

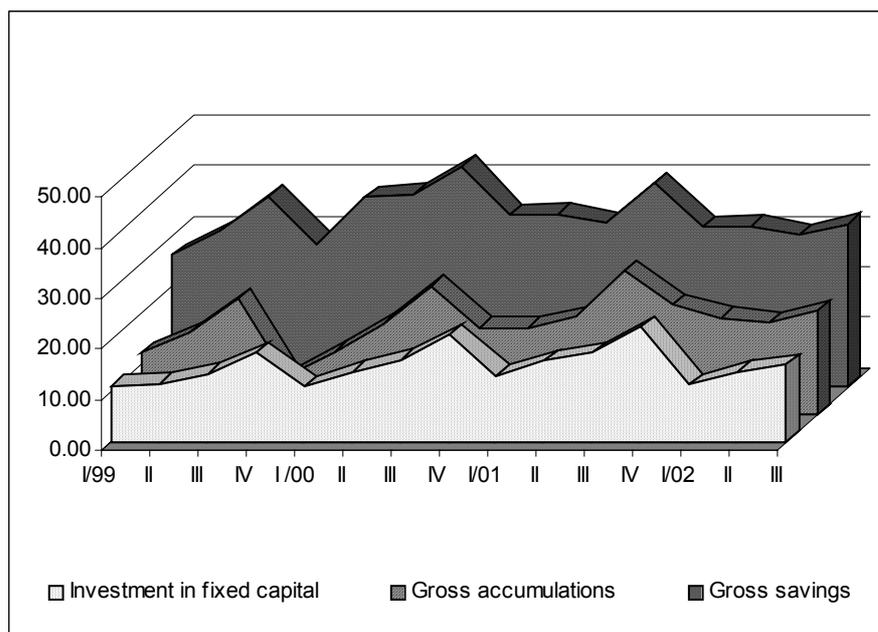


Fig. 16. Shares of gross savings, gross accumulations and investment in fixed capital in the GDP in the 1999-2002 period, % of the level of the corresponding quarter

Investment in fixed capital ceased to have a dominating effect on the rates of economic growth. Though positive dynamics of growth in investment were preserved, with the obtaining technological, reproduction and age structure of fixed capital such investment was insufficient for implementation of an active industrial policy. Considering high concentration of capital in the export-oriented sector and lack of mechanisms of inter-sectorial capital mobility, one can hardly expect radical changes in reproduction of fixed capital. The investment situation is complicated by the fact that apart from needing large-scale investment the economy is also in need of a clear strategy in attraction of investment resources. In conditions of a slowdown of the rates of growth in income, enterprises reproduce the existing proportions.

Taking into account the fact that investment activity was low in the past, the amount of investment in fixed capital in the past three years was insufficient for the required modernization of production facilities, which adversely affected economic efficiency. The much-needed investment maneuver in favor of high value added branches (branches that would be able to contribute to higher competitive ability of the Russian national economy) was not carried out.

With high volumes of savings accumulated in the economy, the issue of transformation of accumulated resources into investments has become even more topical. Due to slow pace of restructuring of the financial sector, banks do not lend much to real-sector industries. Industries' own funds remain the principal source of investment, since mechanisms of inter-sectorial capital mobility and accumulation of gross savings for development of competitive segments of the economy do not work. In conditions of economic growth, it has become clear that investment management is not properly adopted to dynamic restructuring processes in Russia's national economy. However, it is to be noted that sociopolitical stability in Russia had a positive effect on the investment climate, which became more attractive to Russian and foreign private investors.



Growing appeal to foreign investors of Russia's vast and promising market has facilitated Russia's effort to build an open market-oriented economy and integrate it into the international economy. In the 2001-2002 period, foreign investment grew at a higher rate than domestic investment into fixed capital. Foreign investors expanded their presence on the Russian market. However, the volume of direct investment in Russia was modest. As regards the volume of direct investments accumulated in the 1993-2002 period, Russia ranks 21st among the 25 countries of Central and Eastern Europe.

In 2002, new factors stimulating reduction in net flight of capital emerged. Growth in inflow of foreign capital (mostly in form of credits and loans) was also observed. According to the data of the State Committee for Statistics, in January-November 2002 the total volume of foreign investment amounted to 12.9 billion USD, which was an increase of 3.2 mil USD on the figure of the corresponding period in 2001.

Reduction in the rate of flight of capital was another factor stimulating demand in investment on the domestic market. It is important to estimate the volume of flight of capital from Russia as an alternative source of investment in the domestic economy. According to the Central Bank of the Russian Federation, in 2001 the flight of capital from Russia amounted to around 16.2 billion USD, decreasing by 7.4 billion USD on the 2000 figure. In relation to the foreign trade turnover, the net flight of capital decreased from 16.2 percent in 2000 to 10.9 percent in 2001, while in relation to the GDP, from 10.2 percent to 4.5 percent, respectively. In 2002, that trend persisted. According to calculations, in 2002 the flight of capital went down to 11.7 billion USD, which roughly amounted to 3.3 percent of the GDP.

Raising of the sovereign credit rating and/or revision of the forecast by prominent rating agencies contributed to development of that trend. Consistent amendment of the investment legislation, formation of financial institutions and development of the stock market also had a positive effect on it.

Cumulative effect of external factors grows with formation of an open market-oriented economy. It is to be noted that the past four years saw change in proportions between internal and external factors, which change had an effect on growth in output. In 1999, imports were nearly halved, which created favorable opportunities for expansion of domestic production. Growth in prices on energy resources and ferrous metals on international markets was a major factor contributing to growth in production in 2000. Growth in export revenues had a considerable effect on the structure and dynamics of ultimate demand. Starting from 2001, rates of growth in the physical volume of imports were faster than those of exports and the GDP.

Analysis of external and internal factors and conditions of economic development in 2002 reveals that the favorable situation observed on the international markets of fuel and primary goods was one of the factors which accelerated growth. Starting from the 2nd quarter of 2002, dynamics of exports became positive again and simultaneous growth in internal and external demand was observed, which was a key factor behind acceleration of rates of growth in the GDP and the industrial sector as a whole in the second half of 2002. Acceleration of rates of growth in the industrial sector was initiated both by growth in output of export-oriented branches and maintenance of high rates of growth in branches of the consumer complex, which is oriented mainly towards the domestic market.

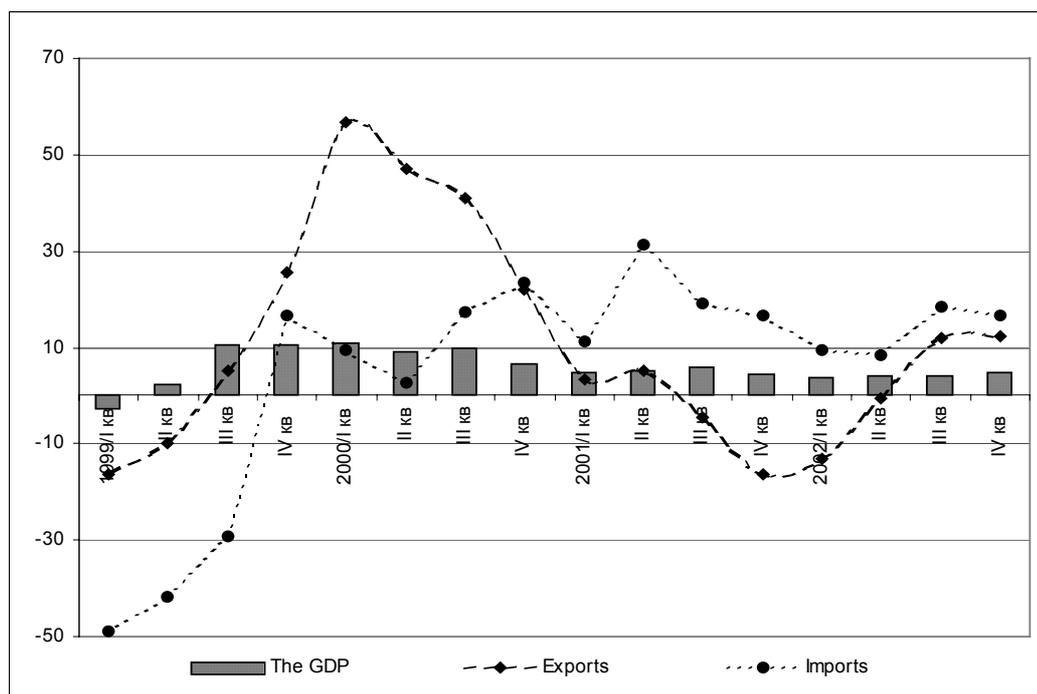


Fig. 17. Change in dynamics of the GDP, exports and imports in the 1999-2002 period, % of the level of the corresponding quarter of the previous year

Analysis of development of the trade sector suggests that Russian-made goods did not win any new niches, either on domestic, or on international markets. Expansion of the domestic demand in the past few years which was initiated by export-oriented branches of the economy, was based on the inertial growth in output of a rather limited segment of branches producing construction materials and investment products. Branches oriented towards the domestic market failed to receive sufficient investment support and lost much of their competitive abilities at the change in the exchange rate.

One of the reasons behind low competitiveness of domestic produce was that economic growth was primarily oriented towards higher utilization and involvement in production of reserve production capacities. Lack of radical change in commissioning of new production facilities prevented purposeful implementation of a policy aimed at import substitution and diversification of export flows. The share of imports in the volume of commodity supply on the consumer market and the market of material and technical produce tended to grow. In addition to that, strengthening of the ruble also contributed to the growth in imports.

Growth in competing imports had a considerable effect on dynamics of branches oriented towards the domestic market. Extensive expansion of imports had a particularly strong effect on dynamics of the investment complex and output in light industry. According to estimates, the share of imports in the volume of non-food commodity supply has increased by 3.3 points since the beginning of the year. It is to be noted that while in foods retail trade turnover imports are mostly non-competing, in non-foods turnover imports have been ousting domestically produced goods. The share of imported machinery and equipment in the volume of investment supply has also been growing since 2001. Further development of those trends would make expansion of domestic production of consumer and capital goods rather compli-



cated. In that situation, decision on reduction in import duties on certain types of technological equipment was a important factor stimulating modernization of production and higher competitive abilities of Russian-made goods.

3.2. Situation in the Industrial Sector¹

3.2.1. Dynamics of the Principal Types of Demand in Industrial Products in 2002

Late in 2001, Russian industries encountered the most serious and long-lasting sales problems ever. After three months (August through October) of stable and relatively high growth of sales for cash, a sharp nosedive of effective demand was observed with the low registered in January 2002. The rate of sales for cash stopped to grow in November (the balance was +2 percent, as against +11 percent in October). In December, surveys revealed a sharp drop in sales (balance of -10 percent), for the first time for that month since the default. In January 2002, the balance of estimations of change in monetary demand went down to -20 percent. Such a sharp nosedive in sales had not been observed since the beginning of post-default growth in effective demand, nor was one like it ever registered since that time up till the time of preparation of the present paper. The volumes of sales of industrial produce for cash kept going down throughout the first six months of the Year 2002, with only the slant of the curve varying. In February, the average industrial sector balance grew by nine points, in March-April, by another eight points. As a result, the demand nearly stopped dropping by the beginning of the second quarter. However, the May holidays pushed the sales down again; the balance dropped to -15 percent. June did not see any significant change in the dynamics of demand. It was only in July that surveys revealed a growth of sales for cash (see *Fig. 18*).

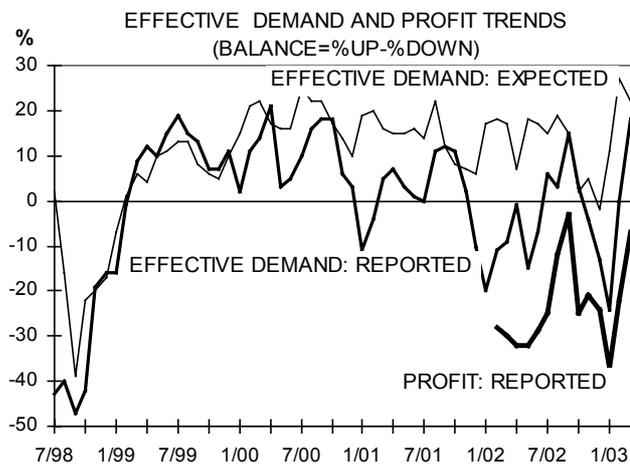


Fig. 18

¹ The present section has been prepared on the basis of polls of industrial enterprises' CEOs. Such surveys have been carried out by the IET on a monthly basis since September 1992 throughout the territory of the Russian Federation. The panel comprises 1,400 enterprises, which account for over 20 percent of those employed in the industrial sector. The panel has been shifted towards major enterprises in each of the 61 sub-branches identified. Return of questionnaires, around 70 percent.

The above situation was observed in every branch of industry but production of building materials. Only with food industry and power generation drop in sales continued at the beginning of the second six months of the year. By September, the rate of growth in effective demand went up by several more points to reach the same level as had been observed in the autumn of 2001 when the two-year high in the growth of that parameter was registered. So, the third quarter was the most favorable period for Russia's industrial sector in the Year 2002. By September, growth of sales for money was resumed in every branch but light industry. The drop in sales for cash, which was observed in building industry, was due to the nearing end of the building season. In October, the growth in sales of industrial products for cash ceased. The balance of estimations (growth-reduction) immediately dropped by 11 points, but it remained positive; the growth in effective demand continued. Negative balances (absolute drop in sales) were observed in October in iron-and-steel industry, engineering industry and building industry. So, the sales growth in September was the high of the past 24 months (+15 percent, after 3 percent in August). The slowdown of the growth in sales did not cause any concern with industries, though. Moreover, while in August-September 38 percent of respondents referred effective demand as 'normal', later that figure grew to make 43 percent. The highest values of that parameter were observed with nonferrous industry (86 percent), power generation (74 percent) and timber industry (69 percent).

In November 2002, just like in November 2001, growth in effective demand came to a halt. In December, the rate of drop in sales grew from -4 percent to -15 percent (according to the balance), exceeding the December 2001 figure (-10 percent). According to IET surveys, the fastest drop in sales in the 1999-2002 period was observed in January 2002 (-20 percent). At the close of 2002, growth in effective demand was only observed in power generation and food industry. The negative trends in sales dynamics finally brought about a change in estimation by industries of the volume of sales. The proportion of respondents seeing the volume of sales as 'normal' dropped in December by six points amounting on average in the industrial sector to 32 percent, which was the low of the closing six months of the Year 2002.

The sharp drop in sales for cash (which was also the most prolonged one in the post-default period) resulted in change in the dynamics of non-monetary forms of demand and enterprises' attitude to such forms of demand. While in 2001 industries preferred to reduce volumes of non-monetary deals, in 2002 polls revealed absolute growth in volumes of bill and setoff operations. In 2002, the most acute and prolonged lack of barter, bills and setoffs was also observed.

The rate of reduction of volumes of all forms of non-monetary deals started to go down at the beginning of the Year 2002. In the first four months, the balance in respect of change in the volumes of barter deals grew from -20 percent to -9 percent. In the next four months, the rate of decline in the use of barter remained practically unchanged. However, in August, that parameter grew to make -7 percent. Such a slow decline in volumes of barter deals had not been observed since the April of 1999 when the post-default growth of effective demand and production began. By the end of the year, the rate of decline in the volume of barter grew by several points, yet, it remained among the more moderate since 1999. (See *Fig. 19*.) In the January of 2003, the traditional seasonal drop in all kinds of demand was observed which brought the balance of barter fluctuations down to -15 percent. Responses revealing a reduction in the volume of barter deals prevailed in all the branches of industry, especially in the building industry, chemical industry, petrochemical industry and engineering industry.



The dynamic of realization of produce for bills and on the basis of setoffs in the first six months of the year was similar to the above. At first, the rate of reduction dropped from -9 percent to -2 percent, then, in June, polls revealed absolute growth in volumes of such deals with Russia's industrial sector. That happened for the first time since monitoring was started in February 2000. It is to be noted that the scope of sales for bills and on the basis of setoffs came to exceed all the other types of demand, including normal, cash demand. After that, growth in volumes of cash sales was observed, which permitted industries to resume their former policy of reduction of volumes of non-monetary deals. The balance became negative again and remained such till the end of the year. For the first time in 2002, according IET surveys, the balance of forecasts in respect of dynamics of the volumes of bill and setoff deals remained positive for a comparatively long time. Just for four months out of twelve Russian industrial enterprises did not plan any increases in the volumes of bill and setoff deals. The greatest hopes for growth in volumes of such operations were in May and June of 2002.

Estimation by enterprises of those three kinds of demand as above normal/normal/below normal also revealed serious sales problems encountered by the Russian industrial sector. Firstly, after October 2001 (when polls revealed the best balances of effective demand since the end of 1993) that parameter went down by 16 to 18 points. It was only by September 2002 that the growth in sales made estimations of the volumes of effective demand more optimistic. The share of 'normal' responses grew to 39 percent, which was the 11-month high. The slowing down in October of growth in effective demand did not cause much concern with industrial enterprises. Moreover, the share of estimation of effective demand as 'normal' grew to make 43 percent. The highest values of that parameter were observed in nonferrous industry (86 percent), power generation (74 percent) and timber industry (69 percent). It was only the drop in the volumes of sales observed in December that changed enterprises' estimations of such volumes. In December, the share of 'normal' estimations went down by six points, to 32 percent (industrial sector average), which was the low of the closing six months of the Year 2002. The lowest values of that parameter were observed in engineering industry (22 percent), chemical industry and petrochemical industry (26 percent).

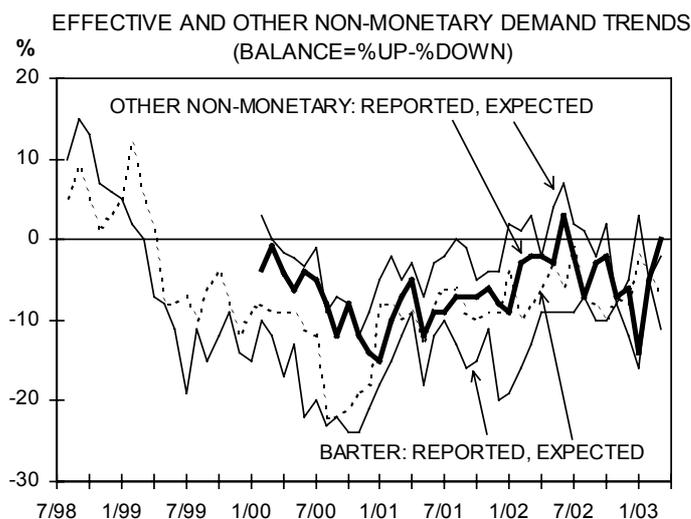


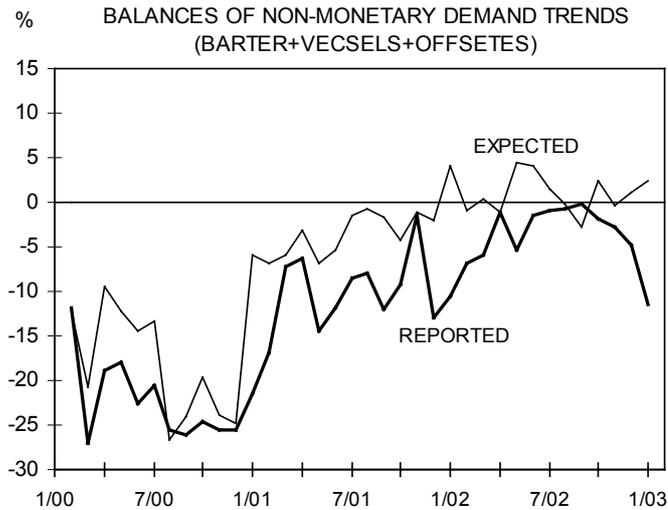
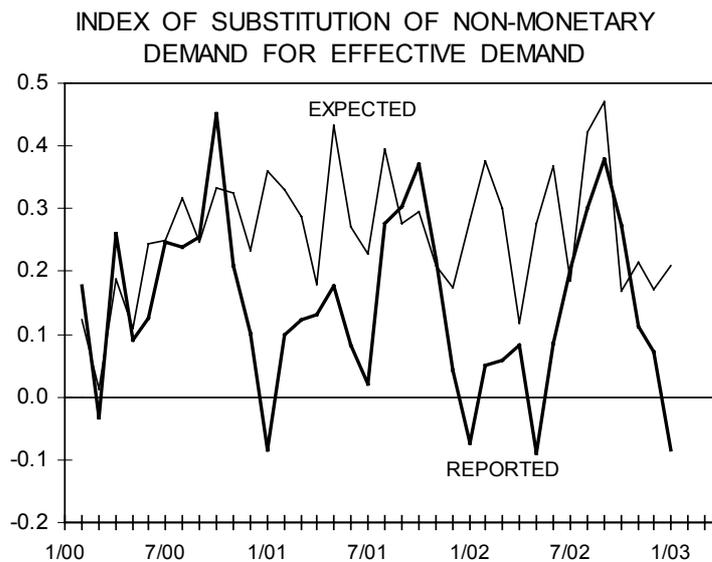
Fig. 19

The Year 2002 saw the acutest and most prolonged lack of non-monetary deals. For three quarters of the year, most of the enterprises in the Russian industrial sector believed that their volumes of barter, bill and setoff deals were 'below normal'. The absolute minimum of such estimations for barter deals was observed in the second quarter (-7 percent), while for bill and setoff deals, in the third quarter (-8 percent). It is to be noted that in the fourth quarter the balance of estimations of non-monetary deals grew from -4 percent to -2 percent for barter and from -8 percent to -3 percent for bill and setoff deals. At the end of the year, the prevalent belief in Russia's industrial sector was that the volume of such deals was insufficient, but during the quarter that insufficiency was reduced by two points and five points, respectively. However, early in 2003 it reached an all-time high. The balance of estimations of barter deals (above normal/below normal) went down to -8 percent, while of bill and setoff deals, to -10 percent. In other words, the highest ever proportion of Russian industries believed that the volumes of their non-monetary deals were insufficient. The greatest insufficiency of such volumes was observed in building industry, metallurgical industry, chemical industry and petrochemical industry.

Dynamics of all non-monetary operations in realization of produce can be assessed with the use of matrices of conjugation of issues of the dynamics of barter deals and the dynamics of bill and setoff deals.² According to estimates, the rates of decline in the volumes of non-monetary deals in 2002 were among the more moderate in the past three-year period. (See Fig. 3.) It is to be noted that the beginning of the year was quite promising for enterprises. The sales and production boom that occurred in the autumn of 2001 permitted enterprises to considerably reduce the volumes of barter, bill and setoff deals. In December 2001, the aggregate balance of non-monetary demand amounted to -13 percent. However, after that the rate of reduction of the volumes of such deals started slowing down continuously. In September, the balance amounted to -0.5 percent. That was the lowest rate of reduction in the volumes of non-monetary deals in the 2001-2002 period. Moreover, in 2002, balances of forecasts in respect of aggregate non-monetary demand of Russian enterprises became positive for the first time. The overall statistic was that Russian industrial enterprises only planned reduction of volumes of non-monetary deals at realization of their produce in four months out of twelve in 2002. By the end of the Year 2002, the volumes of total non-monetary demand started to decline (in line with the general decline in volumes of sales). The balance in January 2003 (-11.4 percent) was similar to the balance which had been observed in January 2002 (-10.6 percent).

The outputs of surveys permit assessment of interrelation between the two types of demand in industrial products, effective demand and non-monetary demand. For that purpose, a matrix needs to be made of conjugation of actual (or forecasted) change in effective demand and such change in non-monetary demand. The substitution index (which may have values ranging between -1 and +1) is calculated as a ratio between the difference between the supra-diagonal and sub-diagonal elements and the sum of those elements. Positive values of that index indicate displacement of non-monetary demand by effective demand, while negative, the opposite process. The higher are the absolute values of that coefficient, the more extensive the displacement process (see *Fig. 21*).

² That method is described in greater detail in the "Situation in the Industrial Sector" section of the previous IET survey.

*Fig. 20**Fig. 21*

The dynamics of the substitution index show that on the whole Russian industries more often succeed in increasing sales for cash in conditions of reduction of the volumes of non-monetary deals. It is to be noted that each year (of the three affording full calculations) had one pronounced high and two lows. In 2002, the high was observed in September, which was one of the best months in respect of the rate of growth in effective demand. It was also in September that the highest substitution index was observed in forecasts. However, on two occasions negative values of that index were observed in the same year (in January and May). Seasonal drops in sales were so strong in those months that displacement of effective demand with non-monetary demand was, in fact, observed in the industrial sector. Between those two lows, the index had positive values, in spite of a drop in effective demand (the balances of

estimations in respect of the dynamics of effective demand were negative). That shows that a majority of industrial enterprises still increased sales for money and reduced volumes of non-monetary deals. They exceeded industries with the opposite tendency insignificantly, though (the values of the index were lower than any ever observed for the February-April period). After the May holidays, fast growth in the substitution index was observed. In four months, its value grew from -0.09 to +0.38 nearly equaling the all-time high (+0.45 in October 2000). The substitution index based on forecasts in respect of dynamics of the two types of demand never had a negative value. Industries never planned expansion of their non-monetary deals even when a drop in sales for money was expected.

Let us discuss specifics of sectoral substitution indices by the example of engineering industry and food industry (see Fig. 22). In engineering industry, the values of that index remained positive nearly all the time. This means that most of the time a decline in volumes of non-monetary deals accompanied by growth of cash deals rather than the opposite was observed there. In food industry, the opposite trend prevailed. There were more cases of drops in the volumes of sales for cash with simultaneous growth in volumes of non-monetary deals, especially in 2000 and the opening months of 2001. Only in 2002 the substitution index for the food industry sometimes had positive values comparable with those of engineering industry. And even then such occurrences were rare.

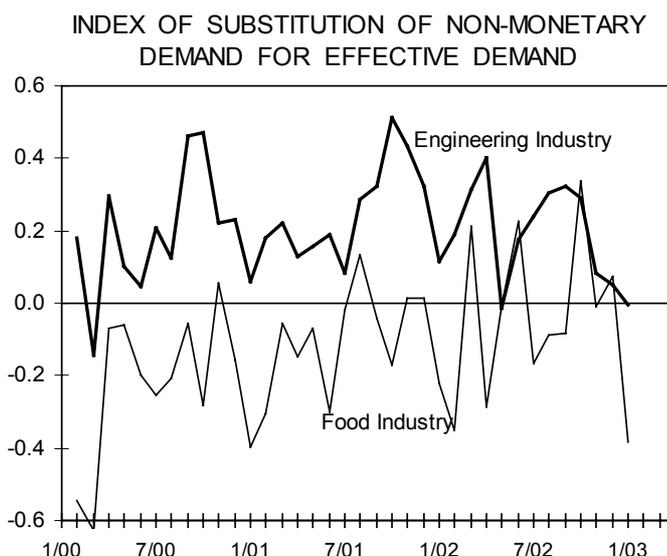


Fig. 22

Calculation of the aggregate sectoral substitution indices for the entire 2000-2002 period permits classification of branches of industry by the extent of displacement of non-monetary deals with sales for cash (see Fig. 23). The top line in that rating is occupied by power generation. Efforts by management of enterprises in that branch of industry have resulted in an increase in volumes of cash deals with simultaneous reduction of the volumes of such other types of settlements as were quite widespread in that branch a few years ago. It seems that similar success achieved by fuel industry and nonferrous industry can primarily be explained by their export orientation. The high values of that parameter with engineering industry are another matter: they signify a more important success of post-default growth and “debarterization” of Russia’s national economy. The branches which had positive values of the index could afford not only to increase sales for cash, but also to reduce volumes of non-

monetary deals without detriment to production. The situation in branches with negative values of the index was quite different. Enterprises in those branches had to resort to increases in volumes of barter, bill and setoff deals at the expense of cash deals. Particularly difficult in this respect was the situation of enterprises in light industry.

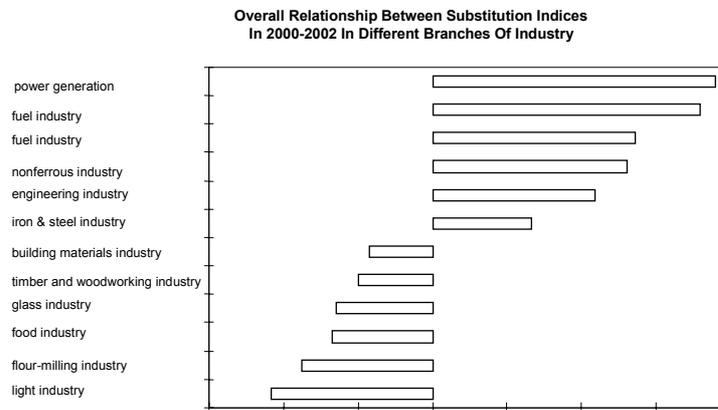


Fig. 23

Calculations of the substitution index for enterprises of different sizes revealed a pronounced pattern (see *Fig. 24*): the smaller the enterprise was, the more difficult it was for it to increase the share of cash deals at the expense of non-monetary settlements. Small enterprises have but insignificant financial and material resources, so they cannot afford to stockpile their produce while waiting till a buyer with money turns up. Another factor making small manufacturers consent to non-monetary deals is a high rate of competition. The situation of major enterprises is very different. Not only can they afford to stockpile finished products, but they also have a certain degree of monopoly, which permits them to “squeeze” cash out of the buyers.

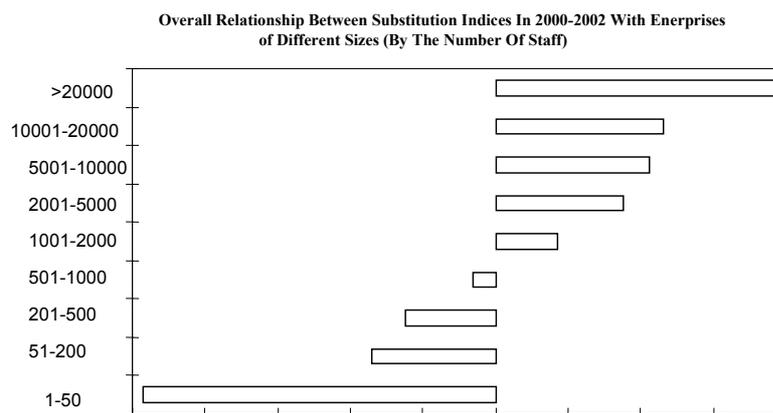


Fig. 24

The substitution index can be calculated on the basis of a matrix of conjugation of the actual change in effective demand and planned change in non-monetary demand. In such a

case, estimation is made of enterprises' readiness to use in future non-monetary deals for compensation for the current drop in cash sales or of enterprises' readiness to reduce the volumes of barter, bill and setoff deals in response to current rise in cash sales. The dynamic of that 'cross-index' is similar to the dynamic of the conventional index based on the actual change in demand. As the difference between the two indices consists in use of actual change in non-monetary demand in the latter case and use of expected change in non-monetary demand in the former case, it is to be concluded that formation of forecasts of change in non-monetary demand is of an extrapolation nature

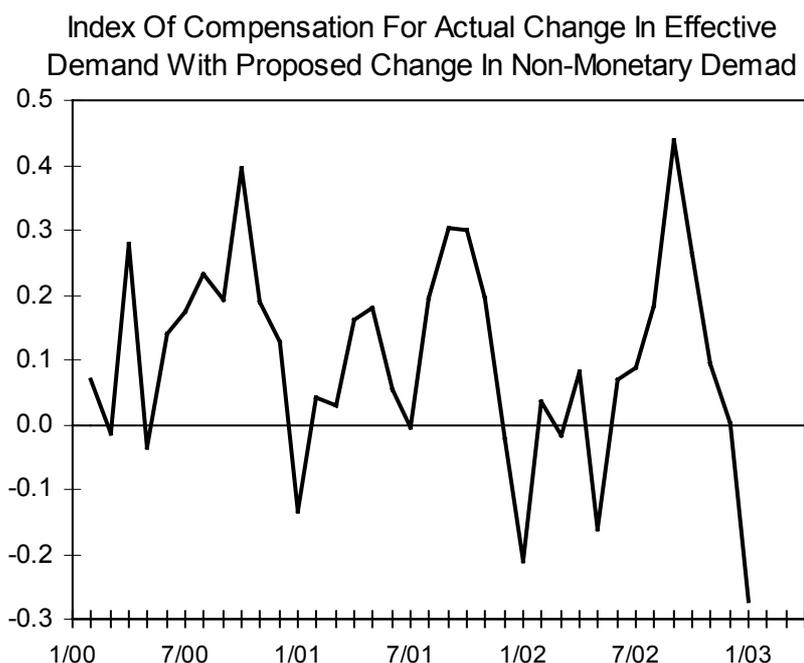


Fig. 25

For simpler characterization of enterprises' preparedness to use non-monetary settlements for compensation for drops in effective demand, the mere share of enterprises prepared to increase the volumes of non-monetary deals at actual drop in cash sales can be used. That share is also calculated with the use of a matrix of conjugation of the actual change in effective demand and the expected change in volumes of barter, bill and setoff deals. However, unlike the above-described substitution (compensation) index which uses both supra-diagonal and sub-diagonal sums, in this case only the sub-diagonal sum is used, or rather share of that sum in the totality of all the elements of the conjugation matrix. As we have at our disposal separate sets of data on barter deals on the one hand and bill and setoff deals on the other hand, and also forecasts in respect of the total non-monetary demand, the share of compensation forecasts for all the above types of demand can be calculated (see *Fig. 26*).

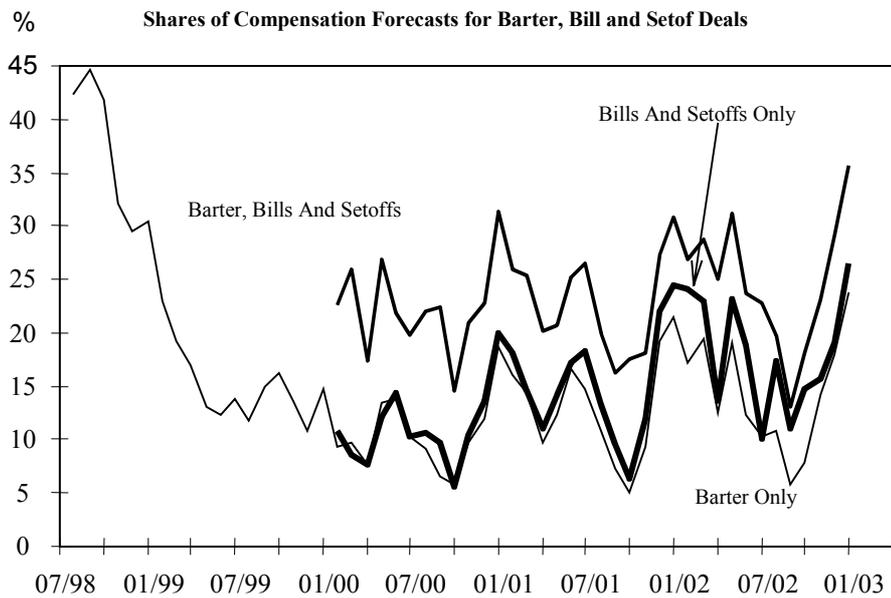


Fig. 26

The longest chain of observations in respect of barter (since August 1998) offers a wealth of material for analysis. As effective demand started growing after the 1998 default, the share of barter-related compensation forecasts started declining. By mid-1999 that index dropped from 45 percent to 12 percent, which can be explained by unprecedented change in the dynamics of effective demand. By October 2000, that index dropped to 6 percent, after which the compensation effect of barter forecasts started growing due to an absolute drop in sales for cash (the first one in the post-default period). In January 2001, 19 percent of enterprises planned to use barter for compensation for the drop in effective demand. In April, resumed growth in volumes of sales reduced the demand for barter deals to 10 percent, however, the seasonal recession in May pushed that index up to 17 percent. The absolute minimum was observed in October 2001. At that time, just five percent of enterprises proposed to use barter for compensation for reduction of the volumes of sales for cash. However, the subsequent prolonged slump in normal cash demand increased the need in barter to 22 percent. Such a high value of that index had not been observed since February 1999. The absolute decrease of demand which persisted throughout the first six months of the Year 2002, made enterprises keep the share of barter compensation forecasts high (over 10 percent). After that, a growth in demand was observed which reduced the barter-related expectations to 6 percent. The reduction in the rate of growth of cash sales at the end of the year, which was followed by an absolute decrease in the volume of cash sales, pushed that index up again. The high was observed in January 2003 when 24 percent of enterprises expressed readiness to use barter for compensation for the slump in cash sales.

The Year 2002 was different in that there was a divergence in compensation forecasts in respect of barter and compensation forecasts in respect of bill and setoff deals. In the previous years, Russian industrial enterprises rated all the types of non-monetary demand similarly. Starting from January 2002, “stratification” began. Enterprises preferred to use bill and setoff

deals as compensation for lack of sales for cash. The difference came to amount to seven percent, while in the previous years it was 3 to 3.5 percent at most.

3.2.2. Development of Competition in Russian Industry in the Post-Default Period

The issue of competition on Russian industrial enterprises' markets, as well as its effect on domestic manufacturers is still in the focus of attention of analysts, government officials and the general public. In 2002, debates on that issue entered a new phase as calls for protection of domestic manufacturers sounded again (for the first time since the 1998 default) following publication of customs statistic, according to which the volumes of imports reached the 1998 level in 2002. However, there are two factors that make one question such depressing estimations. Firstly, the customs statistics is probably one of the most unreliable sources of economic information in modern Russia. Secondly, in 2002 the dynamics of demand and output, as well as monetary settlements in the Russian industrial sector were fundamentally different from those which were observed in the first half of 1998. So, projection of conclusions and forecasts based on the analysis of the pre-default situation to 2002 seems to be unjustified.

True, traditional methods of research of the issue of competition fail to produce such reliable data as is needed for regular and prompt monitoring of that phenomenon which is very important for the Russian national economy. However, competition monitoring started by the IET as early as 1995 offers ample material for analysis of development of the competitive environment in the Russian industrial sector in recent years. Such monitoring is based on regular surveys of CEOs of enterprises on competition related issues. It is to be noted that such an approach has a number of advantages³. Firstly, those surveys help collect data on a wide range of such competition-related indices as are not quantified. Secondly, there is no need to gather and analyze large volumes of detailed technical and economic information; that task is handled by each of the surveyed enterprises themselves. Thirdly, only such an approach permits aggregate assessment of the level of competition on actual markets where enterprises sell their produce. Fourthly, that is the only way to make comparative assessments of domestic competition and competition from imported goods.

Of particular interest are the six-monthly aggregate panel assessments of the competition level. The CEO (or deputy director or head of the economic department of the enterprise) makes an assessment of the competition level on the market where his/her enterprise sells produce by the following scale: "strong", "moderate", "none" and "difficult to assess". All respondents are asked to assess the following three types of competition: competition from other Russian manufacturers, competition from foreign manufacturers and competition from manufacturers from the CIS countries and Baltic states. Simple and obvious as they are, such questionnaires offer ample opportunities for analysis of various competition levels.

Competitive Markets in Russian Industry

A survey approach permits us to isolate competitive markets and assessed markets in the totality of markets where Russian enterprises sell their produce. The share of competitive

³ S.V. Tsukhlo. Assessment of Competition in Russian Industry. Potentialities of Surveys of CEOs of Enterprises. //Voprosy Statistiki, 2000 №11

markets is determined as the share of enterprises which used in their assessment of competition one of the following three types of estimations: “strong”, “moderate” and “weak” (which means that such answers as “none” and “difficult to assess” were excluded from the analysis). If the enterprise gave one of the two latter types of answers, it is likely that the level of competition on the market where that enterprise sold its produce was so insignificant that the enterprise was either aware of its being insignificant or had never given thought to that issue. The share of assessed markets is determined as the share of enterprises which used the following four types of estimations: “strong”, “moderate”, “weak” and “none”. In that case, the “difficult to assess” answer is excluded from the analysis and the aggregate assessments are solely based on definite assessments of the level of competition.

Particularly promising is analysis of the dynamics of the share of competitive markets where Russian industrial enterprises sell their merchandise (See *Fig. 27*). It is to be noted beforehand that the data shown in the chart illustrates the share of markets where competition is observed, rather than the level of such competition.

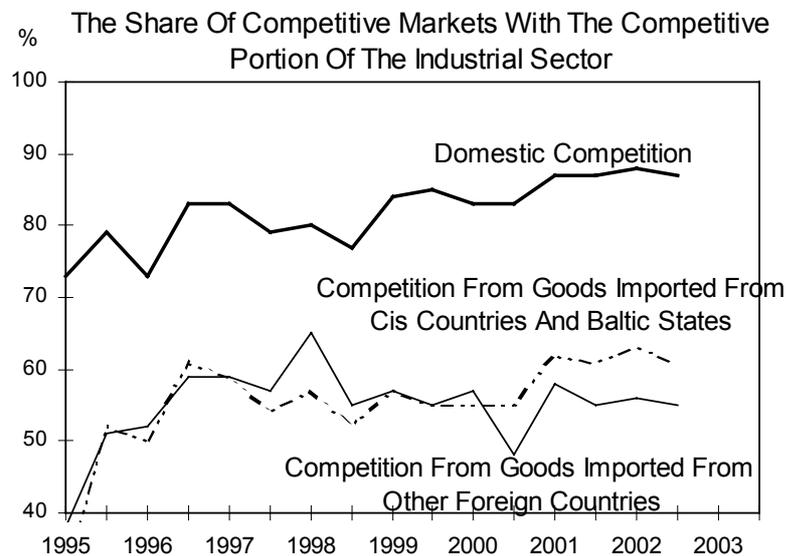


Fig. 27

What conclusions can be drawn from the analysis of the dynamics of shares of competitive markets in the 1995-2002 period? Firstly, the share of competitive markets in all cases (that is, on all lines of competition) was always less than 100 percent. In other words, there have always been markets free from significant competition (competition felt by enterprises). Speaking about domestic competition, the smallest shares of non-competitive markets were observed with the building materials industry (11%), food industry (12%) and chemical industry and petrochemical industry (14%). As regards competition with imported goods, the minimum share of noncompetitive markets was observed with chemical industry and petrochemical industry (33%), engineering industry (41%) and light industry (42%).

Secondly, domestic competition was observed on a greater share of competitive markets. On the average, in the past eight years of monitoring, 82% of enterprises regarded their markets as competitive. That index tends to grow; its highest values (87% to 88%) were observed in 2001 and early in 2002. The share of competitive markets with the Russian indus-

trial sector as a whole amounts to 84 percent. In 2002, the maximum shares of competitive markets (see *Fig. 28*) were observed with light industry (97%), food industry (95%) and building industry (94%).

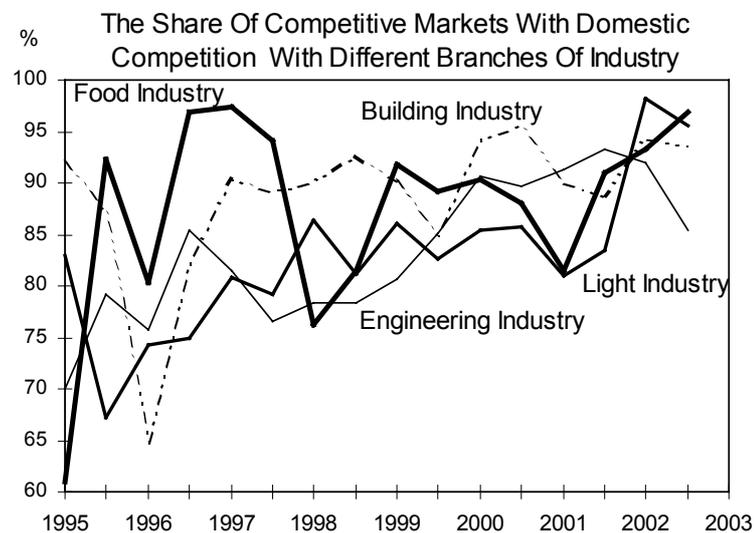


Fig. 28

Thirdly, competition from merchandise imported from CIS countries, Baltic states and other foreign states was only observed, on average, on 55 percent of the markets. Speaking about competition from goods imported from foreign states, the maximum share of competitive markets (65%) was observed in the first half of 1998. That index later fell to 55 - 58 percent and remained at that level throughout the post-default period (but for the ‘nosedive’ observed late in 2000). So, in 2002, the share of markets where Russian enterprises competed with manufacturers from foreign countries was similar to that observed in the 1996-1998 period and in the early post-default years. In other words, competition from imported goods did not increase on the markets where Russian industrial enterprises sold their produce. So, assertions to the effect that imported goods are “pressuring” domestic manufacturers again seem ungrounded. Moreover, according to estimations made by enterprises themselves, the level of competition from imported goods on markets where enterprises from most of the branches of industry sold their merchandise remained low and/or decreased in the second half of 2002 (See *Fig. 12*). In 2002, the largest share of competitive markets with foreign competition was observed with light industry (70%), chemical industry and petrochemical industry (65%) and engineering industry (65%).

Fourthly, the share of competitive markets involving competition from goods imported from the CIS countries and Baltic states increased after the default of 1998 and amounted to 62% in 2002. Starting from the Year 2000, that index was invariably higher than that of the share of competitive markets involving competition from goods imported from foreign countries outside the CIS and Baltic States region. In 2002, the greatest number of competitive markets involving competition from goods imported from the CIS countries and Baltic states (see *Fig. 13*) was observed with chemical industry and petrochemical industry (74%), light industry (74%) and engineering industry (68%).

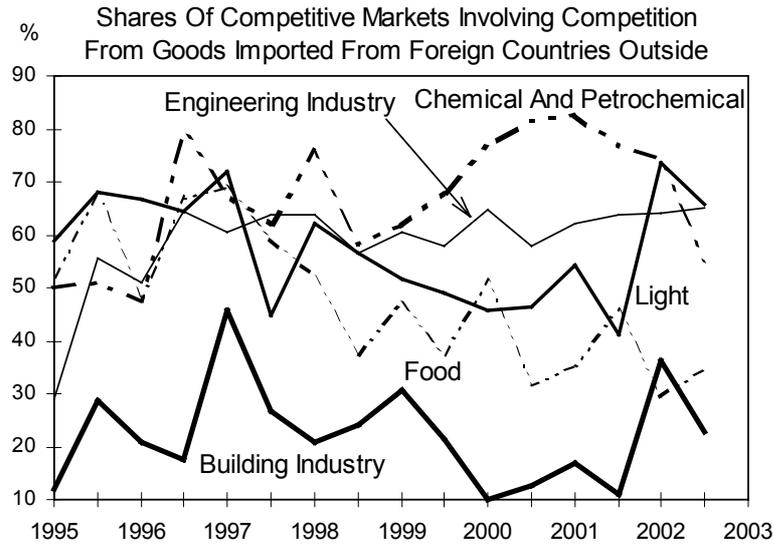


Fig. 29

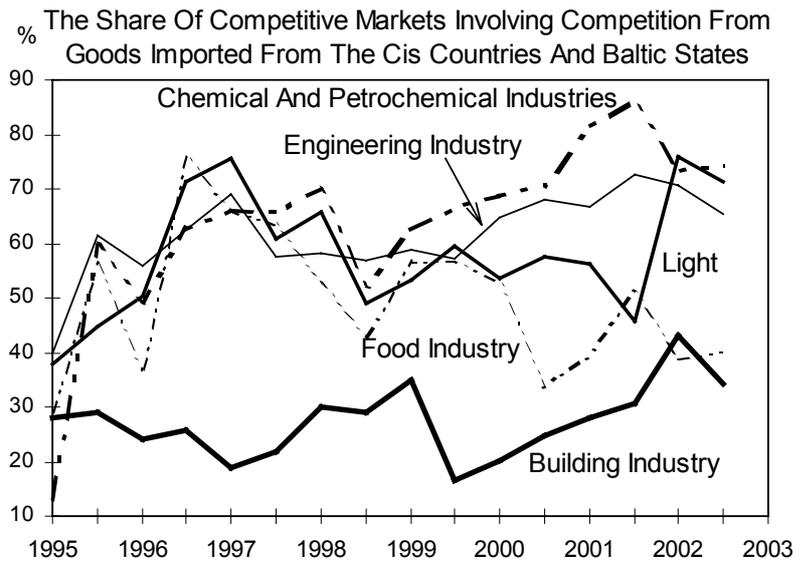


Fig. 30

Dynamics of Competition Levels on All Markets

The toughest competition experienced by Russian industrial enterprises on all markets has always been and remains competition from other Russian enterprises. It is to be noted that domestic competition on all markets has never been weaker than that with imported goods. It is also to be noted that those two types of competition were very different. Aggregate estimations of competition from foreign manufacturers have always been slightly below the “weak”

level, while those of domestic competition tend ever more distinctly towards the “moderate” level.

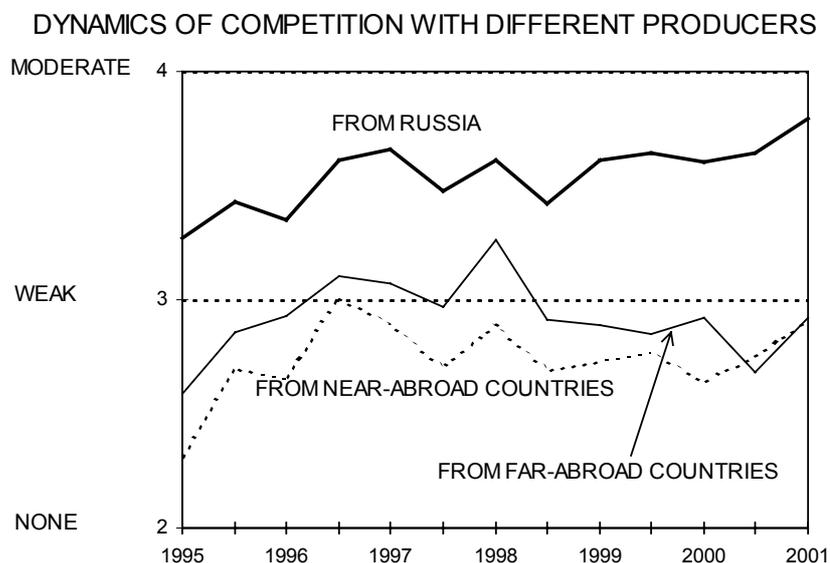


Fig. 31

The greatest spread of assessments was observed late in 2000 (it amounted to 0.96 points). In 2002, domestic competition exceeded that from foreign manufacturers by 0.89 points.⁴ The absolute maximum of domestic competition was observed early in 2002, while that of competition from imported merchandise, early in 1998. In the post-default period, competition from imported merchandise fluctuated within a narrow band of 2.68 points to 2.98 points.⁵ If the ‘nosedive’ observed late in 2000 is not to be taken into account, the band shrinks to 0.13 points. At the same time, domestic competition underwent considerable changes within the post-default period; its estimations increased from 3.42 points to 3.91 points. So, the growth in import had practically no effect on the overall level of competition from imported merchandise on the markets where Russian industrial enterprises sell their produce.

A similar situation can be observed with all branches of industry. Firstly, all surveys revealed growth in domestic competition in the post-default period. The maximum values were observed late in 2002 with the chemical industry and petrochemical industry (4.40) and the food industry (4.38). Secondly, in the post-default period, the level of domestic competition in a great number of branches of industry was slightly below the “moderate” level (see *Fig. 32*). Such a situation can hardly be seen as satisfactory by the Ministry of Antimonopoly Policy and Promotion of Entrepreneurship of the Russian Federation. Thirdly, the weakest competition was always observed with engineering industry. Domestic competition in that industry was rated as the lowest throughout the entire period of monitoring (1995-2002) and

⁴ One point used in that calculation is equal to the difference between two grades (“strong”, “moderate”, “weak”, “none” or “difficult to assess”) of the scale used for assessment of competition

⁵ Value 2 corresponds to “none”, value 3, to “weak”, while value 4, to “moderate”.

in 2002 taken separately. The high degree of monopoly which was typical of the Soviet era has been preserved in that industry to a great extent.

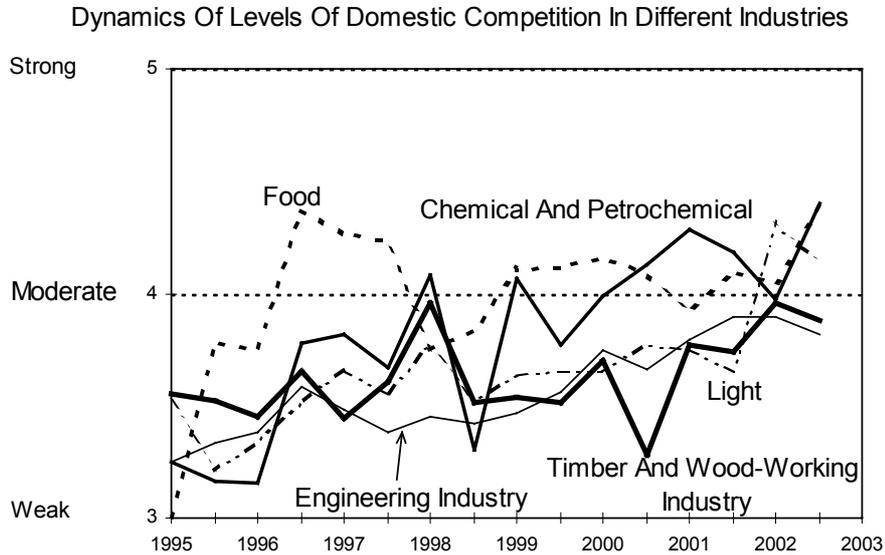


Fig. 32

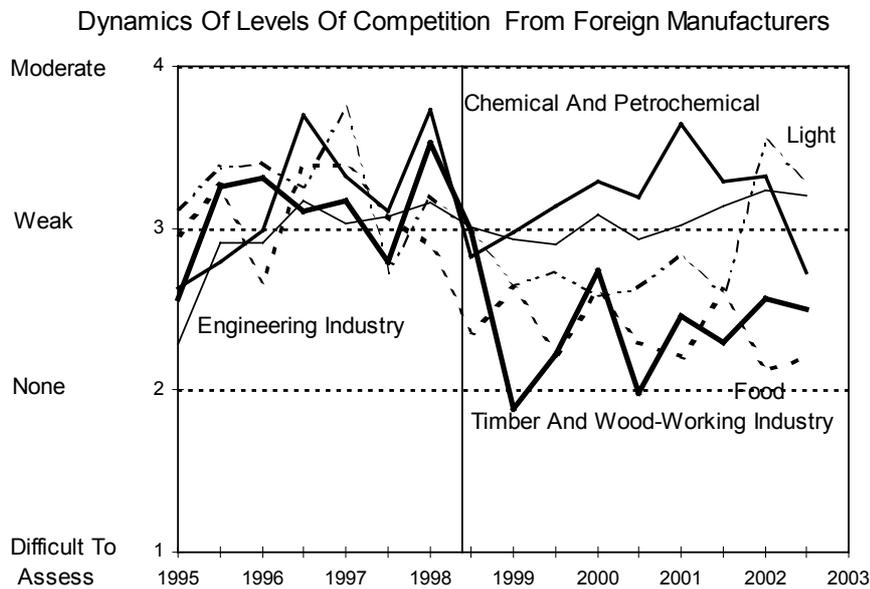


Fig. 33

Estimations of competition from foreign manufacturers with different branches of industry show that the advantages received by different branches of industry after the default of 1998 varied both in extent and duration. The advantage estimations by the food industry was the greatest and of the longest duration. Prior to the default, the average level of competition in that industry amounted to 3.09 points, while after the default, to 2.36 points; so the differ-

ence in average figures amounted to 0.73 points. The second biggest difference was observed with timber industry, wood-working industry and pulp-and-paper industry (0.70). The smallest positive difference (that is, reduction of aggregate post-default estimations) was observed with chemical and petrochemical industry (0.03). In engineering industry, however, “the difference” (that is, the advantage gained from the default) was negative; that is, average estimations of post-default competition from imported goods exceeded those of the pre-default period by 0.11 points. Moreover, in 2002 the level of competition in the engineering industry amounted to 3.23 points and 3.20 points. Such a high level of competition from imported goods had never been observed with that industry since 1995.

The competitive environment in light industry needs to be discussed separately. With all markets taken into account, that branch of industry was the only one where estimations of competition from foreign manufacturers were comparable to those of domestic competition. However, such a situation only observed in the 1995-1997 period. Later, the level of competition from imported goods fell below the “weak” level and remained at that level up till the beginning of 2002, while the level of domestic competition was somewhere in the middle between the “weak” level and the “moderate” level. In 2002, light industry enterprises experienced fast growth both in rates of domestic competition and those of competition from imported goods. Domestic competition in that branch rose from 3.65 points to 4.32 points exceeding the “moderate” level for the first time since the beginning of the monitoring. The growth in competition from imported goods amounted to nearly one point (from 2.58 to 3.55) with the rate of such competition returning to the 1995-1996 level. Yet, the level of domestic competition remained definitely higher (see *Fig. 34*).

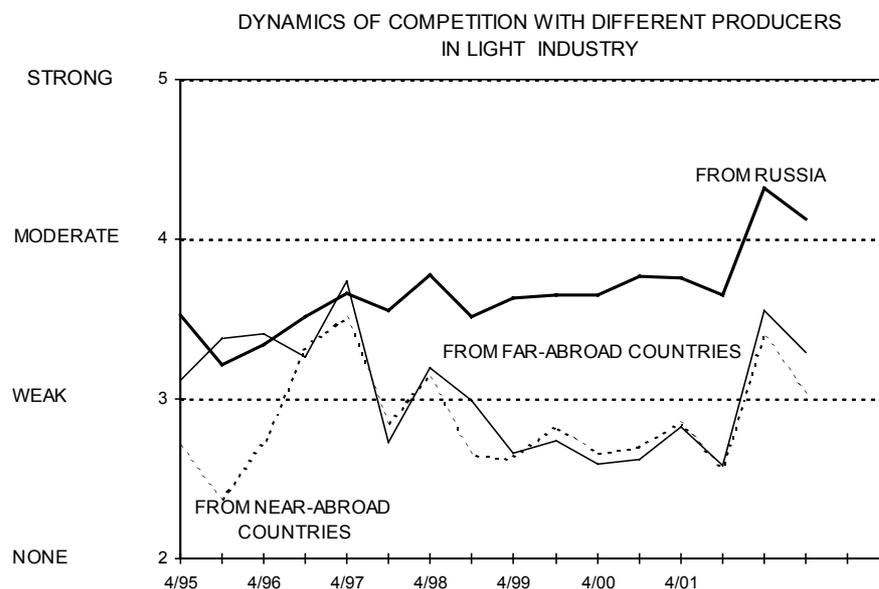


Fig. 34

It is worth discussing in detail development of competitive environment in food industry. While light industry is traditionally believed to be the worst hit by competition from imported goods, by contrast, the situation in the food industry is viewed as the most favorable as regards competition from foreign manufacturers. It is to be noted that survey result point to that as well (see *Fig. 35*).

Firstly, the dynamics of the levels of competition from imported goods in that industry tended to go down. While in the 1996-1997 period aggregate estimations of that competition on all markets were somewhere in the middle between the “weak” level and the “moderate” level, lately, “none” estimations have prevailed in respect of competition from imported goods. It is to be noted that the level of competition from imported goods started to decrease as early as the second half of 1997; prior to the default, competition was rated by enterprises as “weak”. As a result of the default, the index of competition from imported goods fell (in six months from April to October 1998) by 0.54 points, which was not the sharpest decline in the rate of such competition in that industry, though. At the end of 2001 and early in 2002, that index lost another 0.48 points and was the lowest figure to be observed with any of the manufacturing industries in Russia. Similar trends could be observed in competition from manufacturers from the CIS countries and Baltic states.

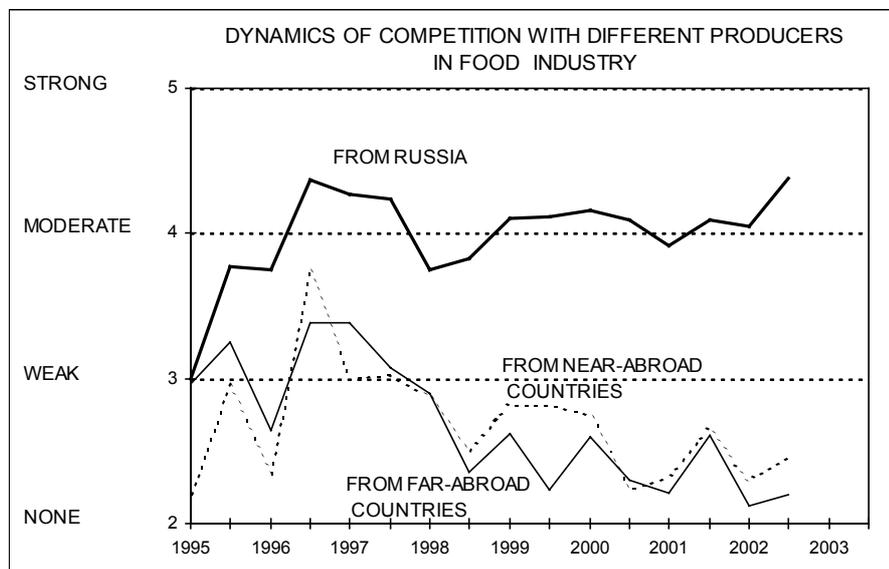


Fig. 35

Secondly, competition in food industry was predominantly domestic, that is, manufacturers mostly competed with other Russian manufacturers. It is to be noted that estimations of the level of such competition always fluctuated around the “moderate” level. The pre-default assessment of the level of domestic competition (3.75 points) was the all-time low of the 1996-2002 period. Since the first assessment of the level of competition following the default, estimations hardly ever went below the “moderate” level. In October 2002, the absolute maximum of 4.38 points was observed with that industry, which level was also the absolute maximum for all industries. On the average, in the 1995-2002 period domestic competition exceeded that with imports by 1.31 points in food industry. A higher value of that parameter could only be observed with the building materials industry which is, for obvious reasons, better protected from competition from imports. Late in 2002, the difference between the level of domestic competition and that of competition from imports in food industry amounted to 2.18 points, which was the maximum for that industry.

Dynamics of Levels of Competition on Competitive Markets

In calculation of aggregate estimations of competition on competitive markets, the following types of answers are used: “strong”, “moderate” and “weak”. Though such an approach reduces the number of processed assessments, in our view, it makes analysis of different types of competition more comparable. In surveys of competition from foreign manufacturers, the share of the “difficult to assess” answers amounted in the eight years of monitoring to 25 percent and in surveys of domestic competition, to 7 percent. Such answers do not contribute much to the aggregate level as they are assigned weight equal to unity. As a result, estimates of competition from imports are bound to be lower than those of domestic competition. This, certainly, reflects the actual situation on markets where Russian enterprises sell their merchandise, but makes calculation results somewhat incomparable. Analysis of competition on competitive markets alone solves that problem. However, it gives rise to another problem; in calculation of the aggregate level of competition from foreign manufacturers, 45 percent of estimations are excluded from calculations and in calculation of that of domestic competition, 19 percent. That permits us, however, to isolate markets where competition is not at the zero level, in other words it can be described as ‘strong” or “weak”.

Prior to default of 1998, on competitive markets of all branches of the Russian industrial sector competition from imports exceeded domestic competition, though insignificantly. While in 1995 and early in 1996 the average value of the index of domestic competition amounted to 3.98 points (that is, it corresponded precisely to the “moderate” level), that of competition from imports, to 4.19 points. Equalization of competition levels only took place in the second half of 1999. It is to be noted that that happened because of reduction of the level of competition from foreign manufacturers. Domestic competition remained at the same level (“moderate”) till the second half of 2000. Starting from 2001, there was simultaneous growth in both the types of competition (see *Fig. 36*). In 2002, the rates of those two types of competition were similar and showed little change.

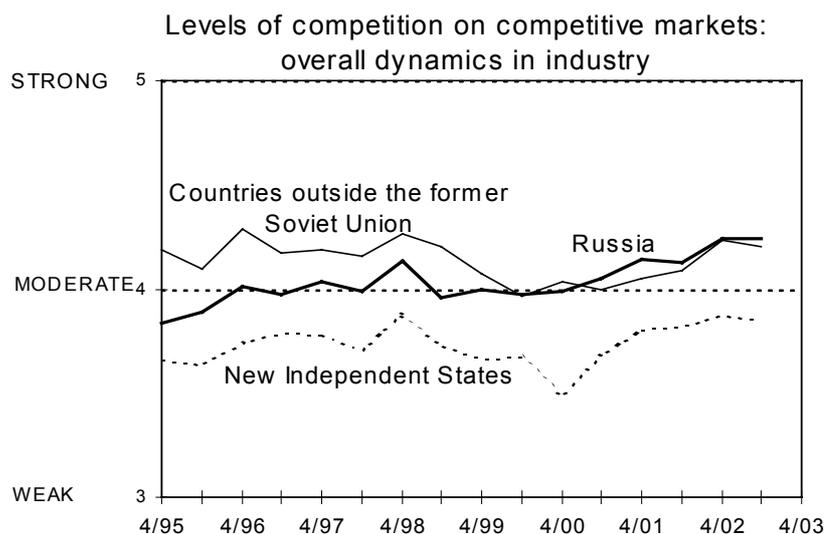


Fig. 36

Now let us discuss sectoral specifics of development of competition on competitive markets. The analysis of surveys' outputs and calculation of aggregate indices of competition brings us to the following conclusions.

Firstly, prior to the default manufacturing industries experienced on competitive markets stronger competition from foreign manufacturers. Food industry was an exception. It is to be noted that from 1996 (that is, long before the default of 1998) in that industry domestic competition exceeded on the average competition from imports by 0.18 points.

Secondly, because of the default the levels of competition from imports dropped. The most radical drop in levels of competition from imports was observed with the building materials industry. The difference between the pre-default maximum and the first post default minimum amounted to 1.55 points in the building industry, 1 point in food industry, and 0.84 points in chemical industry and petrochemical industry. The smallest reduction (0.34 points) of the competition level was observed with engineering industry.

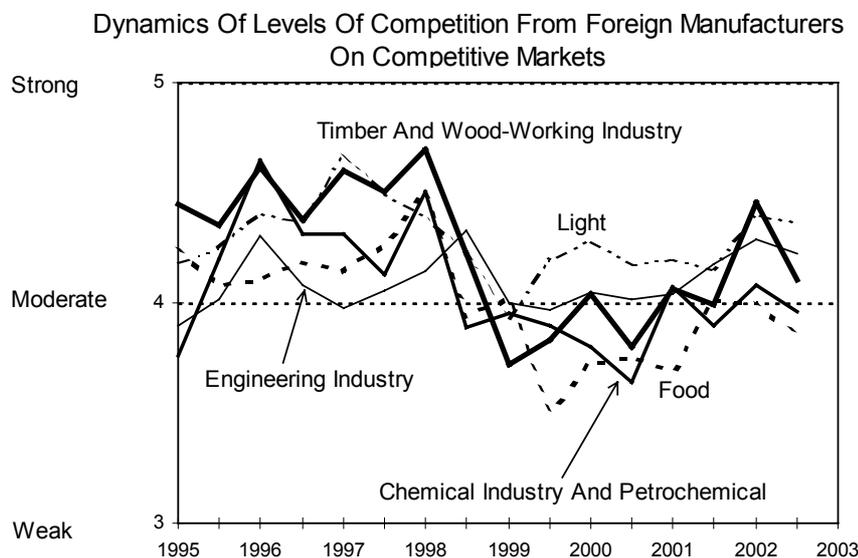


Fig. 37

Thirdly, the effects of the default on intensity of competition were different in the different branches of industry. For instance, as a result of the 1998 default the level of competition from imports in chemical industry, petrochemical industry and food industry became lower than that of domestic competition and remained at the same level till the end of 2002. The levels of the two types of competition in wood-working industry and light industry became similar. In engineering industry, competition from imports remained predominant; though the extent of such predominance decreased. On the average, prior to the default competition from imports in engineering industry exceeded domestic competition by 0.16 points, while after the default, by 0.13 points. The latest estimation (in October 2002) revealed that enterprises in engineering industry rated intensity of both types of competition as equal. It is to be noted that intensity of domestic competition had reached its absolute maximum by that time.

Dynamics of the difference between levels of competition in building materials industry was rather peculiar. Prior to the default (in 1996-1998), competition from imports on competi-

tive markets was extremely high. In April 1998, the index amounted to 4.77 points, which was the all-time high. However, by April 2000 it fell to 3.22 points. It is to be noted that domestic competition remained practically unchanged (see Fig. 38). In the following two years, competition from imports rose to the pre-default level (4.37 points in April 2002), after which there was an insignificant reduction. As can be seen from the Chart, it was early in 2002 that enterprises in that industry estimated the level of competition from imports as higher than that of domestic competition for the first time. And that was not a sudden leap.

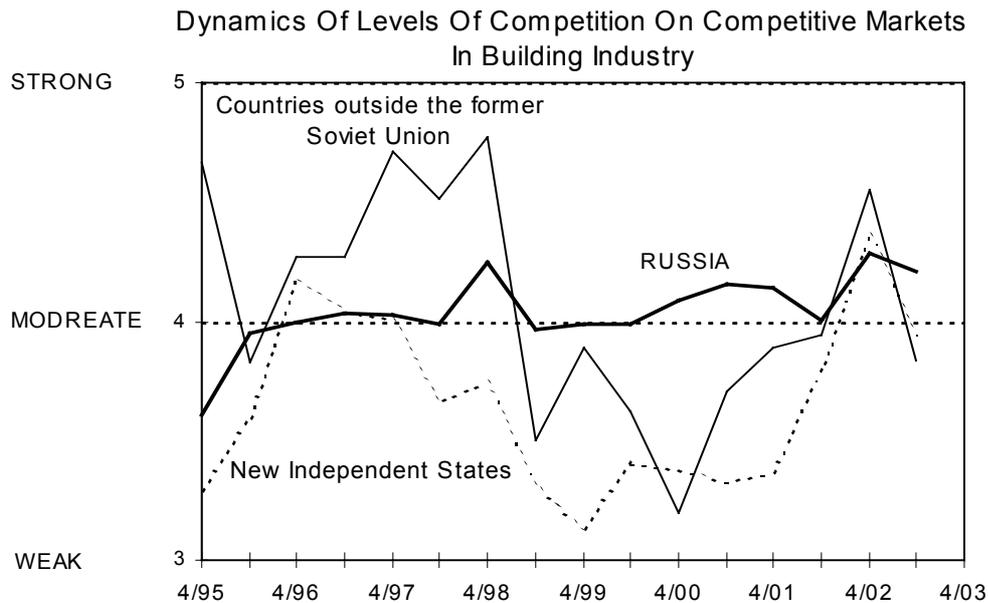


Fig. 38

By the end of 2002 when one would expect imports to be stifling domestic industries again, a higher level of competition from imports was observed (by enterprises themselves) only with light industry; and it is to be noted that even there the level of competition from imports exceeded that of domestic competition by a mere 0.09 points). In engineering industry, timber industry, wood-working industry and pulp-and-paper industry, intensity of the two types of competition was assessed by enterprises as similar. In chemical industry, petrochemical industry, building industry and food industry the level of domestic competition was higher than that of competition from imports.

Analysis of aggregate competition (domestic competition + competition from foreign countries + competition from CIS countries and Baltic states) reveals that manufacturing industries had in general similar dynamics of competition on their competitive markets. (See Fig. 39). Firstly, by the time of the default the level of competition in most branches of industry reached maximum values. The maximum of 4.49 points (that is, the middle between the “strong” level and the “moderate” level) was observed with food industry. The second highest level was observed with timber and wood-working industry and pulp-and-paper industry (4.36 points). Those two industries had also the highest levels of competition throughout the entire pre-default period (4.18 points each). The lowest level of competition in April 1998 and in the 1995-1998 period was observed with engineering industry. Before 2002, absolute val-

ues of the index of aggregate competition in that industry did not exceed the “moderate” level.

Secondly, the default brought about abatement of competition in all branches of industry. The greatest reduction (0.46 points) in the six months from April to October 1998 was observed with building materials industry. That value of the index of competition was also the absolute post-default minimum for all industries. No reduction in competition levels was observed with the engineering industry during that period. Only in 1999, enterprises in engineering industry experienced certain abatement of competition, which abatement was rather insignificant. On the contrary, timber and wood-working industry and pulp-and-paper industry ‘benefited’ to the greatest extent (0.20 points) from the default. By the “benefit”, we mean the positive difference between the average values of aggregate competition before and after the default of 1998. In other industries, such a “benefit” was much smaller; in some cases it was close to zero. “Disadvantage” (-0.06 points of the aggregate competition) was observed only with in the engineering industry. By “disadvantage” we mean negative difference between average levels of aggregate competition before and after the default.

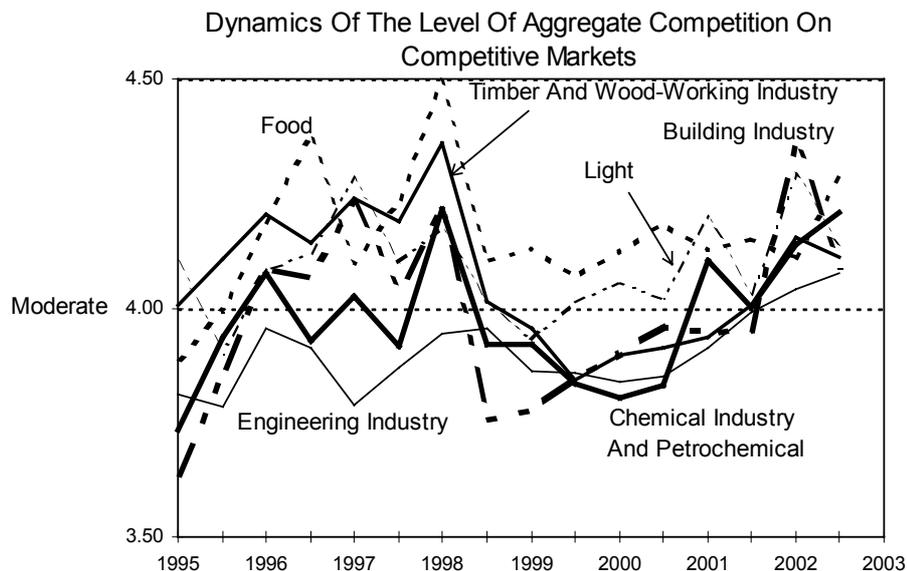


Fig. 39

Thirdly, in the 2000-2001 period aggregate competition started to grow. It reached the post-default maximum in the first half of 2002. In the industrial sector in general and in some branches, the post-default maximum was higher than the pre-default one. Competition became quite intense again. However, in the second half of 2002 it abated again a little.

3.2.3. Relationship Between Different Types of Competition at the Microeconomic Level

Hearing calls for protection of domestic manufacturers all the time, one gets the impression that competition with imported goods pose the toughest competitions to Russian manufacturers' produce in their respective niches of the market. Traditional statistics have failed to produce such quantitative data as could serve as the basis for an answer to the obvious, highly topical question of which competition tougher: Russian manufacturers' competition with one

another or their competition with imports. The feasible calculations of statistical parameters for each type of competition would not permit comparison of the levels of competition since the outputs (if at all obtained) would be using different scales. It is the surveys-based approach to monitoring of competition that permits getting the most grounded and least prone to criticisms answer to that question.

In our study of the correlation between the two lines of competition at the microeconomic level we used analysis of a matrix of conjugation of estimations of domestic competition and competition with imports from countries outside the CIS & Baltic states region. The sum of the matrix's diagonal elements shows the share of enterprises that believe that competition from those two groups of goods is equal. The supra-diagonal sum represents the share of enterprises that experience more severe competition from other Russian manufacturers than from imports, while the sub-diagonal sum, the share of enterprises that face greater competition from imports from countries outside the CIS & Baltic states region than from goods produced by other Russian manufacturers. The above parameters can be calculated for all markets (with the entire integral of estimations used), for estimated markets (with 'hard to say' estimations excluded) and for competitive markets (with 'high rate of competition' and 'low rate of competition' ratings used). It is to be remembered, though, that markets can be estimated or competitive simultaneously along two lines. Analysis of the conjugation matrix only permits one to find out which competition is stronger, but cannot help determine the absolute levels of competition.

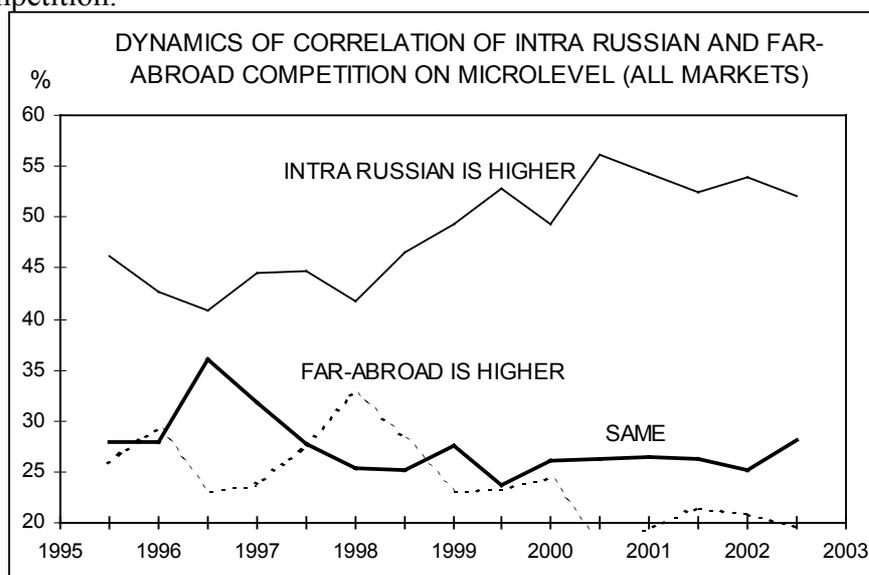


Fig. 40

Let us first examine all the markets in which Russian industrial enterprises are active. For that purpose, conjugation matrixes are based on all the five types of estimations of the level of competition ('high competition', 'moderate competition', 'low competition' 'no competition' and 'hard to say'). The dynamics of correlation between the two types of competition in all the markets showed that the level of domestic competition was higher (see *Fig. 40*). The share of enterprises seeing domestic competition as higher was never below 40 percent; the high observed in the second half of the Year 2000 was 56 percent. In 2002, an average of 53 percent of industrial enterprises believed that competition from domestic manufacturers was



more intense than that from imports. The share of enterprises with the opposite opinion has never exceeded 33 percent in the period monitoring has been carried out. The all-time low (18 percent) was registered in the second half of the Year 2000. The average value of that parameter in 2002 was 20 percent, which was the lowest average annual value. The highest rate of identical estimations of the two types of competition by industrial enterprises (36 percent) was registered in the second half of 1996, while by 2002 the share of enterprises with such estimations dropped to 25 percent. This shows that for the totality of markets in which Russian industrial enterprises are active domestic competition was tougher than that from imports.

Enterprises in all the branches of industry surveyed also believed that in the totality of their markets competition from domestic competitors was more intense than that with foreign competitors (from countries outside the CIS and Baltic states region). The sole exception was light industry where in the period from late 1995 till early 1997 CEOs' estimations of competition with imports were higher than with other industries. However, starting from October 1997 the pattern with that branch became the same as elsewhere: the share of enterprises believing that competition from domestic manufacturers was more intense grew (to make nearly 50 percent) coming to considerably exceed the share of the opposite estimations (see *Fig. 41*). Early in 1999, when consequences of the default became felt on light industry enterprises' markets, the share of enterprises believing that foreign competition was more important than domestic dropped from 30 percent to 15 percent, while the share of equal estimations grew to make 34 percent. Manufacturers found that it was easier to compete with imports than before. By the beginning of 2000, the share of equal estimations of domestic and foreign competition dropped to 21 percent (which was close to an all-time low). That happened not because of intensification of competition with imports but because of an increase in the share of markets with tougher domestic competition, which reached a peak (57 percent). So, in the 1998-2001 period the brunt of competition in light industry was shifted to the 'home front'. It is to be noted that that process had begun back in the second half of 1997. However, in 2002 the situation started to change again. The share of markets with tougher foreign competition grew to 22 percent at first and towards the end of the year even to 29 percent thus relapsing to the pre-default level. The share of such markets grew at the expense of shrinking of the shares of the two other types of markets (those with equal domestic and foreign competition and those with tougher domestic competition).

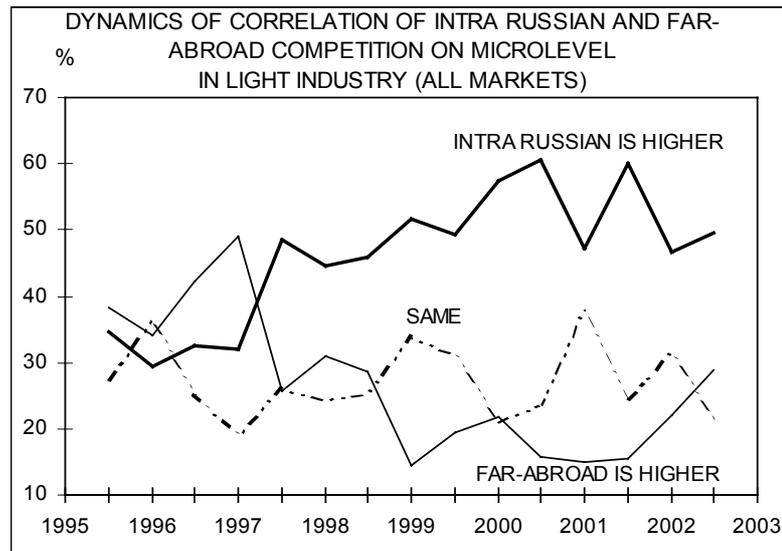


Fig. 41

The situation in food industry has always been very different. Prior to the 1998 default, domestic competition was more intense than foreign for most enterprises in that branch of industry. The pre-default high of that index (65 percent) was registered in the first six months of 1997, then it dropped to 39 percent due to growth in the share of markets with equal rates of competition (see Fig. 42). The share of markets with a higher extent of competition with imports remained low and nearly unchanging in the 1995-1998 period (16% to 18%). The default pushed that figure almost to the zero level and increased the share of markets with higher domestic competition to 70-80 percent. Last year Russian food manufacturers strengthened their positions even further. The share of markets with equal extents of competition went down from 26 percent to 9 percent (which is the all-time low). Just four percent of Russian food industries faced more intense competition from imports than from other Russian enterprises.

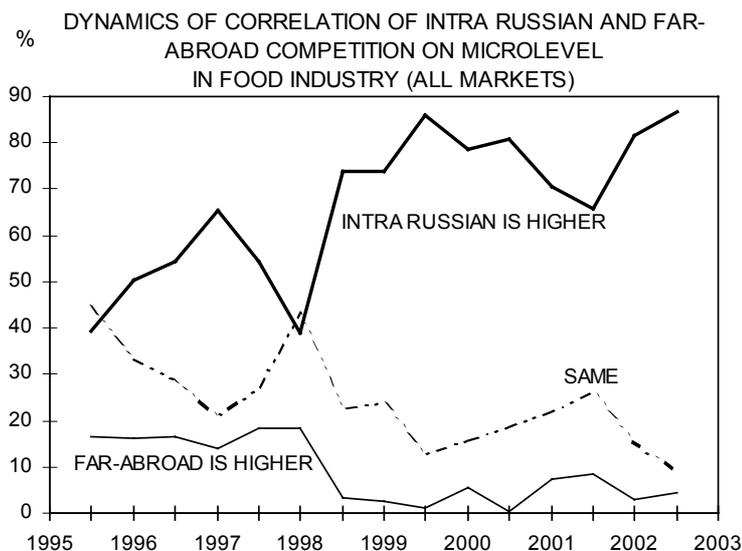


Fig. 42



The above ratios were calculated for all the categories of responses, including ‘hard to say’ responses. In this way, all the markets of Russian industrial enterprises were covered, including those where Russian enterprises did not face any competition for some or other reasons. Narrowing of calculations and analysis to ‘estimated’ markets permits assessment of situation on the markets where enterprises can produce definite estimations. In this context, it is to be remembered in this case only responses by such enterprises are taken into account as have made definite estimations of both types of competitions. The dynamic thus established is different (see *Fig. 43*). Prior to the default, the shares of markets with predominant foreign and predominant domestic competition were, on the average, equal, but the dynamic of parameters was different, as can be seen from the chart. While the share of markets with predominant domestic competition remained more or less on the same level, the share of markets with predominant competition from imports grew from 27 percent to 38 percent in the October 1996-October 1998 period. Early in 1999, the ratio of the markets began to change dramatically. The share of markets with predominantly foreign competition dropped to 25 percent, while the share of markets with the opposite competition ratio grew to 43-45 percent.

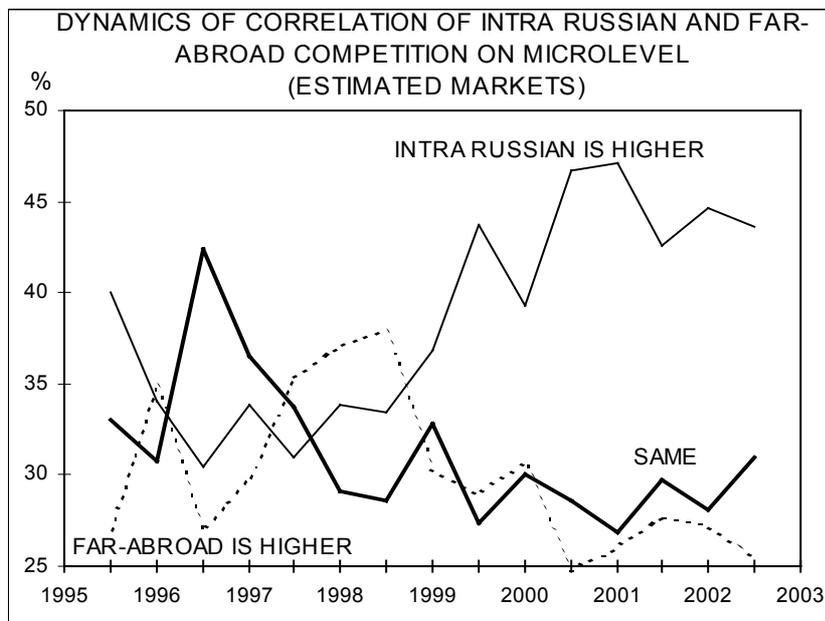


Fig. 43

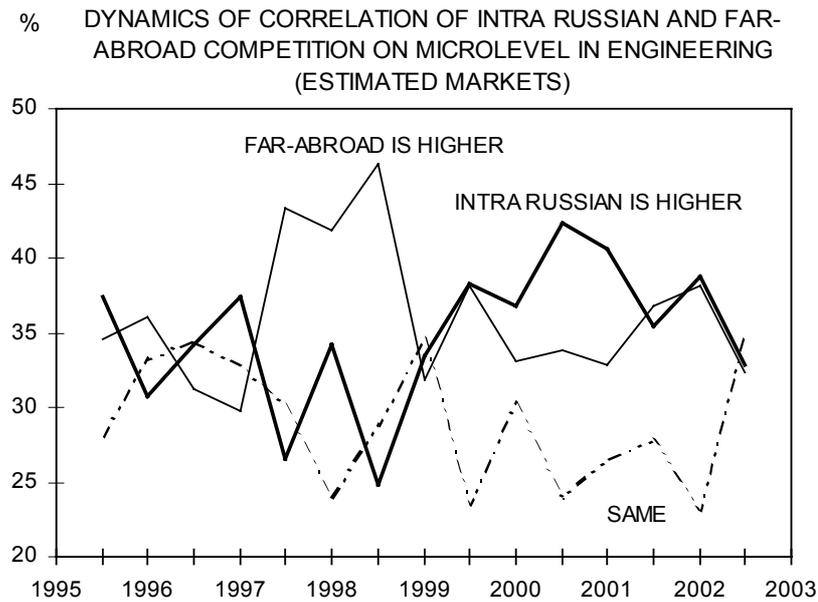


Fig. 44

Ratios of the two types of competition in estimated markets varied considerably from industry to industry. For instance enterprises in engineering industry had a particularly hard time in the October 1997-October 1998 period. At that time, 45 percent of enterprises believed that competition with foreign-made products posed a greater problem than competition with domestic manufacturers. Up till April 1997, the share of such a ratio of estimations was within the 30-35 percent range, roughly equaling the share of the opposite estimations. The situation in engineering industry only reached a balance by the first half of the Year 1999 (see *Fig. 44*). Up till the end of 2000, the shares of market with predominantly foreign competition and predominantly domestic competition were equal, then, markets with a higher level of domestic competition became prevalent. Late in 2001, parity was attained again which lingered for the better part of the Year 2002. Late in 2002, the share of markets with equal rates of foreign and domestic competition grew steeply.

In light industry, a higher level of estimations of competition with imports was observed in the 1995-1998 period. Late in 1996 and early in 1997, around 60 percent of manufacturers believed that the level of domestic competition was lower than that of competition with imports (see *Fig. 45*). Such high rate of estimations revealing prevalence of competition with imports was not observed in any of the other branches of industry. However, the situation began to change as early as the beginning of 1998. In the first six months of 1999, a picture exactly opposite to the above was observed: the share of enterprises facing greater competition from imports dropped to 20 percent, while the share of enterprises experiencing more severe competition from domestic manufacturers grew to 40 percent. By the end of 1999, however, the shares of estimations became equal; in the first half of 2000 both amounted to 40 percent. In the period between late 2000 and early 2000, estimations revealing higher levels of domestic competition prevailed in that branch of industry. The highest share of such estimations was observed late in 2001 when 59 percent of industries believed that domestic competition was tougher than that from imports. In 2002, the shares of the above two groups of enterprises became equal again (both amounting to 35 percent). It is to be noted that a mere 60 to 70 per-



cent of enterprises in light industry were able to make definite estimations of both the types of competition. Others faced only one type of competition (mostly domestic) or none at all. Before October 1998, the share of 'hard to say' responses in respect of competition with imports fluctuated in the 20%-27% interval, in 1999, it grew to 34 percent, and in 2000, to 46 percent. The role played by imports in the markets where Russian light-industry enterprises were active clearly became less important. Later, the opposite trend came to be observed, though, and the share of 'hard to say' responses dropped to 22 percent.

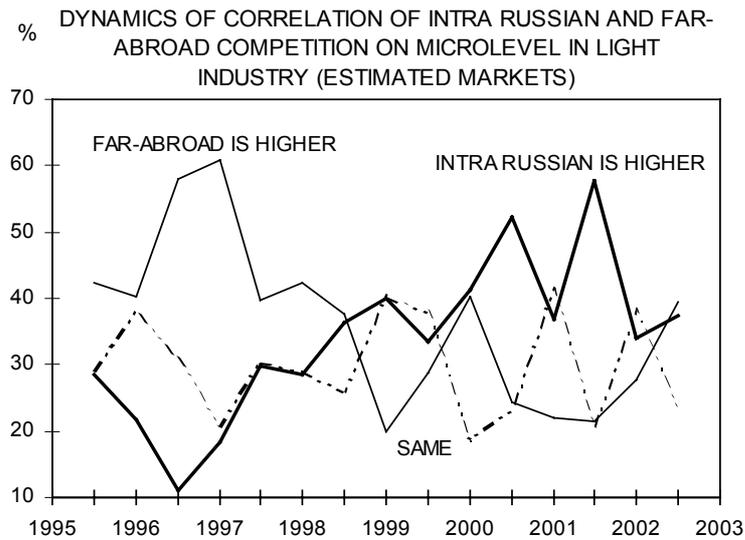


Fig. 45

Positions of food-industry enterprises active in estimated markets were much stronger. They believed that domestic competition was more intense than competition from imports (see *Fig. 46*). True, by April 1998 the share enterprises seeing domestic competition as more intense dropped to 32 percent nearly equaling the share of enterprises with the opposite estimations. But the 1998 financial crisis made competition with imports easier for Russian food industries. The share of manufacturers facing stronger competition with imports immediately dropped to 4 percent, and in October 1999 even to 1 percent. Then, their share grew again (in 2001, it amounted to 10 percent, while in 2002, to 6 percent. As a rule, the share of estimations revealing equal levels of the two types of competition did not exceed 40 percent; in October 2002, it dropped to 12 percent.

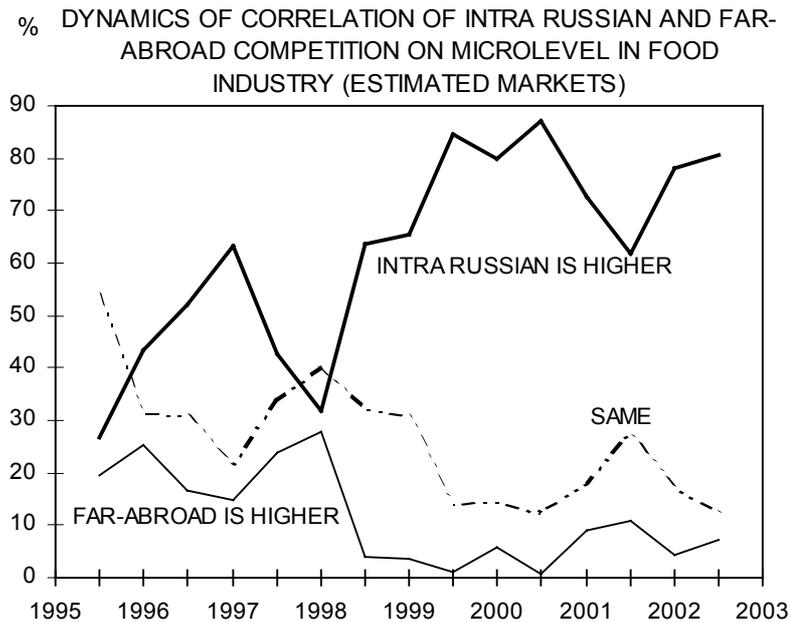


Fig. 46

The dynamics of the ratio between the two types of competition changed even more in the markets where both domestic competition and competition with imports from countries outside the CIS and Baltic states region are present (with levels above the zero level). (See *Fig. 47*) Here, only responses by such enterprises as answered ‘strong’, ‘moderate’ or ‘low’ are taken into account, while ‘none’ and ‘hard to say’ responses are excluded from analysis. As the interval is narrowed, only certain specific markets are analyzed. One feature of those markets consists in existence of some or other rate of competition, while another one, in presence on those markets of both Russian and foreign manufacturers. In our belief, the latter feature is more significant as it permits us to exclude from analysis groups of goods and markets where there is no direct competition between domestic and foreign manufacturers.

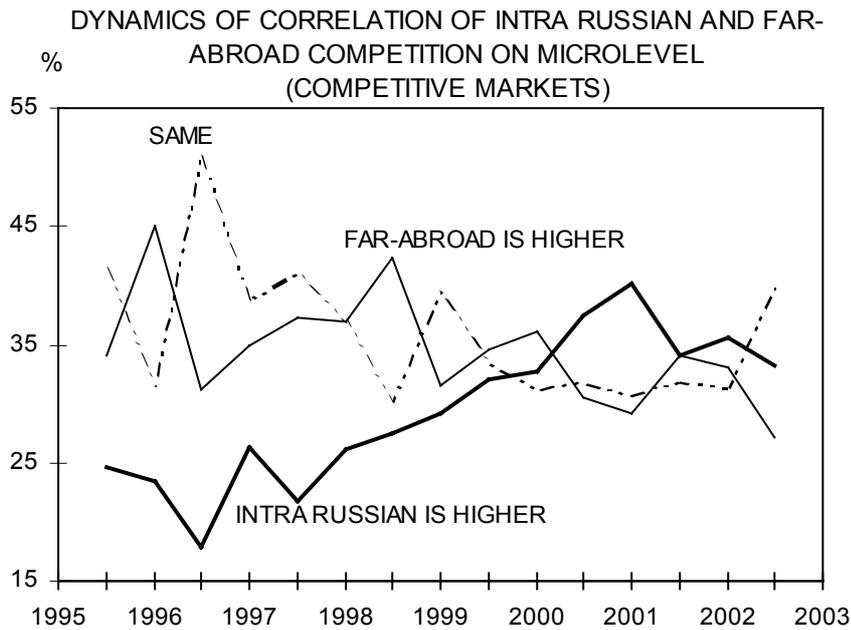


Fig. 47

In such specific (in the above two meanings) markets domestic competition prior to the default was much less intense than competition with foreign manufacturers. In 1999 and early in 2000, the extent of predominance of foreign competition was reduced, yet such predominance remained. It is not until the end of the Year 2001, that the level of domestic competition exceeded that of competition with imports on such markets. As can be seen from the chart, the 1998 crisis did not strengthen much the positions of Russian manufacturers directly competing with imported goods. While prior to the default an average of 37 percent of enterprises viewed competition with imports as more significant, after the default that figure was 32 percent. In the same period, the share of enterprises with predominantly domestic competition grew by ten points, from 24 percent to 34 percent. As can be seen, the 1998 devaluation brought about equalization of the levels of domestic and foreign competition in Russian enterprises' competitive markets.

Domestic competition was always much less intense than competition from imported goods on the competitive markets where enterprises of engineering industry sell their produce (see *Fig. 48*). In the 1995-2002 period, engineering enterprises competing both with foreign and domestic manufacturers never estimated domestic competition as higher than that with imports. Moreover, the greatest difference was observed shortly after the August 1998 crisis, in October 1998. In our view, that can be explained by the fact that due to devaluation of the national currency holders of ruble funds tried to get rid as quickly as possible of their rubles buying mostly superior quality foreign-made machine-tools and equipment. Only in April 1999, intensity of competition from imports started to abate; it fell from 53 percent to 33 percent, while domestic competition became prevalent with 27 percent of enterprises. The greatest number of markets where domestic competition prevailed was observed with the engineering industry early in 2001. At that time, 34 percent of enterprises estimated competition from imports as lower than that from domestic manufacturers. Then, that index started to decrease to reach 26 percent by the end of 2002, which value was the pre-default minimum. It was

about that time that the minimum share of markets where competition from imports prevailed (30 percent) was observed for the first time since the beginning of monitoring. At the end of 2002, engineering industries experienced equal competition, from domestic and foreign manufacturers in most markets where both types of competition took place.

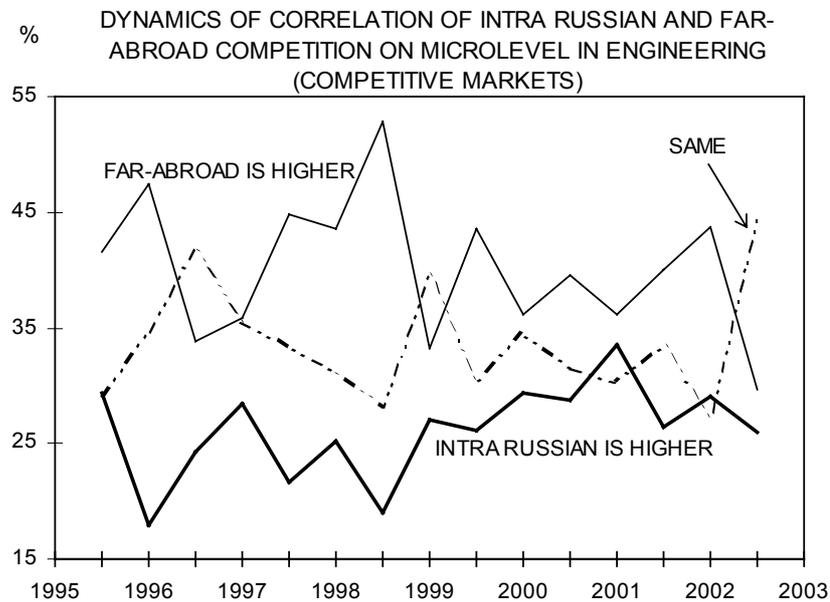


Fig. 48

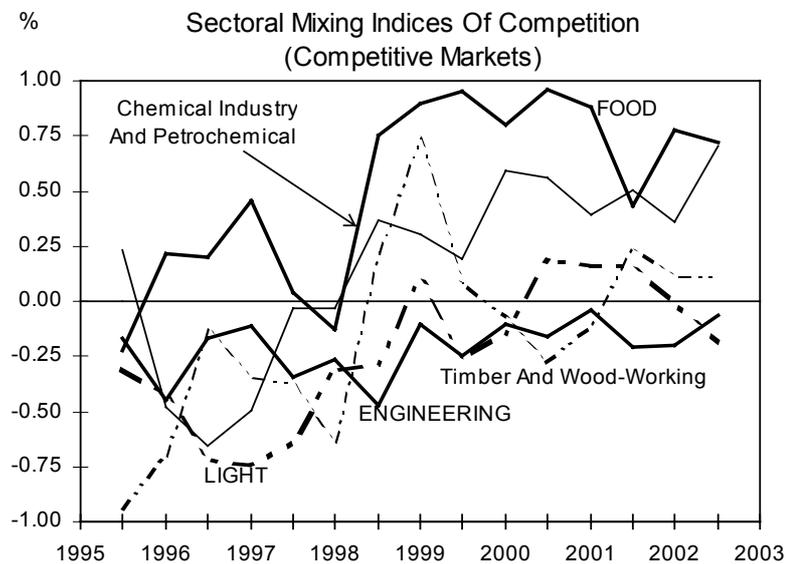


Fig. 49

Light industry benefited from the default to a greater extent than engineering industry. Prior to the default, competition from imports prevailed on the average on markets where 46 percent of enterprises sold their merchandise, while after the default, 35 percent. Dynamics of markets with prevalence of domestic competition was more significant. That index increased



from 16 percent to 34 percent. At present, rough parity of the two types of competition is observed in light industry.

A more clear picture in respect of prevalence of markets with more domestic competition or markets with more competition from imports can be obtained with the use of the mixing index which is calculated as a ratio of the difference between shares of markets with more domestic competition and those with more competition from imports to their value. That index may have values below unity (competition from imports prevails on all markets) or over unity (domestic competition prevails on all markets). Sectoral mixing indices of competition (indices showing which type of competition prevails) are shown in Fig. 49.

The greatest and most continues prevalence of domestic competition was observed in food industry. Competition from imports prevailed only in two out of 15 assessments. It is also to be noted that that prevalence was neither significant, nor systematic. Small negative value (-0.13) of that index which was observed in April 1998 was replaced by the value of +0.75 as early as October 1998; such a big increase within six months was not observed with any other industry. A similar growth in the mixing index was observed with markets where enterprises of timber, wood-working and pulp-and-paper industry sell their merchandise. Before the default, the situation in those industries was different; markets with more competition from imports clearly prevailed there. The mixing index had never had a positive value. However, as early as October 1998 its value grew to 0.22 and in April 1999, to 0.74. Equalization of the levels of markets with prevalence of domestic competition and those with prevalence of competition from imports was observed at the end of 1999, while in 2002 and early in 2001 there were more markets where enterprises experienced more competition from imports. By 2002, the situation changed again “in favor” of domestic competition. Overall, the average post-default value of the mixing index was positive, which value pointed to the fact that markets with more domestic competition prevailed (See *Table 15*)

Table 15

Average Value of the Mixing Index of Competition for Different Periods

| Branches | The 1995-2002 period | Prior to the default | After the default | Growth |
|--|----------------------|----------------------|-------------------|--------|
| Industrial sector in general | 0.34 | 0.24 | 0.42 | 0.19 |
| Metallurgy | 0.41 | 0.50 | 0.32 | -0.18 |
| Chemical industry and petrochemical industry | 0.17 | -0.16 | 0.45 | 0.61 |
| Engineering industry | -0.21 | -0.28 | -0.14 | 0.14 |
| Timber, wood-working and pulp-and-paper industry | -0.14 | -0.42 | 0.10 | 0.52 |
| Light industry | -0.23 | -0.49 | 0.00 | 0.49 |
| Food industry | 0.52 | 0.19 | 0.80 | 0.61 |

Source: calculations made using surveys' outputs

Prior to the default, competitive markets where Russian enterprises experienced more intense competition from other domestic manufacturers prevailed in the Russian industrial sector in general. However, such a situation was not observed everywhere. Of all the surveyed

industries, such a relationship of markets was observed in the three pre-default years only in the metallurgical industry and food industry. After the default, markets with more domestic competition prevailed almost in all industries. Prevalence of markets with more competition from imports was observed only engineering industry. In light industry, markets only balanced each other after the default; the average value of the mixing ratio was zero. However, the “improvement” as against the pre-default period was evident (prior to the default, that ratio amounted to - 0.49, which value was “the worst” from the point of view of the domestic manufacturer).

If the default is to be viewed as a means of ousting foreign manufacturers from markets where Russian enterprises sell their merchandise, the difference between mixing indices of competition of the pre-default and post-default period can be used for estimation of the “benefit” brought about by the default. The greatest benefit was gained by food industry, chemical industry and petrochemical industry (see Column “Growth” in Table 15). The second largest “beneficiaries” were enterprises of timber, woodworking and pulp-and-paper industries. Growth in the mixing index was also observed with engineering industry, but since that index remained negative in the post-default period it is hard to say whether there was any “benefit”. Reduction in the mixing index was only observed in metallurgical industry where the index remained positive, though. In other words, the share of markets where iron-and-steel plants experienced more competition from Russian manufacturers decreased.

3.3. Investment Process in the Real Sector of the Economy

One of the specific features of the Russian national economy in the 2000-2001 period consisted in growth in demand in investment. During that period, growth in investments in fixed capital tended to be faster than growth in the GDP and output of basic branches of the economy. In 2001, the share of investments in fixed capital in the GDP increased to 17.7%, as against 16.8% in 2000. Development of that trend was stimulated by broadening of domestic demand, preservation of a relatively high level of profitability of production and slowing down of the rates of growth in prices of manufacturers in the industrial sector and building industry. In 2002, that situation changed; as regards rates of growth, demand in investment yielded its leading positions to consumer demand. As a result, rates of growth in the GDP came to exceed the rates of growth in investments in fixed capital again.

In 2002, the volume of investments in fixed capital from all sources of financing amounted to 1,660.5 billion rubles, which is 2.6 percent more than in the previous year. That slowing down of the rates of growth in demand in investment determined the specifics of the dynamics of output of capital goods and construction work. In 2002, the volume of jobs performed by building companies increased by 2.6 percent, as against 8.7 percent in 2001, the volume of gross output in engineering industry, by 2.0 percent, as against 8.7 percent in 2001 and that in building materials industry, by 3.0 percent, as against 5.5 percent.

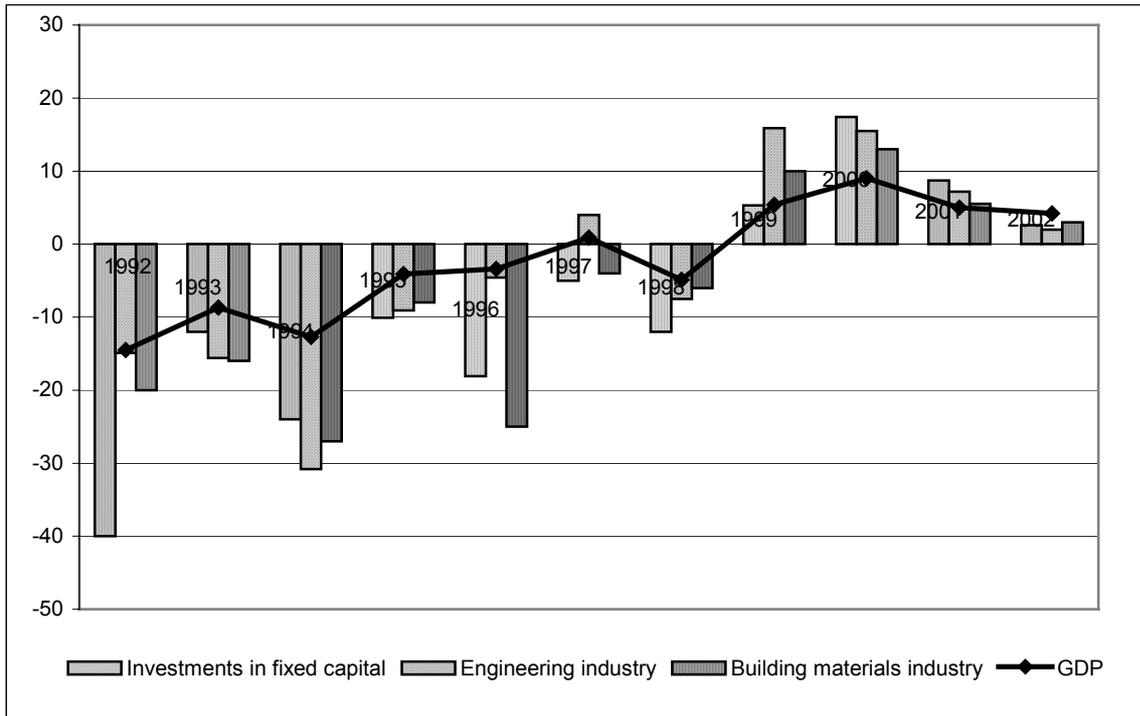


Fig. 50. Changes in dynamics of investments in fixed capital and output of capital-generating branches in the 1992-2002 period, % to the previous year figure.

In 2002, dynamics of demand in investment was determined by the combined effect of factors which influenced changes in sectorial, technological and reproductive structure of the national economy.

Reallocation of investment flows was accompanied by growth in the share of the service sector. The specifics of economic growth consisted in extensive development of infrastructure branches. In the 1999-2002 period, transport, communications and commerce accounted for 25 percent of the total volume of investments in fixed capital, as against 15 percent on the average in the 1992-1996 period. Growth in investment activity in infrastructure branches and growth in demand in services of such branches was an indicator of existence of potential for economic growth, the more so since in investment activity in that sector priority was given to long-term objectives. That enabled entrepreneurs to expand their presence on the market of services and accumulate resources for further development.

In analyzing the dynamics of investments with specific sectors of the economy, it is important to take into account the specifics of dynamics and structures of investments in housing construction. The specifics of the economic growth after the 1998 crisis consisted in transformation of an increase in the share of investment expenses on housing construction in the structure of investments. The structure of the housing completed shows that business activity in that sector of the economy is maintained primarily through contribution by private investors who play an ever greater role; such private investment accounts for 80 percent of the housing completed. It is also to be noted that in the past decade individuals also had ever more important role to play in financing of housing construction. The level of investment activity by individuals depends to a great extent on dynamics of prices on housing and amounts of individuals' savings. In the structure of housing completed, the share of houses built by

individuals at their own expense and with the use of loans amounted to 42.1 percent in 2002, as against 41.3 percent in 2001.

In conditions of economic growth, dynamics of investments in industry were influenced by significant changes in the sectorial structure. Pronounced upsurge in investment in industry began late in 1998. Starting from October 1998, rates of growth in investment in industry were much higher than the rates of growth in industrial output; that investment growth was the principal generator of economic growth. In the 1999-2001 period, the annual average increase in investment in fixed capital amounted to 12.2 percent with the increase in the volume of industrial output amounting to 7.3 percent. Growth in investment in fixed capital had a very strong effect on the dynamics of output and was accompanied by fast expansion of production in all branches of the investment complex. In 2001, growth in the volume of output on the 1998 figure amounted to 50.5 percent in engineering industry, to 40.0 percent in building materials industry and to 27.3 percent in building industry (volume of jobs and services). In 2002, the situation began to change. In a situation where rates of growth in industrial output started to slow down (that was a general trend) reduction in demand in investment became faster. In the total volume of investments in fixed capital, the share of industry decreased by nearly 1 point on the 2001 figure. It is to be noted that in 2002 the rates of growth in engineering industry were slower than the dynamics of investment, which situation limited potential of transformation changes in reproduction of fixed capital. In 2002, in the total volume of investments, expenses related to purchase of machine-tools and equipment fell to 37.0 percent, as against 38.0 percent in the previous year. In the total volume of investments in equipment, the share of expenditure on purchase of imported equipment increased. In 2002, it amounted to 8.8 percent of the total volume of investments in fixed capital, increasing by 0.4 points on the 2001 figure.

Table 16

Structure of investments in fixed capital by the type, % of the total

| | 1998 | 1999 | 2000 | 2001 | 2002*) |
|--------------------------------------|------|------|------|------|--------|
| Investments in fixed capital – total | 100 | 100 | 100 | 100 | 100 |
| including: | | | | | |
| housing | 16.3 | 14.3 | 10.7 | 9.8 | 12.1 |
| Non-dwelling buildings | 45.1 | 41.4 | 43.6 | 43.6 | 43.6 |
| Machine-tools and equipment | 29.9 | 36.4 | 35.7 | 38.0 | 37.0 |
| Other | 8.7 | 7.9 | 10.0 | 8.6 | 7.3 |

*Preliminary data of the Ministry of Economic Development of the Russian Federation.

Source: The State Committee for Statistics of the Russian Federation.

At the same time, the share of expenditure on purchase of machine-tools and equipment in the overall volume of investment expenses remained high as compared to the 1992—1998 period. In the structure of capital expenditure, an increase in the volume of expenses on implementation of highly efficient modernization and re-equipment projects was observed, while the number of new construction projects was reduced.

In conditions of change in the market situation, enterprises gave priority to strengthening of their positions on the domestic market, both through increasing competitiveness of their products on the market of domestic produce and through development of production of goods serving as substitutes for imported products. It is to be noted that motivation of investment activity changed as well. In a situation where financial resources were strictly limited,



investment decisions were influenced by such considerations as upgrading of quality of products, ensuring of products' correspondence to present-day standards, expansion of the product range, as well as technological aspects of reduction of the cost of production. According to the State Committee for Statistics of the Russian Federation, investments made to build up production capacities while keeping the range of products unchanged were made by around 35 percent of industries, while those with expansion of the range of products, by 28 percent of industries; it is also to be noted that in making investments 37 percent to 46 percent of industrial enterprises sought to improve economic efficiency of their production through automation, mechanization, introduction of new technologies, reduction of costs of production and economy of energy resources.

Investment activity in the past few years was primarily aimed at active utilization of formerly unused competitive capacities and modernization of production. Analysis of utilization of production capacities shows that their potential is almost exhausted, since much of the equipment cannot be used in production due to being obsolete and worn. Utilization of production capacities differs greatly with different industries. In primary industries characterized by lower share of added value, utilization of equipment is much higher than in manufacturing industries. Even within the same branch of the industrial sector, in different types of production equipment can be utilized to different extents.

In manufacturing industries, especially in highly technological production, potential for increasing of output depends on quality of equipment and technologies applied. Fixed capital in manufacturing industries being so worn, it cannot be fully utilized and opportunities for further growth in output are rather limited.

*Table 17***Average annual extent of use of production capacities in production of specific types of industrial products, %**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|------|------|------|------|------|------|------|
| Prime petroleum refining | 62 | 61 | 65 | 60 | 62 | 68 | 68 |
| Coal | 72 | 72 | 70 | 66 | 73 | 84 | 87 |
| Cast iron | 70 | 70 | 73 | 71 | 84 | 86 | 86 |
| Steel | 67 | 68 | 68 | 63 | 71 | 77 | 77 |
| Rolled stock (ferrous metals) | 66 | 65 | 67 | 59 | 63 | 72 | 78 |
| Market iron ore | 84 | 81 | 81 | 81 | 90 | 92 | 93 |
| Chemical fertilizer | 50 | 46 | 49 | 47 | 58 | 63 | 67 |
| Artificial resin and plastic-coal masses | 45 | 36 | 40 | 45 | 55 | 62 | 62 |
| Paintwork materials | 20 | 17 | 17 | 15 | 20 | 24 | 22 |
| Tires for cars, agricultural vehicles, motorcycles and scooters | 43 | 52 | 62 | 59 | 69 | 71 | 76 |
| Metal-cutting machine-tools | 24 | 18 | 16 | 13 | 14 | 17 | 18 |
| Press-forging tools | 13 | 7,8 | 7,8 | 10 | 10 | 13 | 18 |
| Tractors | 11 | 10 | 9,7 | 8,4 | 14 | 19 | 15 |
| Household refrigerators and deep freezers | 37 | 24 | 27 | 25 | 31 | 39 | 52 |
| Electric vacuum-cleaners | 19 | 13 | 14 | 12 | 21 | 20 | 20 |
| Household watches | 40 | 22 | 16 | 18 | 28 | 55 | 50 |
| Lumber | 31 | 28 | 27 | 29 | 34 | 39 | 39 |
| Plywood | 52 | 53 | 53 | 67 | 76 | 82 | 80 |
| Woodchip boards | 39 | 27 | 30 | 36 | 47 | 55 | 63 |

Table 17 (cont'd)

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|------|------|------|------|------|------|------|
| Cardboard | 41 | 29 | 35 | 38 | 52 | 63 | 67 |
| Paper | 57 | 49 | 47 | 54 | 70 | 79 | 81 |
| Cement | 45 | 36 | 36 | 36 | 39 | 44 | 48 |
| Wall materials | 50 | 41 | 38 | 34 | 45 | 48 | 49 |
| Corrugated asbestos board | 34 | 27 | 27 | 29 | 39 | 41 | 45 |
| Soft roofing and insulation materials | 38 | 30 | 30 | 34 | 37 | 40 | 43 |
| Nonmetallic building materials | 52 | 45 | 43 | 45 | 49 | 56 | 58 |
| Ferroconcrete structures and prefabricated items | 32 | 24 | 20 | 20 | 22 | 28 | 33 |
| Rough cotton fabrics | 28 | 24 | 31 | 29 | 39 | 55 | 58 |
| Linen cloth and rough hemp fiber | 32 | 27 | 25 | 17 | 23 | 28 | 32 |
| Ready-made woolen cloth | 16 | 12 | 12 | 11 | 14 | 17 | 18 |
| Leg-wear garments | 36 | 27 | 27 | 24 | 42 | 49 | 51 |
| Knitted goods | 21 | 13 | 12 | 13 | 24 | 28 | 33 |
| Shoes | 23 | 18 | 17 | 14 | 23 | 29 | 32 |
| Beet sugar | 86 | 85 | 81 | 75 | 77 | 76 | 81 |
| Bread and bakery | 44 | 41 | 38 | 35 | 39 | 40 | 40 |
| Canned vegetables | 21 | 15 | 16 | 20 | 24 | 32 | 45 |
| Meat | 32 | 25 | 19 | 17 | 14 | 18 | 18 |
| Sausages | 54 | 52 | 44 | 41 | 42 | 52 | 55 |
| Butter | 35 | 29 | 27 | 26 | 24 | 25 | 24 |
| Whole milk products (converted into milk) | 24 | 24 | 24 | 26 | 28 | 32 | 35 |
| Flour | 53 | 46 | 48 | 47 | 49 | 45 | 45 |
| Cereals | 39 | 28 | 27 | 28 | 22 | 24 | 27 |

Source: The State Committee for Statistics of the Russian Federation.

In the 2000-2002 period, average utilization of capacities in petroleum refining amounted to 68 percent, while the level of economic efficiency, to 80-85 percent. It is to be noted that the share of secondary processing (deep refining) in that branch was rather low, while existing facilities were worn extremely. In chemical industry and petrochemical industry, because of a favorable situation on foreign markets growth in domestic consumer demand on those industries' produce, the ratio of utilization of production capacities amounted to 53 percent, as against 43 percent in 1998. In engineering industry and metal-working industry, positive trends were maintained through optimization of production capacities, upgrading of quality of certain types of machine-tools and equipment, use in production of new developments and application of new highly efficient technologies. However, in that branch of industry in general and in individual types of production within that branch in particular utilization of production capacities is rather low.

The rate of wear and the age of fixed capital are such that there is an urgent need for modernization. As regards the extent of utilization of production capacities, engineering industry still ranks last among the branches of the industrial sector. A long pause in investment brought about conservation of the structure of engineering industry; in conditions of a switch-over to an investment based model of economic growth lack of equipment and machine-tools became a factor limiting expansion of production. With its produce failing to meet the quality standards prevalent on the market, engineering industry is unable to achieve such volume of sales as would permit it to make large-scale investments in modernization of its production capacities, which makes the situation even worse.



Table 18

Age structure of fixed assets (machine-tools and equipment) in the industrial sector in the 1991-2002 period, % as of the beginning of the year

| | <i>Total equipment</i> | <i>Including equipment aged (years):</i> | | | | | <i>Average age (years)</i> |
|------|------------------------|--|-------------|--------------|--------------|----------------|----------------------------|
| | | <i>Up to 5</i> | <i>6-10</i> | <i>11-15</i> | <i>16-20</i> | <i>Over 20</i> | |
| 1991 | 100 | 29,4 | 28,3 | 16,5 | 10,8 | 15,0 | 10,8 |
| 1996 | 100 | 10,1 | 29,8 | 21,9 | 15,0 | 23,2 | 14,3 |
| 2001 | 100 | 4,7 | 10,6 | 25,5 | 21,0 | 38,2 | 18,7 |
| 2002 | 100 | 5,7 | 7,6 | 23,2 | 22,0 | 41,5 | 19,4 |

Source: The State Committee for Statistics of the Russian Federation.

Since capital assets could not be replaced in a timely manner, inefficient machine-tools and equipment continued to be used for longer periods of time. In many cases, capital assets are written off only when they can no longer be used in production due to their physical wear. In 2001-2002 period, 81-84 percent of machine-tools and equipment were written off because of their physical wear and only 11-13 percent, because of their inefficiency. Replacement of worn equipment still remains the main goal of investment in fixed capital. As capital assets are getting very old, they are becoming ever more vulnerable to man-caused accidents and natural calamities. In the 2001-2002 period, such factors accounted for 1-2 percent of the total volume of capital assets written off and 2-3 percent of the volume of machine-tools and equipment written off in the industrial sector.

In assessment of the state and prospects of development of the Russian national economy, it is important to take into account the fact that the dynamics of investment activity is motivated to a great extent by the market situation. In 2002, the specifics and dynamics of demand in investment were largely influenced by reduction of the fuel complex's share in the total volume of investments in capital assets, both in the national economy as a whole and in the industrial sector, in particular. Taking into account the fact that transport, communications and the fuel complex accounted for nearly 50 percent of the total volume of investments in the national economy, it becomes clear that demand in investment and financial and economic situation in those branches have a considerable effect on dynamics and structure of the overall demand in investment.

Fuel industry retains dominating positions in the structure of investments; it accounts for 49.8 percent of the total volume of investments in the industrial sector, nearly 1/3 of investments are made in oil industry. In the past two years, extensive expansion of the oil and gas complex's demand in investment products was a major factor contributing to expansion of business activity in engineering industry and building materials industry. In 2002, due to cumulative effect of domestic and foreign factors profitability in fuel industry was reduced nearly by half on the 2001 figure and that had a negative effect on demand in investment. In conditions of preservation of the situation where revenues are traditionally concentrated in export-oriented branches of the oil sector and the primary production sector and there are no mechanisms of inter-branch capital mobility, growth in rates of investment and radical changes in reproduction of capital assets could hardly be expected. With the rates of growth in investment in fuel industry slowing down, that industry's economic performance declined. In 2002, in oil industry the rate of completion of new oil wells fell by 21.9 percent, volumes of production drilling, by 16.8 percent and volumes of exploring drilling, by 40.2 percent.

Changes in the structure of output of engineering industry were determined to a great extent by the growth in demand in engineering products on the part of metallurgical indus-

tries, oil industries, transport and communications. It was in those branches of the economy that particularly high rates of growth in investment in production were observed in the 1999-2002 period. Despite growth in the rates of production in related machine-building industries such factors as insufficient volumes of output and inefficient structure of production of machine-tools and equipment prevented proper reproduction of capital assets. Obsolete material and technical basis in engineering industry and low rates of investment activity in machine-building industry proper hampered sustained economic growth and high demand in investment. In machine-tool industry, instrument-making industry and electrical industry (industries determining the resource base for modernization of engineering industry) another recession has been observed since 2001.

In addition to that, demand in investment in the 2000-2002 period was mostly initiated by oil industry and metallurgical industry alone. Though exporters increased their volume of investment expenses on development of profile production they invested rather cautiously the rest of their available funds in the Russian economy. For that reason, the gap between export-oriented industries and a greater part of the rest of the economy became ever more wider. In 2002, the volume of output in the oil sector fell by 17.8 percent due to reduction in revenues and decrease in demand in investment. In machine-building for metallurgical industry, recession has been observed since 2001.

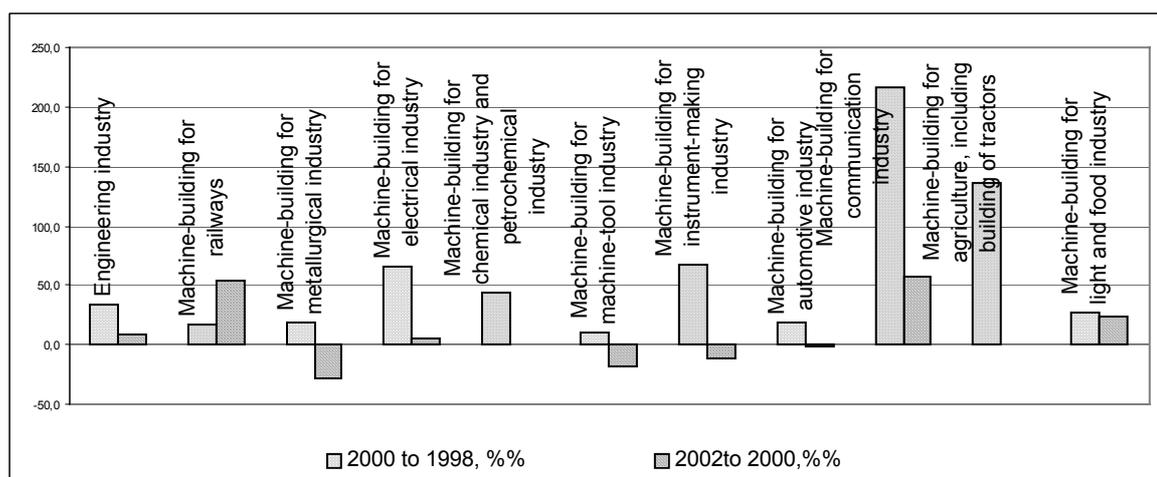


Fig. 51. Changes in the rates of production for branches of engineering industry in the 1999-2000 period and the 2000-2002 period, %

Though in the 2001-2002 period the share of investments in manufacturing industries somewhat increased, it is important to take into account the fact that investment intensive branches of the industrial sector and branches of the consumer complex accounted for 6.8 percent and 4.6 percent of the total volume of investments in the industrial sector, respectively.

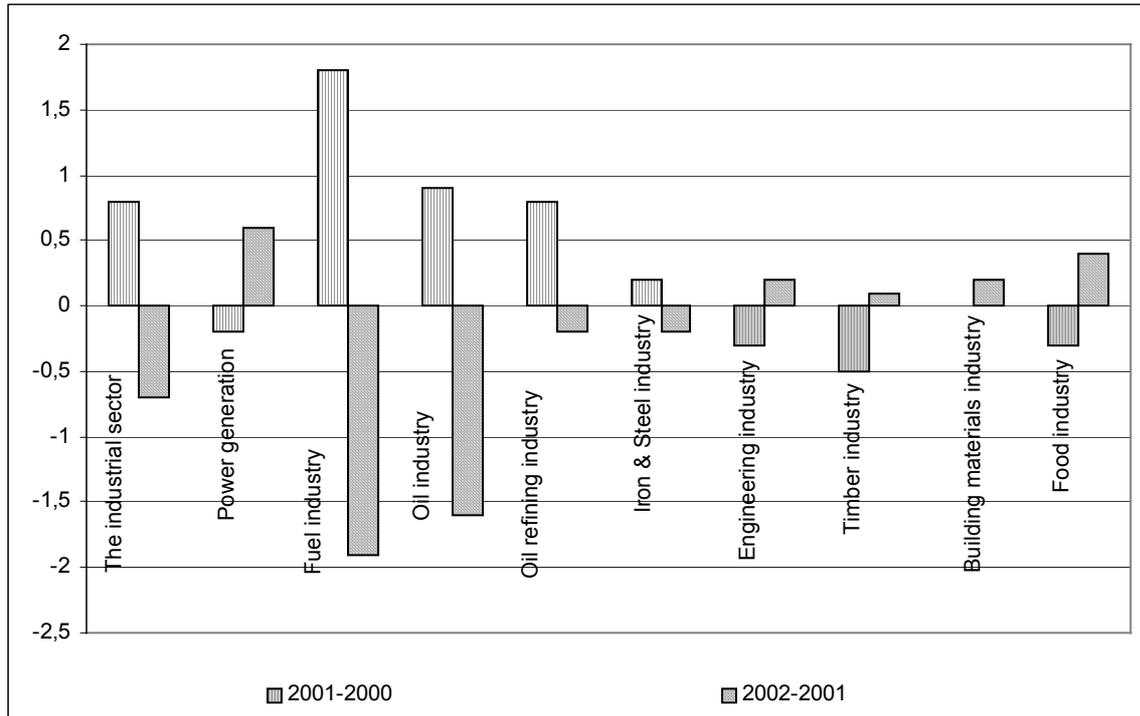


Fig. 52. Changes in the structure of investments in fixed capital for branches of the industrial sector in the 2000-2002 period, % against the previous year.

Comparison of dynamics of the GDP in respect of different components of ultimate demand shows that investment expenses tend to fluctuate to a greater extent than consumer expenses, so analysis of the dynamics and structure of their changes gives us a better idea of trends in economic activities. With the share of gross accumulations in capital assets in the GDP going down continuously for a long period of time, normal cycle of reproduction of capital assets was broken. Calculations of the structure of gross accumulations in capital assets show that there has been absolute reduction in the volumes of net accumulations since 1995. In such conditions, investment activity was limited to preservation of accumulated potential. Comparison of dynamics of production and efficiency of utilization of labor and capital reveals that with a tendency towards decline in technical and economic parameters of production and investment activity branches of the industrial sector faced an «exchange» of factors of production. It is to be noted that in the 1999-2000 period growth in investment in the industrial sector had a considerable effect on efficiency of labor utilization. Growth in labor efficiency in the industrial sector increased by 23.2 percent during that period with higher efficiency in utilization of labor attained practically in all branches. It needs to be reminded that in the above period growth was ensured through engagement in production of reserve capacities and additional labor force. However, as there was no radical change in the production and technological base, as soon as the rates of investment activity started to decrease in the 2001-2002 period, the rates of growth in labor efficiency slowed down. High proportion of manual labor helped compensate for shortage of investment to a certain extent, but, at the same time, caused technological stagnation in production. The situation was made even worse by the fact that in a number of branches of the economy absolute reduction in physical volume of capital assets was observed. Recession of fixed capital in the industrial sector was par-

ticularly dramatic in manufacturing industries, especially, in engineering industry, chemical industry and light industry. The high rate of physical wear and moral depreciation of fixed capital and unfavorable age structure of the fleet of machine-tools and equipment considerably limit economic growth.

Among the principal factors which caused slowing down of investment activity in the 2001-2002 period, worsening of the financial situation in branches of the real sector of the economy is worth mentioning in particular. From the beginning of 2002, dynamics of balance profit was characterized by gradual slowing down of the rates of its decline in each quarter on the corresponding periods in 2001.

With industrial entities' financial results declining in 2002 (according to preliminary data), their share in the sectorial structure of balance profit of the economy decreased by 14.1 points on the corresponding period in 2001. Reduction in the value of that index for the industrial sector as a whole was caused by its reduction in export-oriented industries (by 10.6 points, including in fuel industry, by 6.4 points).

Positive effect on formation of balance profit in economy was produced by branches of the services sector. In 2002, the volume of balance profit exceeded the 2001 figure by 33.0 percent in communication industry, by 20.8 percent in transport and by 8.7 percent in commerce and public catering. However, growth in profit gained in the services sector did not compensate for the negative effect produced by reduction in profit in the industrial sector and building industry. As a result, balance financial result of enterprises and entities of all branches of the economy amounted to about 85.1 percent in 2002.

Reduction in profitability of branches of the fuel complex and metallurgical complex which form over 25 percent of demand in investment in the national economy had a negative effect on business activity in building industry. In January-September 2002, the share of profit in the structure of sources of financing investments was 4.9 points lower than in the corresponding period in 2001. The situation was made even worse by the effects of such adverse factors as high cost of commercial loans, insignificant volumes of financing of investments through budget funds and other financial institutions, high investment risks due to lack of mechanisms ensuring protection of the rights of domestic and foreign investors and lack of efficient mechanisms of transformation of households' savings into investments..

In January-September 2002, the ratio between own capital and borrowed funds in the structure of sources of financing of investments in capital assets remained nearly the same as in 2001. As compared to January-September 2001, the share of profit allocated for investment purposes in the structure of own capital of enterprises fell by 4.9 points, while the rates of depreciation rose by 4.1 points. It is to be noted that abolition from January 2002 of the tax benefit in respect of profit allocated for financing of capital investments in production facilities and housing had a negative effect on the dynamics of investment activity. Early in 2002, enterprises took a wait-and-see attitude towards investment activity due to a switch-over to new conditions of taxation.

In the structure of borrowed funds, the share of loans from banks increased by 1.2 points. As a result of positive developments in Russia's national economy in the past few years, Russia was assigned better ratings by international rating agencies than before. For example, according to the rating (as of the end of September 2002) by A. T. Kearney (a consulting company), Russia became more attractive to foreign investors; as regards the confidence index, Russia moved from 32nd place to 17th place with the value of that index growing by 19 percent (in October 2002 it amounted to 0.99). For the first time since 1998, Russia ranked



again among the 25 countries most attractive to foreign investors. Such a high ranking in the confidence index was gained by Russia thanks to sustained growth in its GDP and ability to meet its debt obligations and make investments in the economy of foreign countries. The investment class of ratings reflected Russia's high ability to meet its financial obligations, the country's financial stability and its high sensitivity to unfavorable economic conditions. Russia is just one point (BB+) short of reaching the Standard & Poor's foreign currency investment class of long-term ratings, two points (BB and BB+) short of that of the Fitch Ratings agency and two points (Ba2 and Ba1) short of that of the Moody's Investors Service.

With enterprises' profits going down, own capital limited and opportunities for long-term borrowing scarce, slowing down of the rates of domestic demand in investment is observed again in Russia.

In conditions of economic growth, it has become obvious that investment management is not coordinated with the dynamic processes of restructuring of Russian economy. Lack of investment financial institutions, underdevelopment of the stock market and inefficient legal system complicate the process of borrowing of funds and drawing of banking loans. There is no such mechanism in the economy as would permit inter-branch capital mobility, which complicates investment activity on the level of enterprises, branches of the economy and regions. As is known from experience, in a situation where saving reserves have been formed making of investment decisions requires a prudent approach and rationalization of investment flows. Lack of a long-term development strategy and business priorities reduces motivation for making of long-term investments.

*Table 19***Structure of investments in fixed capital by sources of financing, % of the total**

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002* |
|--|------|------|------|------|------|-------|
| Investment in fixed capital — total | 100 | 100 | 100 | 100 | 100 | |
| Including by the source of financing: | | | | | | |
| own capital | 60,8 | 53,2 | 52,4 | 47,7 | 50,3 | 48,6 |
| including: | | | | | | |
| profit | 13,2 | 13,2 | 15,9 | 23,4 | 26,6 | 20,0 |
| depreciation | 26,5 | H/д | H/д | 18,1 | 19,3 | 24,4 |
| borrowed funds | 39,2 | 46,8 | 47,6 | 52,3 | 49,7 | 51,4 |
| Including budget funds (funds of the consolidated budget) | 20,7 | 19,1 | 17,0 | 22,0 | 19,8 | 19,9 |
| including: | | | | | | |
| federal budget funds | 10,2 | 6,5 | 6,4 | 6,0 | 5,8 | 5,6 |
| Funds from budgets of constituent entities of the Russian Federation and local budgets | 10,5 | 12,6 | 10,6 | 16,0 | 14,0 | 13,1 |

*The preliminary data.

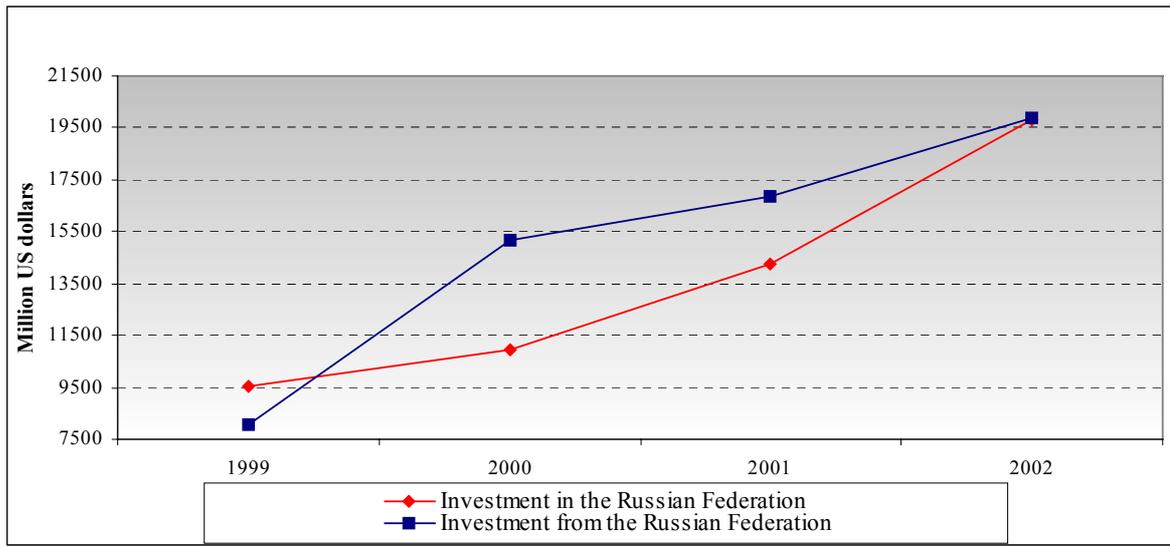
Source: The State Committee for Statistics of the Russian Federation.

Foreign Investments in Russian Economy

Analysis of the dynamics of foreign investments reveals that as soon as economic growth resumes foreign investors increase their presence on the Russian market. Low investment activity in the 1998-1999 period, which was caused both by Russia's domestic problems and a general recession in business activity on international markets was followed by expan-

sion of demand in investment services in the 2000-2002 period. For the past few years, the volume of domestic investments increased by 1/3 on the 1998 figure. It is also to be noted that the growth in the volume of foreign investment has been faster than in domestic investments in fixed capital.

As of January 1, 2003, accumulated foreign capital in the national economy of the Russian Federation, including investments from CIS countries, amounted to 42.9 billion US. Dollars.



Source: The State Committee for Statistics of the Russian Federation

Fig. 53. Foreign investment in the Russian Federation and investment from the Russian Federation abroad in 1999-2002 period.

Table 20

Structure of foreign investment in Russia's national economy

| | In mil US dollars. | | | | %, to the previous year figure | | | |
|-------------|--------------------|--------|-----------|--------|--------------------------------|--------|-----------------|--------|
| | Total | Direct | Portfolio | Other | Total | Direct | Portfolio | Other |
| 1999 | 9 560 | 4 260 | 31 | 5 269 | - 18,8 | 26,7 | 83,9 % decrease | - 35,9 |
| 2000 | 10 958 | 4 429 | 145 | 6 384 | 14,6 | 4,0 | 370 % increase | 21,2 |
| 2001 | 14 258 | 3 980 | 451 | 9 827 | 30,1 | - 10,1 | 210 % increase | 53,9 |
| 2002 | 19 780 | 4 002 | 472 | 15 306 | 38,7 | 0,6 | 4,7 | 55,8 |

Source: The State Committee for Statistics of the Russian Federation.

In 2002, the total volume of foreign investment in the non-financial sector of Russia's economy (not counting in monetary and credit regulation authorities and commercial and savings banks), including the US dollar equivalent of investments made in rubles, amounted to 19.78 billion US dollars.



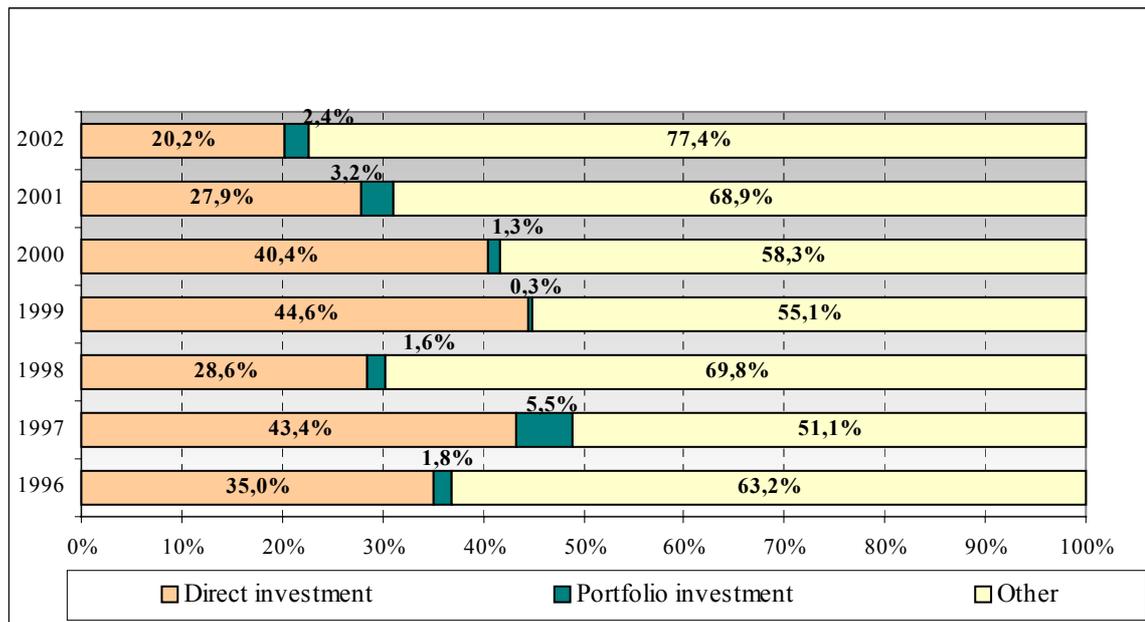
Investment in Russia has been characterized by a low level of the volume of direct foreign investment, which is an adverse factor. As regards the volume of per capita accumulated direct foreign investment in the 1993-2001 period, Russia ranks 21st among the 25 Central and Eastern European countries and CIS states. As regards the ratio between the volume of foreign investment and the GDP, the situation is even worse. Even in 1997, when the inflow of foreign investment was record high Russia with the value of that ratio amounting to 0.1 percent ranked last but one among the countries from Central and Eastern Europe and CIS countries. In the 1995-2002 period, structure of foreign investment in Russia underwent considerable changes. In 1995, direct foreign investment accounted for 67.7 percent, while in 2002, for a mere 20.2 percent.

Unlike portfolio investment, direct foreign investment less sensitive to changes in the situation on the market. Portfolio investment reacted promptly to the 1998 crisis and the economic growth in the 2000-2002 period. In 1997, portfolio investment was record high and accounted for 5.5 percent of the total volume of foreign investment in Russia's economy. After a drop in its share to 0.3 percent in 1999 due to withdrawal by non-residents from the Russian stock market and its fast growth in the past few years, the share of portfolio investment has reached the level of 2.3 percent. Growth in portfolio investment is one of the symptoms of Russia having overcome the crisis. In developed countries, the share of portfolio investment is much higher than that of direct investment; it is to be noted that developed countries are major donors and recipients of portfolio investment.

Dynamics of direct foreign investment are strongly affected by the following factors:

- low competitiveness of direct investment as compared to the alternative of placement assets in commodity loans (which loans pay off soon) and deposits (of foreign legal entities) with Russian banks, which account for a greater portion of foreign investment related to the «other» category. Unlike direct investment, the above-mentioned alternative forms of investment are not only more profitable, but also better protected from investment risks;
- high investment risks for foreign investors, since investors' proprietary rights and title to profit are not adequately ensured.
- unstable situation on the Russian stock market and low efficiency of its operations due to its underdevelopment and dependence on the state of the global economy and stock market situation in the United States, Europe and developing countries.

In 2002 like before, 'other' investment accounted for a greater portion of foreign investment in Russia's economy (such investments are largely made up of loans extended by international financial institutions and investors' investment in state-issued securities), which is a factor adversely affecting the investment situation in the Russian Federation (as regards the mid-term prospects).



Source: The State Committee for Statistics of the Russian Federation.

Fig. 54. Structure of foreign investment in Russia's national economy in the 1996-2002 period, % to the total

Dynamics of investment are different in different branches of Russian national economy, which has caused structural changes. It is also to be noted that the share of investment in the services sector has been growing.

Table 21

Distribution of foreign investment between different branches of Russia's national economy in the 2000-2002 period

| | In mil US dollars | | | %, of the previous year's figure | | | %, of the total | | |
|--|-------------------|-------|-------|----------------------------------|--------|--------|-----------------|------|------|
| | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 |
| Industrial sector | 4 721 | 5 662 | 7 332 | - 3,2 | 19,9 | 29,5 | 43,1 | 39,7 | 37,1 |
| Transport and communications | 1 947 | 1 259 | 610 | 114,7 | - 35,3 | - 51,5 | 17,8 | 8,8 | 3,1 |
| Commerce and public catering | 1 954 | 5 290 | 8 800 | 20,5 | 170,7 | 66,4 | 17,8 | 37,1 | 44,5 |
| commercial activities related to market services | 271 | 792 | 1 355 | 42,6 | 192,3 | 71,1 | 2,5 | 5,6 | 6,9 |
| Finance, loans, insurance and pension provision | 274 | 127 | 130 | 140,4 | -53,6 | 2,4 | 2,5 | 0,9 | 0,7 |
| Other branches | 1 791 | 1 128 | 1 553 | - 3,2 | - 37,0 | 37,7 | 16,3 | 7,9 | 7,9 |

Source: The State Committee for Statistics of the Russian Federation

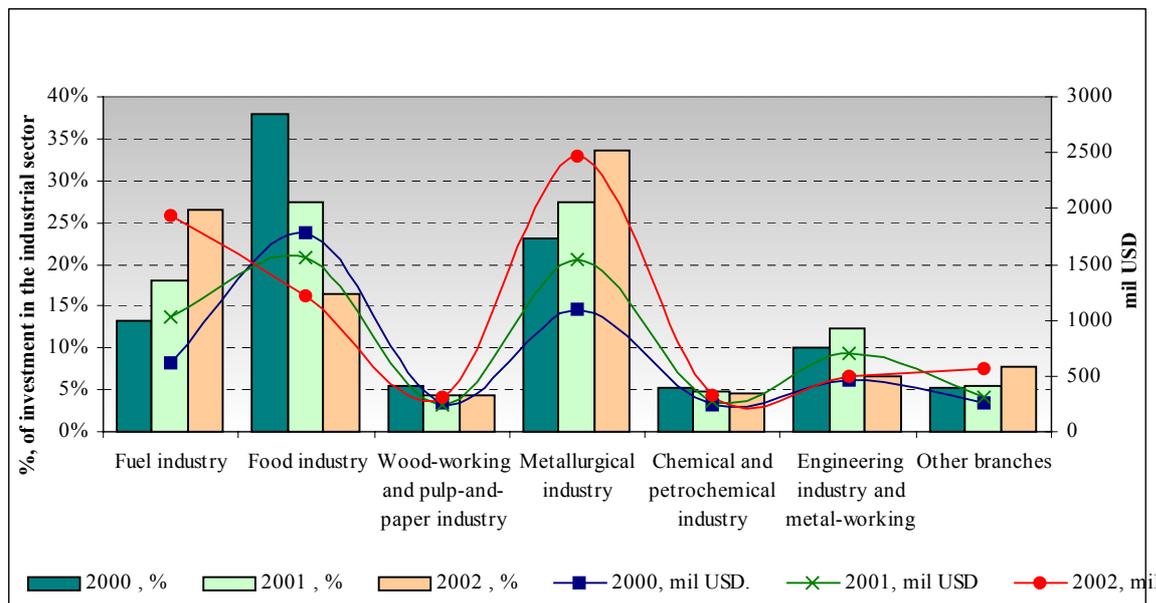
In the past few years, foreign investors have shown ever greater preference to commerce and public catering, since investment in the those branches pays off quickly. In 2002,

commerce and public catering accounted for 24.0 percent of direct investment, against 19.0 percent in 2001. It is to be noted that in 2002 the ‘other’ investment accounted for a larger portion of foreign investment in above branches of the economy (86.7 %); such ‘other’ investment are mostly made up of loans.

Though in 2002 the rates of growth in foreign investment in the industrial sector were somewhat lower than the rates of growth in the aggregate volume of foreign investment in Russia’s national economy, direct investment in the industrial sector increased by 10.2 percent on the 2001 figure and amounted to 1,932 mil US dollars (48.2 percent of the combined foreign investment in Russia’s national economy). ‘Other» investment in the industrial sector grew by 43.3 percent on the 2001 figure and amounted to 5,246 billion US dollars (34.3 percent of the combined other foreign investment in Russian economy). Portfolio investment in the industrial sector decreased by 37.9 percent.

Significant changes in the structure of foreign investment were caused by increment in foreign investment in Russia’s oil and gas sector and metallurgical complex. The share of fuel industry in the combined volume of direct foreign investment grew by 5.0 points on the 2001 figure with the share of food industry and engineering industry decreasing by 2.2 points and 1.4 points, respectively.

In 2002, 33.7 percent of the total volume of investment in the industrial sector went to metallurgical industry (against 27.3 percent in 2001), 27.4 percent, to the fuel and energy sector (against 18.3 percent in 2001), 16.5 percent, to food industry (against 27.5 percent in 2001).



Source: The State Committee for Statistics of the Russian Federation

Fig. 55. Distribution of foreign investment between different branches in the industrial sector in the 2000-2002 period

In the past few years, serious changes have been observed in geographic structure of foreign investment. While before, Western European countries were principal donors, in the past few years the United States has become the biggest investor. This can be explained by

US companies' extensive operations in the fuel and energy sector, as well as expansion of business activity of food companies. As regards the volume of accumulated direct investment, the United States ranks first and accounts for 27.0 percent of the total volume of direct foreign investment, about the same share as the combined investment of Germany, Great Britain and France.

In 2002, 93 countries made investments in Russia's economy, as against 109 countries in 2001. It is to be noted that in 2002 five largest investors accounted for 63.8 percent of the combined volume of foreign investment accumulated as of January 1, 2003. In 2000 and 2001, that figure was 73.2 percent and 67.7 percent, respectively. In 2002, five largest exporters of capital into Russia also accounted for 60.1 percent of direct accumulated investment, 67.0 percent of portfolio investment and 55.2 percent of other investment, while in 2001 those figures were 63.7 percent, 57.9 percent and 72.9 percent, respectively.

Table 22

Accumulated foreign investment by major investor- countries

| | Accumulated as of 01.01.2003, mil USD. | | | |
|-----------------|--|---------------|--------------|---------------|
| | Total | Direct | Portfolio | Other |
| USA | 5 522 | 4 220 | 68 | 1 234 |
| Germany | 8 146 | 1 714 | 384 | 6 048 |
| France | 3 033 | 303 | 0,1 | 2 730 |
| Great Britain | 5 054 | 2190 | 128 | 2 736 |
| Cyprus | 5 627 | 3 927 | 305 | 1 395 |
| The Netherlands | 2 850 | 2 398 | 21 | 431 |
| Other countries | 12 696 | 5 599 | 567 | 6 530 |
| Total | 42 928 | 20 351 | 1 473 | 21 104 |

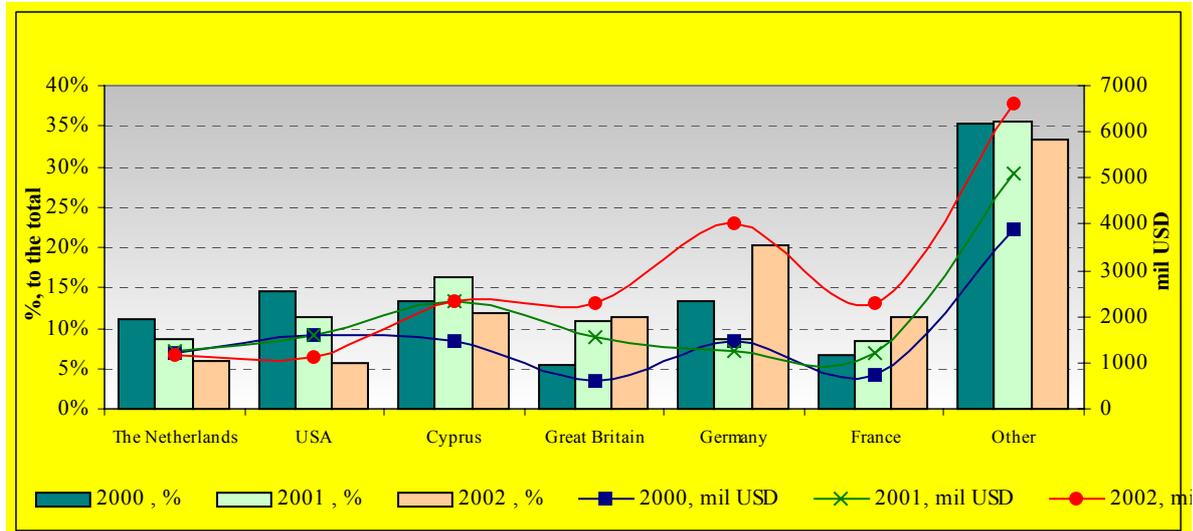
Source: The State Committee for Statistics of the Russian Federation

In 2002, investment from the USA fell by 29.4 percent, investment from France, by 1,4 percent and investment from the Netherlands, by 6.5 percent, while investment from other countries increased. In 2002, investment from Germany amounted to 4 billion USD (that is, 220 percent more than in 2001), while investment from Great Britain, to 2.3 billion USD (46 percent growth on the 2001 figure).

In 2002, German investment mostly went to trade and public catering. In those sectors, German investors invested 3,065 million dollars, or 76.6 percent of the total amount of investments from Germany in 2002. US investors prefer to invest in the industrial sector: 431 million US dollars (38 percent of the total US investment) went there. British investors show interest in trade and public catering (1,071 million USD, or 47.4 percent of the total investment from the UK in 2002), the industrial sector (634 million USD, or 27.9 percent) and general commercial activities ensuring functioning of the market (457 million USD, or 20.1 percent). Joint Russian-French ventures mostly engage in reseller services, advisory activities, financial services and other services.

The geographic distribution of sources of investment in Russia and targets of Russian investment abroad is somewhat alarming. While the investment attracted into Russia comes from countries with low levels of profitability and risk, Russian investments go to countries

with unstable economies and political systems and far higher levels of risk. Over half of Russian investments abroad go to Belarus, Iran, Liberia, Cyprus, British Virgin Islands, the Isle of Man, Moldova and Armenia.



Source: The State Committee for Statistics of the Russian Federation

Fig. 56. Geographic structure of foreign investment in Russia's economy in the 2000-2002 period

That is quite important since analysis of foreign investment in Russia reveals a continuous growth of the share of investment in 'tax paradise' countries. Comparative analysis of data on the dynamic and the structure of foreign investment suggests that a certain portion of exported capital returns to Russia disguised as foreign investment. It is widely known that foreign-economic operations transacted through offshore zones, especially Cyprus, constitute the biggest channel of hidden export of capital from Russia. According to Russian statistics, Cyprus ranks among the five countries with the largest amounts of investment in Russia. As of January 1, 2001, accumulated investment from Cyprus amounted to 5,627 million USD (while investment from the US amounted to 5,522 million USD and from the UK, to 5,054 million USD).

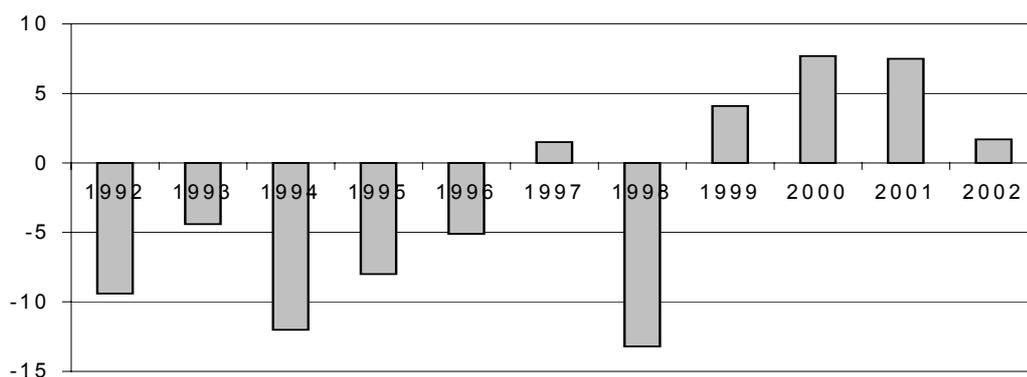
It is also indicative that nearly 70 percent of investment from Cyprus is direct investment, which is an absolute record unmatched by far by investment from any other foreign country. It is to be supposed that investment formally declared as coming from Cyprus does not actually originate in that country. It is likely that such funds are, in fact, Russian capital, which is illegally exported by its owners, legalized and then brought back to Russia as 'foreign investment'. Cyprus is by no means the only country from which Russian capital returns as 'foreign investments'. There are grounds to believe that a considerable proportion of investment from all the investor countries originates in capital illegally exported from Russia. Those grounds are as follows. Firstly, capital exported from Russia would meet with severe competition in entry on the international markets, while in Russia re-investment of domestically accumulated capital is much easier. Secondly, in Russia, much higher profit can be gained. Thirdly, re-investment in the form of 'foreign investment' can create much better guarantees for the capital.

It is difficult to assess the amount of capital exported from Russia and later brought back in the form of ‘foreign investment’. It seems likely that its share in foreign investment is quite large and accounts for a considerable proportion of the funds actually invested.

3.4. Agrifood Sector

In 2002 growth in Russian agriculture continued. While in 2001 it was largely attributed to weather conditions and the correspondingly high crop yields, the 2002 trends evidence that the sector’s recovery is due to its internal restructuring and improvement of the general economic situation in the country rather than to favourable weather. Today there are all grounds to assert that growth in the Russian agriculture is sustainable.

Within the first 6 months 2002 agricultural output was up 4% as compared with 2.3% in 2001. Due to the seasonal character of agricultural production, growth in the first half of a year is determined by livestock sector performance that is far less dependent on the weather factor. According to data of the RF State Committee for Statistics, the annual index of agricultural production in 2002 is only 101.7%. However, in all the preceding years the Committee reviewed its annual estimates by the middle of the successive year raising them by 1.5-2%. So, one can surely assert that the real agricultural growth in 2002 amounted to 3-3.5%.



Source: RF State Committee for Statistics.

Fig. 57. Russian agriculture: percent change of annual output in 1992-2002

Despite the continuing upward trend, the general agriculture’s performance in 2002 deteriorated eventually due to the overproduction of almost all agricultural products. It resulted in the drop of real (in some months – even nominal) purchase prices and respectively – in lower profits received by producers, smaller investments and larger share of insolvent farms.

Food industry continues to demonstrate rather high growth rates (about 6.5%) especially in the meat and milk sub-sectors (10.5%). However, these indicators are below the previous year level.

It’s noteworthy that processing and food industry grow faster than agricultural production. This is an evidence of their continuous reliance on imported raw inputs. By May 2002 the pre-crisis (1998) level of food imports has been restored. As a result the negative agrifood trade balance started to expand again despite growing exports.

Lowering of the sector’s profitability resulted in smaller investments. Farm machinery building fell by nearly 23% and by the end of the year the trend was aggravating, growth in

the production of protein and vitamin additives discontinued, investments in agriculture almost stopped to increase, less new capacities were put in operation in agriculture and food industry (except oil extracting facilities).

So, the window of opportunities that opened before the country's agrifood sector after the ruble devaluation in 1998 is closing, and other incentives are needed to foster further development.

The exhaustion of after-crisis growth factors goes in line with strengthening of protectionist trends in economic policies. Slower growth rates condition the wish to protect domestic market from resuming imports, and to defend protectionism agribusiness companies use the lobbying capabilities that they have acquired during the recovery. At the same time, the deviation from liberal principles on the world agricultural markets induces retaliatory actions. All this results in broader application of "amber box" measures in agricultural policies.

In other words, 2002 became to some extent a turning point marking the shift from the after-crisis recovery to a new pattern of growth.

3.4.1. Production trends in agriculture, upstream and downstream sectors

Agricultural production

In 2002 the total size of areas planted remained almost the same as in the previous year – 84.2 million hectares. Areas planted in sunflower and grains expanded (*Table 23*) in response to 2001 market situation. The protectionist policies on raw sugar market haven't resulted in larger sugar beets' planting. Areas planted in potatoes (93% of which is produced in household plots) actually do not change for a number of years being a sign of social and economic stabilization in the country – it means that alternative labour costs at least do not decrease which is usually the case during crisis periods.

Table 23

Areas planted in major agricultural crops, million ha

| | 1990 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-------------|------|------|------|------|------|------|------|------|-------|
| Grains | 63.1 | 54.7 | 53.4 | 53.6 | 50.8 | 46.8 | 45.9 | 47.6 | 48.2 |
| Sunflower | 2.7 | 4.1 | 3.9 | 3.6 | 4.1 | 5.5 | 4.6 | 3.8 | 4.089 |
| Sugar beets | 1.5 | 1.1 | 1.1 | 0.9 | 0.8 | 0.9 | 0.8 | 0.8 | 0.814 |
| Potatoes | 3.1 | 3.4 | 3.4 | 3.4 | 3.3 | 3.3 | 3.2 | 3.3 | 3.2 |
| Vegetables | 0.6 | 0.8 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 |

Source: RF State Committee for Statistics.

Production of grains remained at the same level. In the structure of grain output the share of wheat is growing (it's already above the Soviet period indicator) while that of fodder grains (barley, oats) is falling. Output of grain corn is up 81.9% but still doesn't cover the demand. Rye crops are steady although very large stocks of this grain accumulated in Europe and the world prices for it will most likely fall in the nearest future.

The quality of 2002 grain is far below that of 2001: the output of food wheat is down 10%, the output of high-grade wheat – 9%.

In 2002 the share of individual farms in production of major crops (grains, sunflower seeds and sugar beets) enlarged. One can expect that grain prices' drop resulting from over-

production will be most damaging for such farms since they are usually less diversified and depend on sales of one or two crops.

Production of major livestock products grows for the second year in succession. But their output (unlike that of crops) still remains far below the pre-reform level. Production of milk grows despite the continuing decrease of cattle (including cow) inventories, i.e. becomes more intensive. Inventories of poultry, pigs, sheep and goats increased.

Table 24

Gross output of major agricultural crops, million tons

| | 1986-90 | 1998 | 1999 | 2000 | 2001 | 2002 | 2002 as % of 1986-90 |
|---|---------|------|------|------|------|------|----------------------|
| Grain (weight after primary processing) | 104.3 | 47.8 | 54.7 | 65.5 | 85.1 | 86.5 | 83 |
| including wheat | 43.5 | 27.0 | 31.0 | 34.5 | 47.0 | 50.6 | 116 |
| Sugar beets | 33.2 | 10.8 | 15.2 | 14.1 | 14.6 | 15.5 | 47 |
| Sunflower seeds | 3.1 | 3.0 | 4.2 | 3.9 | 2.7 | 3.6 | 116 |
| Potatoes | 35.9 | 31.3 | 31.2 | 34.0 | 35.0 | 32.8 | 91 |
| Vegetables | 11.2 | 10.5 | 12.3 | 12.5 | 13.3 | 13.0 | 116 |

Source: RF State Committee for Statistics.

Table 25

Total production of major livestock products, million tons

| | 1991 | 1999 | 2000 | 2001 | 2002 | 2002 as % of 1991 |
|---|------|------|------|------|------|-------------------|
| Livestock and poultry, slaughter weight | 9.3 | 4.3 | 3.5 | 3.5 | 3.7 | 40 |
| Milk | 51.9 | 32.3 | 31.9 | 32.9 | 33.5 | 65 |
| Eggs, billion pieces | 46.9 | 33.1 | 33.9 | 35.0 | 36.2 | 77 |

Source: RF State Committee for Statistics.

The major contributors to meat output growth are large-scale farms: they increased production of slaughter livestock and poultry by 9.3% (that of pigs – by 13.5%, of poultry – by 11.6%).

Milk production is primarily enlarged by households (at large-scale farms it's up only 1.3%). The growing unemployment in rural areas forces people to look for income sources in household farming, and production of milk became one of the most common activities in countryside. Regional authorities everywhere (even in such regions of intensive milk production as Vologda oblast) actively support this self-employment.

The comparison of major agricultural products' output volumes and growth rates with the pre-reform level gives a certain idea about Russian agriculture's comparative advantages and the country's place in the international division of labour. Tables 24 and 25 demonstrate that domestic farming benefits from its competitive advantages on markets of grain, sunflower seeds, vegetables and potatoes while losing positions in production of sugar beets and meat. A more intent look at the production of major kinds of meat evidences that production of beef is least beneficial while that of poultry and pork has good prospects.



Production of food

As we have already mentioned, steady growth continues in the production of food (6.5% in 2002 as compared with 2001), especially meat and milk products (10.5%). Output of almost all food items is enlarging except for vegetable oils and sugar that seem to be overproduced (*Table 26*). The food industry development trends follow the trends of real personal incomes meaning that on the average it sustains the competition of imports (as different from primary agricultural production).

Table 26

Production of major food products as % of the previous year

| | 1991 | 1999 | 2000 | 2001 | 2002 |
|---------------------|-------|-------|-------|-------|-------|
| Meat | 87.7 | 84.4 | 112.4 | 104.0 | 108.5 |
| Sausage | 91.0 | 93.2 | 113.2 | 111.8 | 116.9 |
| Butter | 91.5 | 93.2 | 101.4 | 100.6 | 102.8 |
| Whole milk products | 89.4 | 99.0 | 110.1 | 109.6 | 111.0 |
| Vegetable oils | 100.5 | 112.8 | 174.4 | 90.1 | 92.5 |
| Sugar | 91.3 | 182.2 | 86.5 | 108.1 | 94.0 |
| Flour | 99.0 | 107.1 | 94.3 | 99.0 | 88.3 |
| Groats | 93.9 | 85.3 | 99.5 | 105.3 | 90.1 |
| Macaroni | 107.4 | 132.6 | 96.0 | 108.5 | 108.8 |
| Margarine products | 77.6 | 182.2 | 120.7 | 108.8 | 100.5 |
| Canned meat | n.a. | 169.0 | 82.7 | 106.4 | 106.2 |

Source: RF State Committee for Statistics.

Production of major food products ranges from 25% to 75% of the 1990 level (except for white sugar the output of which is almost twice above the 1990 volumes, and vegetable oils – 2.3% above the pre-reform level).

Production of agricultural inputs

Worsening of agricultural producers' financial performance led to smaller demand for farm machinery. After several years of growth agricultural machine building resumes the downward trend (*Table 27*). The domestic demand for mineral fertilizers is still constrained by low solvency of most agricultural producers. Production of mineral fertilizers continues to grow slower than exports meaning that foreign markets are more attractive for suppliers as compared with the domestic one.

Table 27

Production of agricultural inputs as % of the previous year

| | 1999 | 2000 | 2001 | 2002 |
|---------------------|----------|----------|-------|-------|
| Tractors | 148.3 | 137.2 | 78.8 | 63.5 |
| Tractor ploughs | 99.9 | 170.8 | 113 | 68.9 |
| Tractor seeders | 2.3 fold | 166.9 | 122 | 82.2 |
| Tractor cultivators | 69.4 | 165.9 | 118.5 | 93.4 |
| Grain harvesters | 188.5 | 2.2 fold | 174.3 | 83.4 |
| Tractor mowers | 109.7 | 100.4 | 547 | 105.5 |
| Mineral fertilizers | 124.9 | 106.2 | 106.9 | 104.0 |

Source: RF State Committee for Statistics.

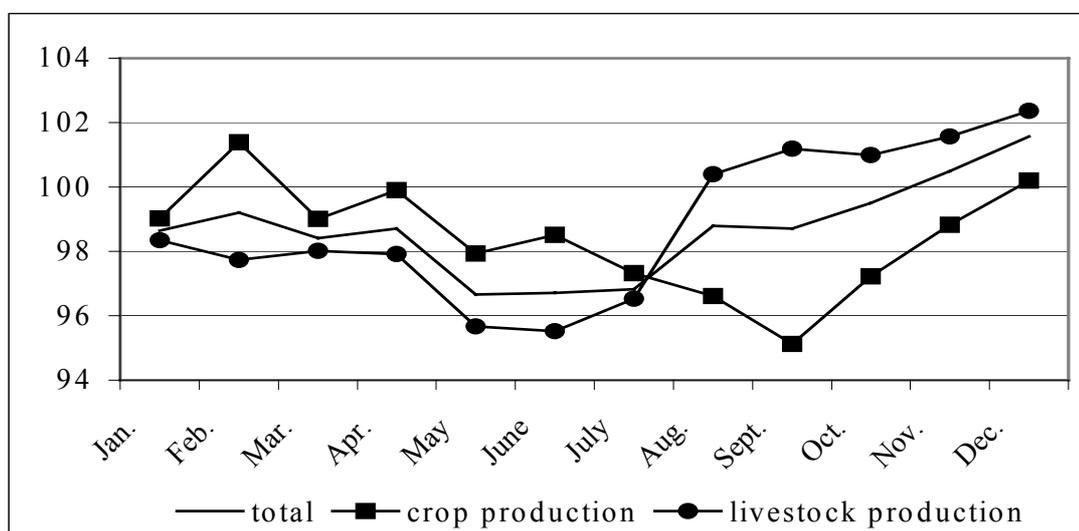
3.4.2. Financial performance of agricultural producers

As it has already been mentioned, financial performance of agricultural producers in 2002 has notably aggravated. Profitability of agricultural production dropped while farms' payable debts enlarged. In 2002 profits received by enterprises engaged in farming fell to 10.9 billion rubles, or were twice less than in 2001. Profitability of agricultural production averaged 3.9% as compared with 9.2% in 2001.

Insolvency of agricultural producers remains a serious problem. Both their total and outstanding debts on bank credits and loans grew throughout the year.

The financial performance of agricultural producers in 2002 was determined by an extremely unfavourable trend of purchase prices for major agricultural products. Within the first 6 months 2002 not only real but also nominal prices were falling (*Fig. 58*). From the mid-year prices for livestock products began to grow but in the last 3 months this growth slowed down while prices for crop products became higher. The average drop of real agricultural prices in 2002 totaled 2%. Poor financial performance of agricultural producers was aggravated by the substantial lifting of prices by input sectors (in September 2002 the price for electricity supplied to agriculture was 34.5% higher than in September 2001, the price for fuels and oils – 25.5% higher, for gas – 30.2% higher). So, the problem of notorious price disparity has re-emerged.

At the same time budget financing of the agrarian sector in 2002 has certainly improved as compared with the previous years. Then agriculture used to get smaller share of envisaged funds than other budget items and, besides, the bulk of these funds was transferred only at the end of a year. In 2002 this practice was discontinued: 51.3 billion rubles were allocated to the sector from budgets of all levels, and over 80% of this amount has been transferred by October.



Source: calculated using data of the yearbook “Social and economic situation in Russia in 2002”, RF State Committee for Statistics.

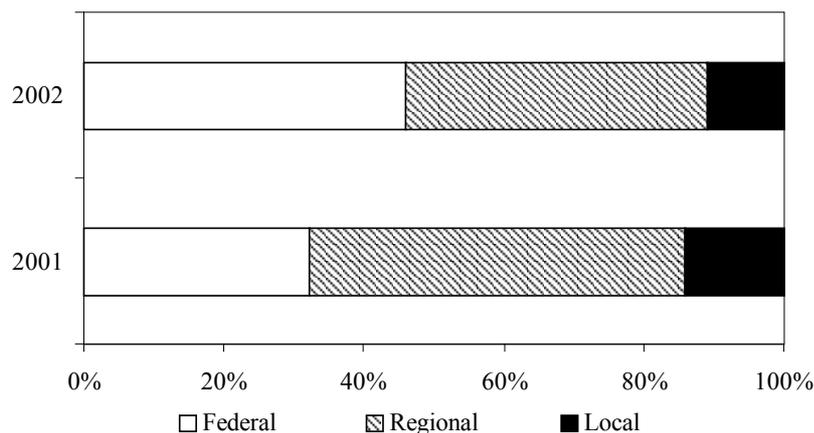
Fig. 58. Index of real (deflated by consumer price index (CPI)) prices received by agricultural producers in 2002 as percent of corresponding months 2001

Actual budget transfers to agriculture in January-September 2002 were 23.5% below the envisaged level. To understand the causes of shorter financing one should examine what items got smaller funds.

First, expenses on purchasing home-produced machinery and breeding stock on leasing terms were under-financed due to the late adoption of spending procedures and the short demand for state leasing in 2002. Second, funds for maintaining subordinate institutions were not allocated in full since the latter were transferred from the regional to the federal level. Since the mechanisms of their financing from the federal budget still need fine-tuning, funds were transferred with delays.

The amount of budget support to the agrarian sector continues to decrease. Expenditures on agriculture in consolidated budget fell by 11% in real terms and their share declined to 1.7% of the total as compared with 2.4% in 2001.

The share of federal budget in the consolidated budget support to agriculture sharply grew. This is partially explained by the general trend of budget expenditures' centralization: during the same period in 2002 51% of consolidated RF budget expenditures were financed from the federal budget. One more explanation has already been mentioned – it's the transfer of subordinate institutions to the federal level.



Source: the RF Ministry of Finance.

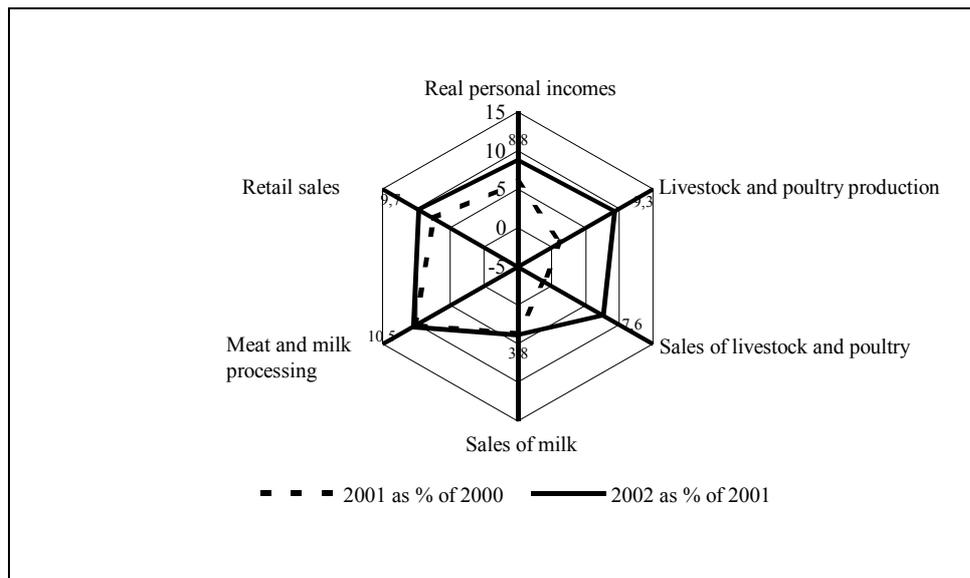
Fig. 59. Structure of consolidated budget, %

3.4.3. Agricultural and food markets

The situation on agricultural and food markets in 2002 was primarily determined by faster growth of supply as compared with demand. On the one hand, real personal incomes rose by 8.8%, or slightly more than in 2001 (8.5%), and differentiation of population by received incomes didn't increase. Exports expanded but so did imports of major agrifood products. On the other hand, supply followed the upward trend of the three preceding years. As a result, the situation on most agricultural markets in 2002 was shaped by overproduction and the corresponding drop of prices in real terms throughout the year (in some months – even in nominal terms).

Agricultural producers are the most affected by overproduction: food sales grow at a rather high rate (over 9% in 2002) while gross agricultural output (GAO) – much slower. This

means that bigger share of raw inputs for food production is supplied from abroad. Nevertheless, in the second half of the year the situation on meat and milk markets improved. In the first 6 months 2002 personal incomes and meat and milk processing grew faster than production of corresponding raw products in agricultural enterprises, i.e. a part of food industry's demand for inputs was met by import supplies. Annual indicators demonstrate a substantial increase of domestic supply (*Fig. 60*) the major contributors to which are large-scale farms. The market situation notably improved as compared with the corresponding period 2001. The rate of milk supply growth remained at actually the same level.



Source: Yearbook "Social and economic situation in Russia", RF State Committee for Statistics, 2001, 2002.

Fig. 60. Increase of personal incomes, agricultural and food production as percent of the previous year

Grain market

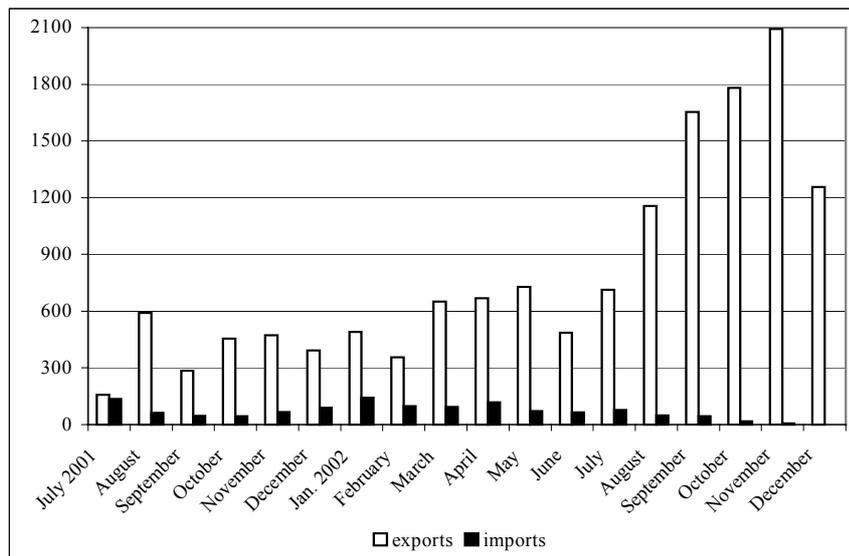
In 2002 the situation on grain market was shaped by excessive supply. Rather good crops in 2001 and 2002 combined with short domestic demand resulting in lower prices and bigger exports. In 2002 grain exports were record high. In 2001/2002 marketing year the annual grain export volumes totaled 5.7 million tons, while in 6 months 2002 (July - December) 8.7 million tons of grain were exported – an absolute record for the recent half of a century (*Fig. 61*).

Exports were fostered not only by grain surpluses on the domestic market but also by exceptionally favourable situation on the world grain market throughout 2002 and good demand prospects for the coming marketing year. The result was a large price spread: domestic prices were far below the world ones. For instance, by the end of October the ex elevator prices for soft wheat in the European part of Russia equaled 65-70 dollars per ton, in Novorossiysk port according to different estimates - ranged from 90 to 100 dollars per ton, FOB, while in Europe they amounted to 120 dollars per ton, in the US Gulf – to about 160 dollars

per ton. This price spread made exports profitable even despite high costs of overcoming poor institutional development.

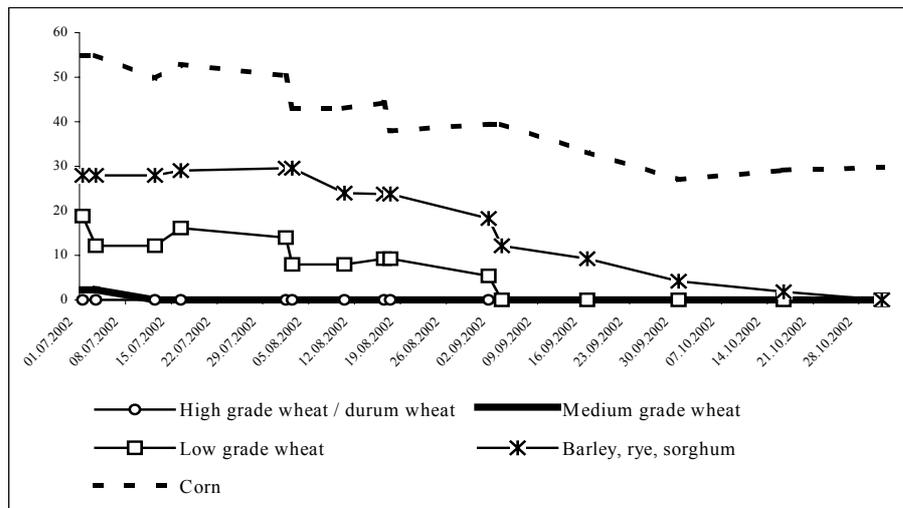
Another factor of intense export supplies at the end of 2002 was a gradual lowering of grain import tariffs in the European Union (*Fig. 62*). Besides, on the eve of new EU policies for 2003 affecting grain imports from Russia, traders intensified deliveries trying to offset forthcoming restraints on export to European countries. The new EU mechanism of quoting grain imports (based on the historic principle) envisages constraints on supplies of low and medium grade wheat the volume of which is not to exceed 2.98 million tons, and on supplies of barley – not more than 300 thousand tons. The customs duty on wheat within the quota is 12 EUR per ton, on barley – 16 EUR per ton. The duty on quantities supplied in excess of the quota amounts as high as 95 EUR per ton. Of the total quota volume 610 thousand tons are allotted to the US and Canada, the remaining 2.37 million tons – to other countries. Mean-time, in 2002 Russia exported to the EU over 1 million tons of low and medium grade wheat.

In addition to the EU grain quotas exports in 2003 will be constrained by the envisaged elevation of cargo railroad tariff.



Source: data of the RF State Customs Committee.

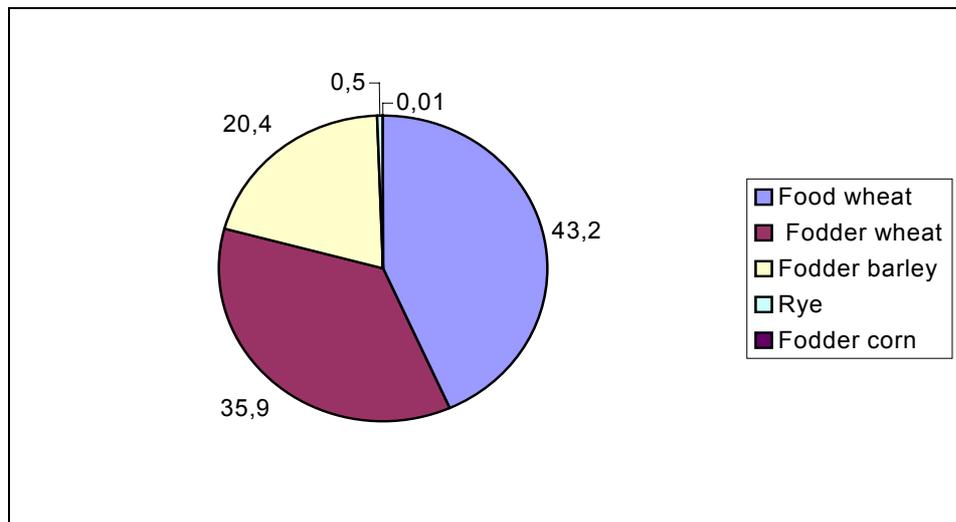
Fig. 61. Exports and imports of grain in 2001/2002 and 2002/2003 marketing years, thousand tons



Source: <http://www.proagro.com.ua>.

Fig. 62. EU import duties on grain in 2002, EUR per ton

Wheat accounted for the bulk of Russian grain exports (about 80%). Fodder wheat prevails in grain supplies to the EU (in some months its share reached 80%), while other countries import primarily food wheat.



Source: data of the RF State Customs Committee.

Fig. 63. Structure of Russian grain exports in 2002-2003 marketing year (January – December average)

In 2002 the imports of major grains to Russia sharply decreased and consisted primarily of traditionally deficit corn and brewer's barley. Larger share of corn in the total grain imports is due not only to a sharp drop of other grains' import supplies but also to an absolute growth of corn imports. This growth was temporary and was primarily conditioned by the need to cover the demand of domestic starch and syrup processing affected by small and poor

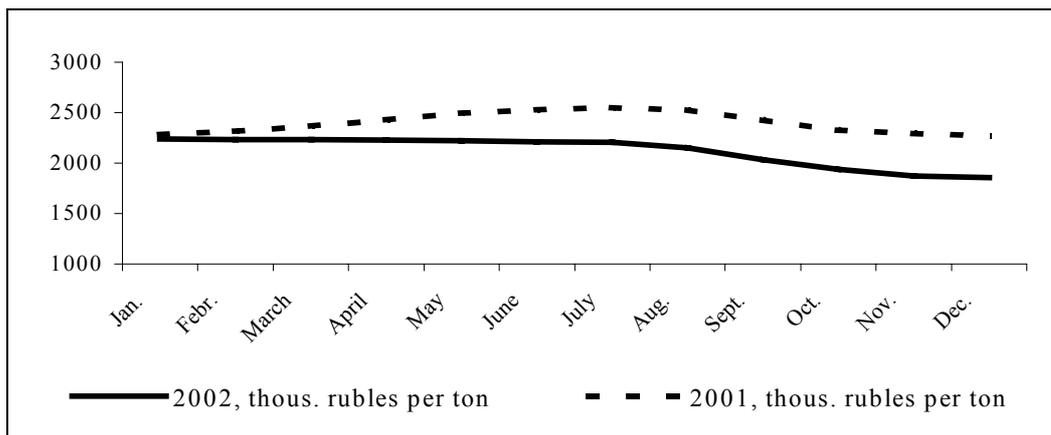


quality corn crop in 2001/2002⁶. Imported corn was also used for feeding purposes. However, in the last months 2002 corn imports reduced since the 2002/2003 crop was twice larger than that of 2001/2002, and there is no shortage of corn for processing on the domestic market. Given the current domestic prices for wheat livestock producers stop using corn for feeding.

Despite their sizable volumes, grain exports in 2002 were not sufficient to lift prices on domestic market. Throughout the year average prices received by grain producers were below the corresponding 2001 level.

To support agricultural producers affected by low grain prices the government for the second successive year carried out grain interventions. They started in mid-November 2002 and continued till January 22, 2003 (though in January the volumes of sales were already small).

Interventions clearly demonstrated segmentation of the national grain market. The greatest participation in trading sessions was observed in the Siberian regions where most volumes of grain were sold due to the abundant supply and low prices. At the same time auction sales of grain on the Russia's European South basis were rather slack. Traders didn't show much interest in them since this region is the basic Russian grain exporter.

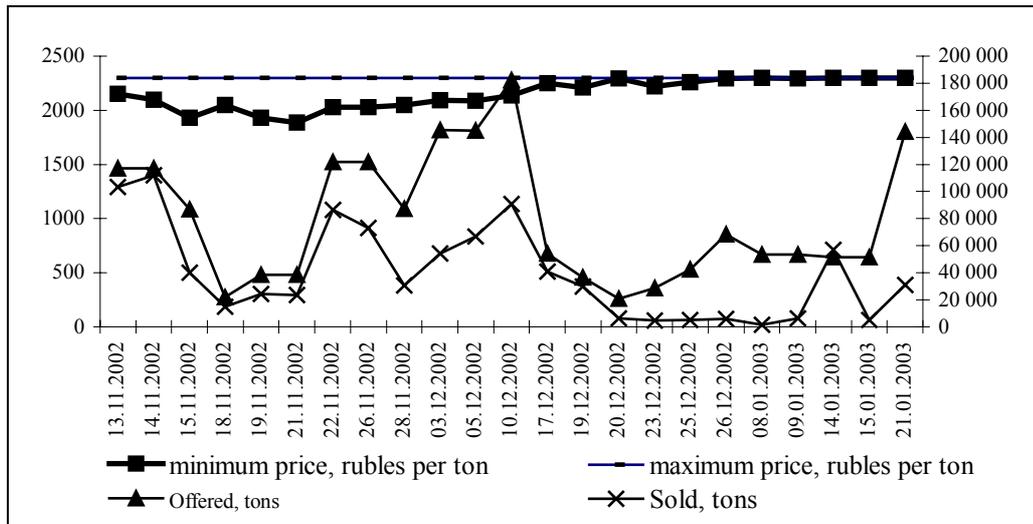


Source: RF State Committee for Statistics

Fig. 64. Average real prices received by grain producers, thousand rubles per ton

Though the price range for trading sessions was set, already in a month minimum prices lifted up to the maximum level, and grain was sold at maximum prices irrespective of the actually traded volumes.

⁶ Marketing year for corn is October – next September.



Source: calculated using statistics of trading sessions (<http://www.birja.ru/price/index.html>).

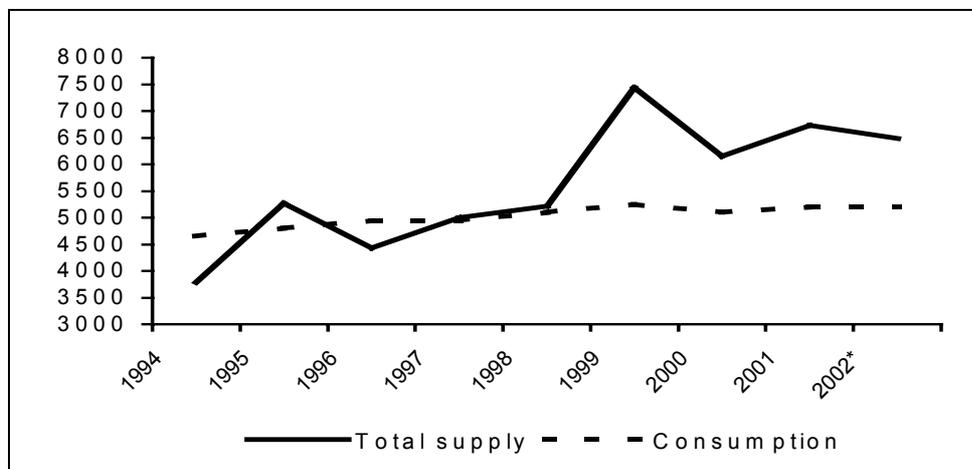
Fig. 65. Statistics of intervention trading sessions for wheat #3 in 2002/2003 (volumes and minimum/maximum prices)

In the course of intervention trading sessions about 3 million tons of grain were purchased and nearly 5 billion (of the allocated 6 billion) rubles of budget funds were spent. As a result prices in major producing regions (and first of all in Siberia) were stabilized. Within the two and a half months of auction sales prices for wheat #4 (that constituted the bulk of sales) in the Siberian region rose by about 30-36%.

Sugar market

In 2002 the situation on sugar market remained actually the same as in the two preceding years both from the point of view of demand/supply ratio and the state market regulation.

The supply of sugar beets for processing enlarged. Higher crop (up 6% as compared with 2001) and yields (up 10%) were conditioned by intensive factors – larger fertilizer application and renovation of agricultural machinery. But due to the low content of sugar in 2002 crop, the output of domestic sugar remained at the 2001 level – 1.3 million tons.



2002* - estimate.

Source: data of the Russian Sugar Producers' Union, Customs Statistics of Foreign Trade, corresponding years.

Fig. 66. Total sugar supply and consumption in Russia, thousand tons

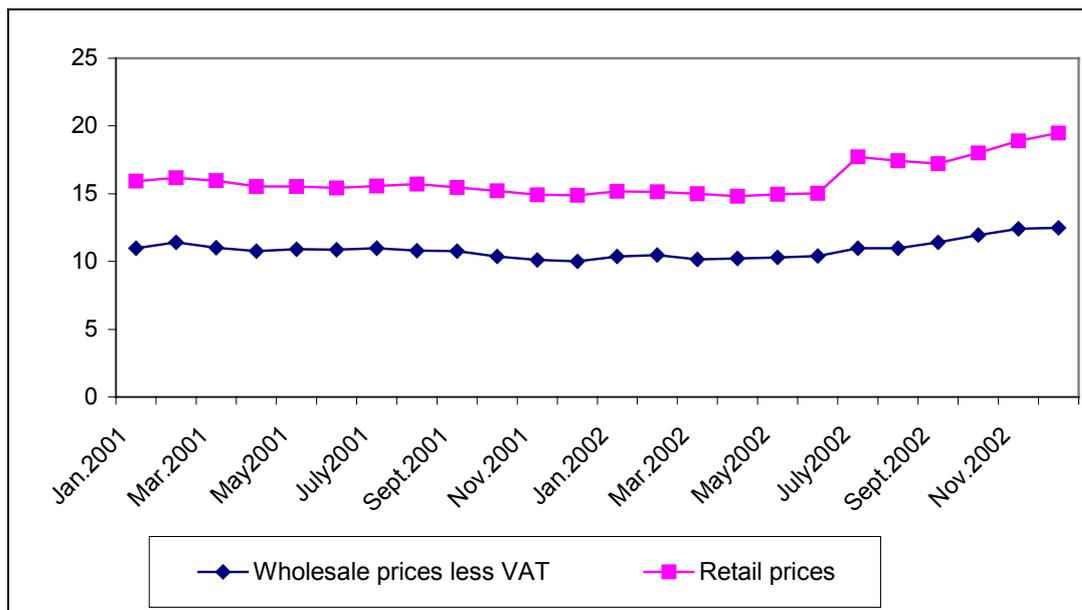
State regulation of sugar market has failed to increase home production of sugar beets and to limit excess supply of white sugar on the domestic market (*Fig. 66*).

White sugar imports are constrained at the level of about 0.4 million tons by means of high import tariffs.

The only meaningful result of sugar market regulation is that quotas and import tariffs helped to separate the periods when processors get imported inputs (raw sugar) and sugar beets from domestic producers. On the whole the scheme of seasonal supplies works: almost all raw sugar imports are delivered in the first half of a year while in its second half sugar plants process primarily domestic sugar beets. At the same time, import supplies of sugar in excess of the quota remain beyond domestic regulation, the world prices being their major determinants. In case these prices go down, the non-quota sugar is supplied to the Russian market despite all ordinary, seasonal and even special elevated import tariffs since low prices for raw sugar make up for suppliers' losses from paying duties.

When the world prices are high, import of raw sugar even within the quota becomes non-profitable inducing an inevitable rise of domestic prices. That was exactly the case in the second half of 2002. High sugar prices on the world market became a natural barrier to import of sugar in excess of the quota. In 2002 raw sugar imports totaled 4.8 million tons of which 1.15 million tons, or 30% less than in 2001, were supplied in excess of the quota. As a result both wholesale and retail domestic prices for sugar in the second half of 2002 were growing (*Fig. 67*).

Another factor of domestic prices' rise was the September auction of sugar quotas the prices for which were very high. Wholesale and retail prices started to grow actually right after it and this growth continued till the end of the year.



Source: Bulletin of Russian Sugar Producers' Union, corresponding months.

Fig. 67. Wholesale and retail prices for sugar, thousand rubles per ton

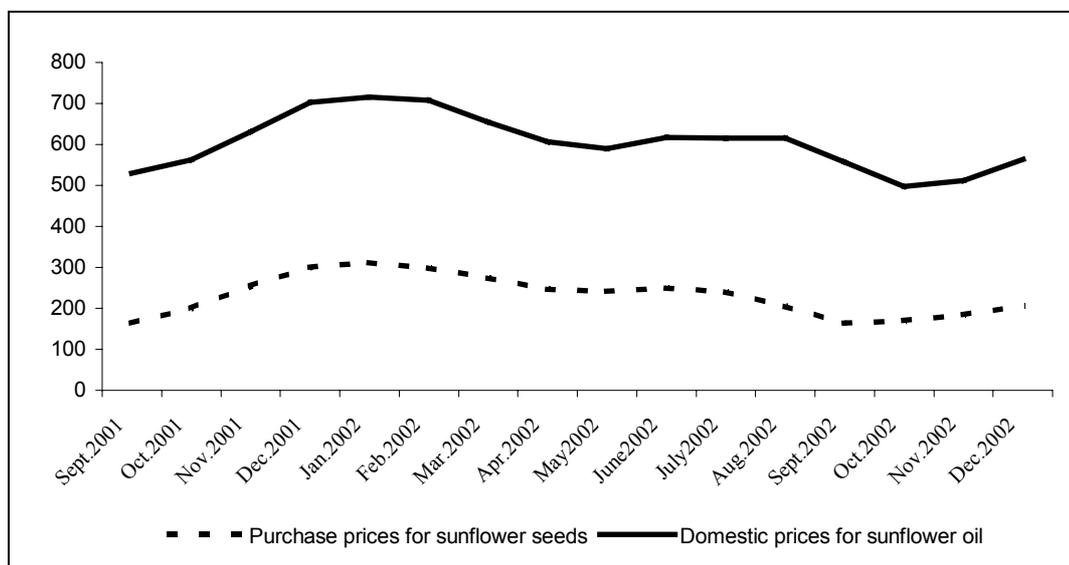
Oilseeds market

The oilseeds market demonstrated an apparent reversal of trends in the second half of the year. In addition to the world market fluctuations (to which this market is very sensitive as compared with markets of other agricultural products), the 2002 market situation was determined by two factors: poor quality of new crop and the price dynamics.

In 2002 the output of sunflower seeds notably grew (by 35% - up to 3.6 million tons) as compared with 2001 when the scarce crop led to a sharp rise of domestic prices and the most part of produced volumes was processed by domestic plants. The new crop is sufficient to satisfy the processors' demand for inputs and to export about 300-400 thousand tons of sunflower seeds.

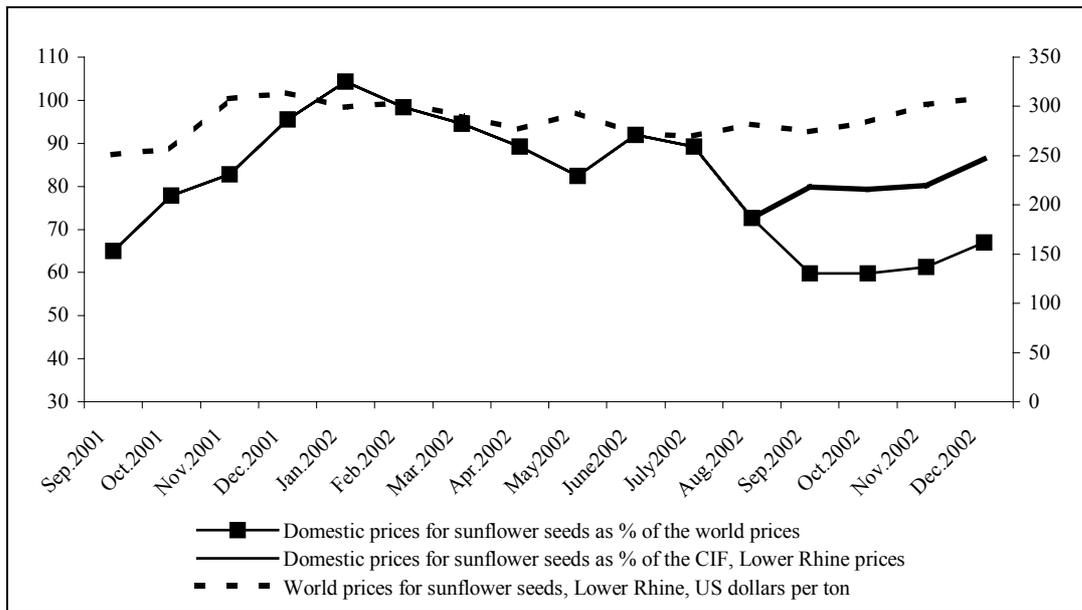
At the same time the supply of quality sunflower seeds in 2002 is rather short while the demand for them is large resulting in high prices. Despite the abundant gross supply domestic prices remained high throughout 2002 (except for a short period in September when harvesting started).

Still, domestic prices for sunflower seeds are far below the world ones (*Fig. 69*) and thus the situation is favourable for export. But supplies continue to be constrained by 20% export duty and high freight rates (on the average 30-35 dollars per ton) in major ports of loading in autumn-winter 2002 due to the intense shipments of grain and high demand for vessels. *Fig. 69* demonstrates that the price competitiveness of Russian sunflower seeds on the world market is falling due to the high transaction costs of freight and duties. Besides, the poor quality of 2002 crop is also a limitation to export supply.



Source: calculated using data of EFKO company: <http://analitic.efko.ru>.

Fig. 68. Domestic prices for sunflower seeds and sunflower oil, US dollars



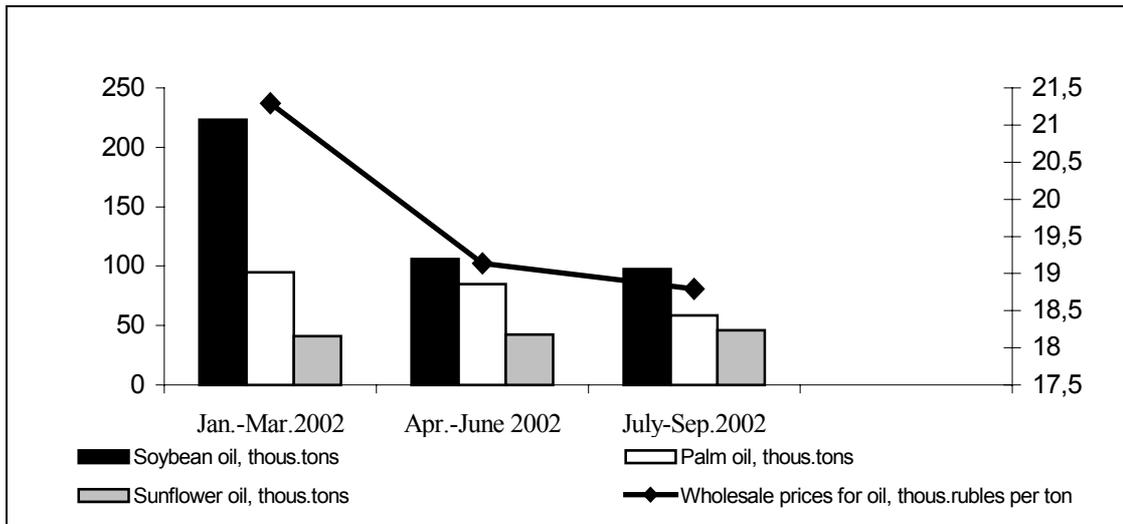
Source: calculated using data of EFKO company: <http://analytic.efko.ru>.

Fig. 69. Domestic prices for sunflower seeds as % of the world prices

In recent years Russian companies have notably enlarged processing capacities and thus the domestic demand for sunflower seeds is rather stable. The existing facilities are capable to process as much as 3 million tons of seeds. The continuation of this trend in the medium term can result in smaller sunflower seeds exports as well as in halting of vegetable oils import into the country. The determining factor in this situation is the level of prices for oil.

Throughout the first half of the year domestic prices for sunflower oil were above the world ones conditioning large imports: 0.6 million tons of vegetable oils were imported to Russia in January-June 2002 (Fig. 70). Lower domestic prices for oil in the second half of the year resulted in a sharp drop of imports of relatively cheap oils – the palm and the soybean ones the share of which in the total vegetable oils imports amounts to 87%.

At the end of the year further lowering of domestic wholesale prices for sunflower oil made its export profitable. Only within one month (December 2002) the exported volumes increased almost two fold while imports of vegetable oils reduced by about 11% as compared with November 2002.



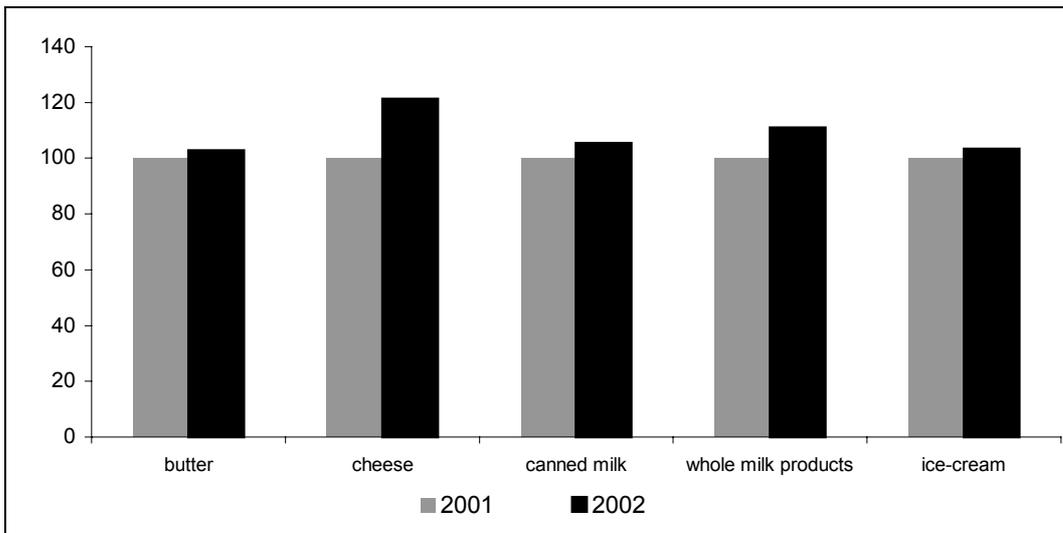
Source: calculated using data of EFKO company: <http://analytic.efko.ru> Customs statistics of foreign trade.

Fig. 70. Imports of vegetable oils and domestic wholesale prices for sunflower oil

Milk market

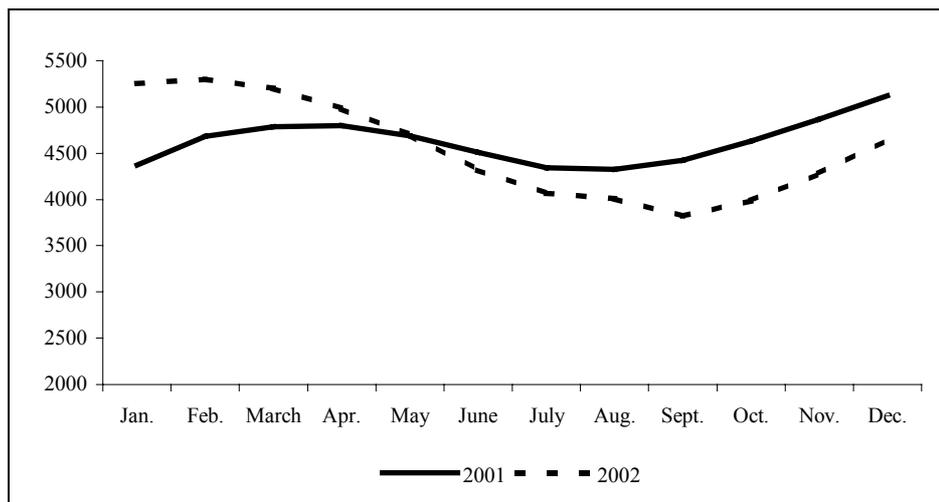
The growth of milk productivity in recent years resulted in larger supply on the primary milk market. Milk processing grew as well: for the first time since the beginning of 90's output increased in all the sub-sectors reflecting higher consumer demand and larger supply of raw milk.

The growth of milk production and processing from late 2001 was accompanied by lowering of prices for raw milk received by agricultural producers. Throughout most part of the year they were below the corresponding 2001 level (*Fig. 72*). Lower prices were a consequence of excess supply of raw milk to which the market failed to adjust in a short term. The sharpest drop was observed in summer 2002.



Source: Yearbook "Social and economic situation in Russia", RF State Committee for Statistics, 2002.

Fig. 71. Domestic production of dairy products as % of the previous year



Source: Yearbook "Social and economic situation in Russia", RF State Committee for Statistics, 2002.

Fig. 72. Average real prices received by milk producers in 2001 and 2002, thousand rubles per ton

The growth of prices for milk that started in September shows that domestic market is adjusting to the situation. The evidence of that are smaller imports of dairy products (especially the ones that need further processing) in the last months 2002 indicating the start of import substitution process. In January-November 2002 imports of condensed milk and cream fell by 32% as compared with the corresponding period 2001.

The growth of butter imports halted as well. In recent years the share of imported butter on the Russian market was rather large. It was more price-competitive primarily due to the non-compliance with domestic quality standards: the alleged butter was often a sort of marga-

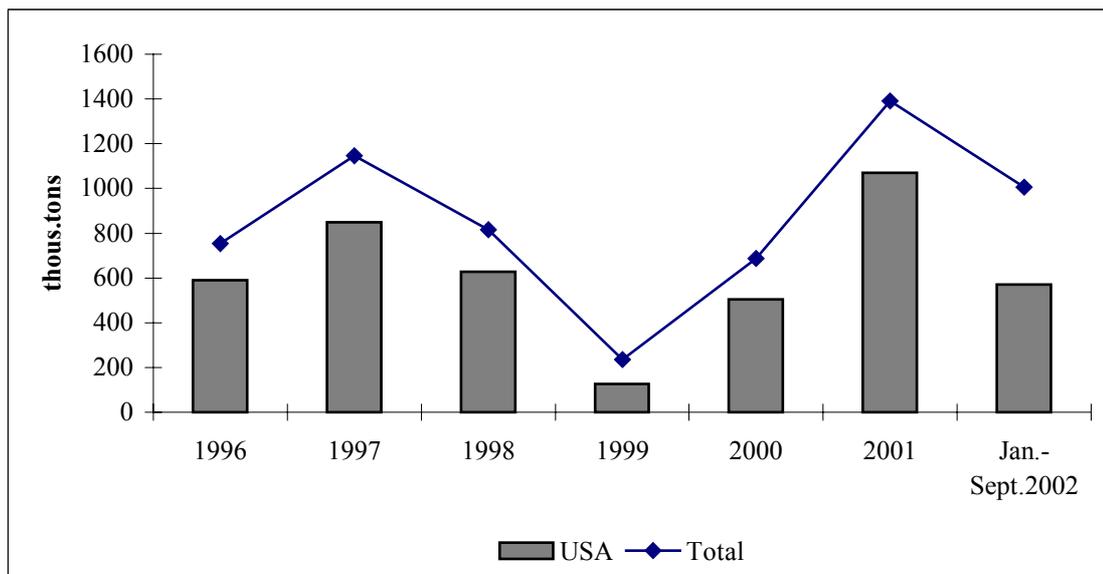
rine. At the end of the year butter imports were constrained by seasonal import duty on this product.

In 2002 opportunities emerged for enlarging exports of dairy products, first of all cheese, the production of which got investments from milk processing companies.

Poultry market

The ban on broiler meat import from the US introduced by the government in March 2002 sharply reduced the supply of this product to the domestic market. From the 15th of April (when the first ban was lifted) till the 1st of August poultry imports totaled about 130 thousand tons while within the corresponding period 2001 about 100 thousand tons were shipped to Russia monthly⁷. Although already in September the American side met the requirements of the new Russian veterinarian regime, and the ban on poultry imports from the US was lifted, such import restrictions have led to some changes on the domestic market.

First, shorter supply of the US poultry legs resulted in higher prices for poultry on the Russian market. In July 2002 the price for imported poultry was 25-30% up from March, the price for domestic poultry – 10-20% up⁸.



Source: data of the Customs statistics of RF foreign trade and the RF State Committee for Statistics.

Fig. 73. Poultry imports to Russia in 1996-2002

Second, these developments opened the Russian market to other (besides the US) poultry exporters. A part of market niche formerly belonging to the US was occupied by poultry meat from other countries. The share of Brazil increased most notably: from about 2% of the Russian poultry imports in 2000 to 7.4% in 2001 and to 22.3% by May 2002.

The AFE Centre study⁹ showed that in Russia poultry meat is not a homogeneous product and includes at least two large segments: whole broilers and broiler parts. Due to the mar-

⁷ Data of the USA Poultry and Egg Export Council (USAPEEC).

⁸ Ibid.



ket specifics the first product is primarily supplied by domestic producers while the second consists largely of broiler legs supplied from the US. The analysis revealed that these two products are hardly substitutable on the consumer market. Broiler legs are primarily consumed by families with low incomes while chilled whole broilers – by richer consumers. Accordingly, the development trends on these two markets differ greatly.

Such product non-homogeneity can mean only one thing: smaller supply on one market does not lead to an adequate growth of supply on the other. The practical implication is that any constraints on import of broiler legs won't result in a corresponding expansion of domestic production.

At the same time, higher personal incomes lead to larger demand for output of domestic poultry producers. Domestic poultry production demonstrates rather high elasticity of supply, the ability to respond to expanding demand. The growth rates of poultry meat production are currently above those of all other agricultural sub-sectors. Besides, active investments therein allow to assert that the elasticity of supply will continue growing.

In other words, the rise of real personal incomes and the decrease of social differentiation in the country will be followed by the growth of domestic poultry meat production and the reduction of broiler legs imports.

Meanwhile, high barriers to trade in poultry meat result in the growth of prices for broiler legs being one of the key sources of animal proteins for the poorest population group, and thus in the worsening of this group's quality of life. Since due to tough budget constraints the government is unable to compensate poor families for these losses, import restrictions become even more undesirable: in addition to failure to produce the expected effect on domestic producers, they aggravate living standards of a certain population group. The budget benefit cannot justify the social and economic detriment.

One more circumstance should be taken into account: since domestic production of poultry meat meets demand of higher income groups, the more likely substitutes for this product are beef and pork rather than broiler legs. Accordingly, when elaborating foreign trade policies targeted to support domestic poultry producers one has to take into account highly subsidized imports of these two items from the EU (that, besides, undermine the positions of domestic cattle and pig producers).

3.4.4. Foreign trade in agricultural and food commodities

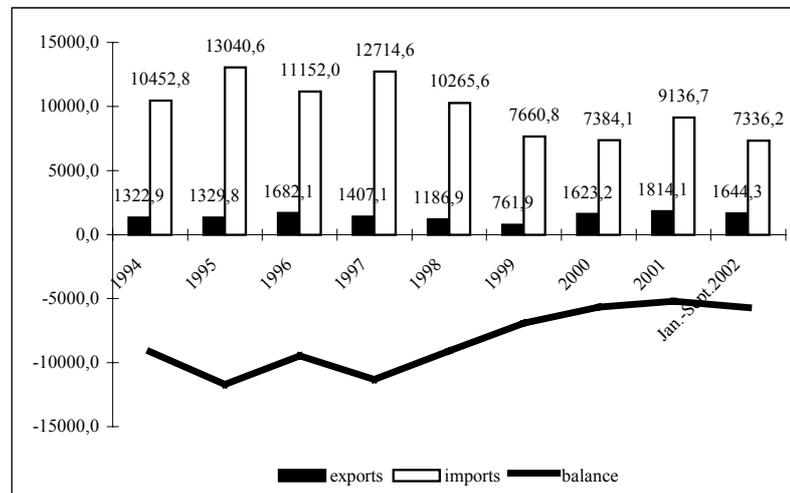
In 2002 agrifood imports to Russia expanded despite growth in domestic agriculture and processing. This trend is due to two basic factors: first, the growth of real personal incomes and, second, the structure of imports that consist primarily of commodities, the domestic production of which is short or non-competitive.

After the 1998 collapse imports of agricultural and food products began to restore only in 2001 (*Fig. 74*). Though official annual statistics of 2002 foreign trade are not yet available, it's already clear that the volume of agrifood imports hasn't shrunk and most likely - even grew. In January-September 2002 Russia imported 12% more agrifood products than in the corresponding period 2001.

The second apparent trend of 2002 is the expansion of agricultural and food exports. It started back in 2000, and in 2001 their volume was record high as compared with all the post-reform years. The 2002 indicators are likely to surpass this record. Already in January-

⁹ <http://www.iet.ru/afe/projects/poultry.pdf>.

September Russian food exports were 40% larger than in the corresponding period 2001. The intense shipments of grain at the end of the year give grounds to suggest that the total 2002 agrifood exports will be above the 2001 record.



Source: Customs statistics of RF foreign trade.

Fig. 74. Exports and imports of agricultural and food products in 1994-2001, million dollars

Table 28

Structure of Russia's foreign trade in 1999-2002, %

| | 1999 | 2000 | 2001* | 2002* | 2002/2001 |
|---|------|------|-------|-------|-----------|
| Export | | | | | |
| Total | 100 | 100 | 100 | 100 | 50.47 |
| <i>Agricultural and food products</i> | 1.1 | 1.3 | 2.39 | 2.24 | 141.06 |
| Mineral products | 45.1 | 54.2 | 85.39 | 55.24 | 97.34 |
| Produce of chemical industry | 8.2 | 7.0 | 11.18 | 7.09 | 95.33 |
| Hides and skins including fur-skins | 0.3 | 0.2 | 0.31 | 0.24 | 114.69 |
| Timber, pulp and paper products | 5.2 | 4.4 | 6.68 | 4.85 | 109.06 |
| Textile | 1.0 | 0.7 | 1.09 | 0.78 | 107.51 |
| Jewels and precious metals | 6.3 | 5.0 | 5.89 | 4.00 | 102.13 |
| Metals | 20.5 | 17.1 | 22.51 | 14.60 | 97.59 |
| Machinery, equipment and means of transport | 10.5 | 8.6 | 14.73 | 9.45 | 96.51 |
| Other items | 1.8 | 1.4 | 1.78 | 1.52 | 128.94 |
| Import | | | | | |
| Total | 100 | 100 | 100 | 100 | 109.79 |
| <i>Agricultural and food products</i> | 28.4 | 23.1 | 22.94 | 23.41 | 112.01 |
| Mineral products | 4.2 | 6.8 | 4.52 | 3.82 | 92.83 |
| Produce of chemical industry | 16.4 | 18.6 | 18.30 | 16.93 | 101.57 |
| Hides and skins including fur-skins | 0.2 | 0.3 | 0.51 | 0.44 | 94.66 |
| Timber, pulp and paper products | 3.5 | 3.8 | 4.00 | 4.28 | 117.41 |
| Textile | 4.3 | 4.8 | 5.46 | 4.95 | 99.56 |
| Jewels and precious metals | 0.1 | 0.2 | 0.07 | 0.08 | 122.90 |
| Metals | 7.2 | 8.3 | 7.76 | 6.19 | 87.48 |
| Machinery, equipment and means of transport | 32.4 | 30.6 | 32.32 | 35.81 | 121.64 |
| Other items | 3.2 | 3.4 | 4.11 | 4.09 | 109.33 |

* - January - September.

Source: Customs statistics of RF foreign trade.



Agricultural and food products are perhaps the only commodity group that still sustains its share (that enlarged after the 1998 crisis) in the total Russian exports (*Table 29*). Besides, the growth of agricultural export supplies in recent years was above the corresponding indicators of other sectors.

The agrifood import trends also clearly differ from the ones of other commodities. The share of agricultural and food products in the total Russian imports fell to 23% and throughout the recent years remains at this level while the share of other sectors noticeably fluctuated and didn't demonstrate a steady downward trend. So, the contribution of agrifood sector in the improvement of country's trade balance is one of the most substantial. Besides, smaller negative balance of agrifood foreign trade strengthens the Russia's food security.

In 2002 the basic contributors to import growth were meat (except poultry) and fish products, white sugar, products containing cacao, citrus fruits, tea, coffee, alcohol and alcohol-free beverages, i.e. traditional import items.

*Table 29***Russian imports of major food products in 2002**

| | January-November 2002 as % of January-November 2001 |
|------------------------------------|---|
| Meat, fresh and frozen | 129.7 |
| Poultry meat | 101.2 |
| Processed and canned meat | 104.3 |
| Fish, fresh and frozen | 107.5 |
| Condensed milk and cream | 67.9 |
| Butter | 98.7 |
| Sunflower oil | 96.3 |
| Raw sugar | 84.6 |
| White sugar | 142.4 |
| Food grains | 74.5 |
| Bread and bakery products* | 115.6 |
| Macaroni* | 121.7 |
| Products containing cacao | 110.1 |
| Coffee | 116.9 |
| Tea | 106.8 |
| Citrus fruits | 124.3 |
| Alcohol and alcohol-free beverages | 116.6 |

* - January - September.

Source: RF State Committee for Statistics.

Import of some commodities was restricted by government regulations: that of sugar, poultry meat and some other. The import of condensed milk and cream was not, and so its shrinkage is all the more noteworthy since it can evidence a growing competitiveness of domestic producers.

In 2002 Russia became one of the major suppliers of grain on the world market: it was the third after the US and the EU in exports of wheat, and together with Ukraine accounted for over 20% of the total world grain supplies (in the previous marketing year – only 5%). It also became a net exporter of some products of grain processing: e.g. the exports of macaroni increased 10.3 fold, the exports of bakery products – by 21.5% (*Table 29* and *Table 30*). Ex-

ports of macaroni in January-September 2002 exceeded imports by 36.7% and were primarily shipped to the CIS countries.

Table 30

Russian exports of selected agricultural and food products in 2002

| | January - September 2002 as % of January - September 2001 |
|---------------------------|---|
| Fish | 91.6 |
| Wheat | 763.1 |
| Bread and bakery products | 121.5 |
| Macaroni | 10.3 fold |
| Sunflower oil | 51.1 |
| Condensed milk and cream | 78.4 |

Source: the RF State Customs Committee.

Table 31

Geographic structure of the world wheat production, %

| | 2001/02 | 2002/03 |
|-----------------|---------|---------|
| USA | 9.20 | 7.75 |
| EU | 15.82 | 18.27 |
| Canada | 3.54 | 2.77 |
| Australia | 4.14 | 1.85 |
| Argentina | 2.67 | 2.29 |
| China | 16.20 | 16.21 |
| CIS | 15.75 | 16.86 |
| India | 11.87 | 12.69 |
| Other countries | 20.79 | 21.30 |

Source: USDA.

The stability of Russia's position as a grain exporter will depend on its support by the state policies. In 2002 the grain exports' growth was primarily conditioned by the extremely favourable world market situation characterized by high prices for grain. But some internal problems impeding the expansion of exports still persist and it may turn out that the spread between domestic and the world prices is not large enough to cover the costs associated with their solution. Although the capacity of Russian seaports enlarged due to their modernization and putting in operation of new cargo berths, discounts on transporting grain to the Ukrainian and Baltic ports were still effective. Due to that these transport routes were rather popular in 2002. But already in January 2003 traders encountered problems when shipping grain through Ukraine: the cargo railroad tariffs there were elevated and requirements to the phytosanitary certificate needed for transporting grain through the country's ports became more strict. In 2003 railroad tariffs will grow in Russia as well. All these factors hinder Russian exports.

3.4.5. Changes in the agricultural policies

The key accomplishments of 2002 agricultural policies were the adoption of agricultural land transferability law and the implementation of program of subsidizing interest on medium-term credits to agriculture. Restrictions on poultry imports from the US also had a certain political resonance. The rest of agrifood sector support measures remained the same.



Land legislation

Adoption of the land law by the State Duma (in June) and the Council of Federation (in July) has put an end to the long-lasting dispute on agricultural land transferability. The federal legislation permitted actually all transactions with farmland as far back as 1993. However, in 1998 the RF Law on mortgage forbade to use it as a pawn. The growth of agricultural production after the 1998 crisis and the devaluation of ruble resulted in bigger demand for agricultural land, first of all the arable one. The transfer of land in agriculture became rather intensive (see *AFE Centre Bulletin*, April 2002). Still, economic agents felt permanently uncertain of the stability of existing land relations: the question of whether to permit the purchase and sale of farmland was broadly discussed in the society and the outcome of this discussion was not clear at all. This uncertainty became a noticeable hindrance to agrifood sector development. Thus the adoption of the above mentioned law is to have an important stabilizing effect. Society as a whole and agricultural market operators in particular got a distinct signal that the current system of land relations is to stay for long.

At the same time the adopted law does not and should not make a revolution in the farm sector land relations. One should expect neither breaks through in agricultural production nor drastic changes in farm structure resulting from the new law's adoption.

Together with the new Land Code adopted earlier the Law on agricultural land transferability codifies, puts in order and fills the gaps in land legislation that formed before the start of reforms. And this is the second important mission of the adopted law.

Earlier we have already scrutinized the draft of this Law introduced to the State Duma by the government¹⁰. After the first reading the bill was seriously amended. Let's examine the most significant of these amendments.

The government draft bill inherited the spirit of the new Land Code and contained actually no limitations on non-residents' title to agricultural land: they could not acquire only areas near the state border. The adopted law denies their right to own farmland *de jure*. Individuals having foreign or no citizenship and legal entities with over 50% of stock controlled by non-residents can only rent agricultural land (the term of rent may be up to 49 years). Thus people concerned with the "Russian land's buying up by foreigners" (numerically they prevail in the society) got a positive signal. In other words, when combined the new Land Code and the Law on agricultural land transferability permit non-residents to own only urban and industrial land.

It should be noted that almost in all the European post-socialist countries (except Latvia and Estonia) the non-residents' title to farmland is restricted in one or other way (in the OECD countries such restrictions are quite rare). In this regard the Russian law doesn't stand aside of the transition countries' general trend. At the same time given the country's social, economic and legislative conditions this regulation won't have a noticeable restrictive effect. Given that legal entities are permitted to own farmland, its execution is actually impossible to control: there is no effective mechanism of tracing companies' affiliation. Moreover, the ban on individual non-residents' ownership of farmland will stir up sham marriages just the way registration did during the Soviet period. So, this limitation won't seriously influence the *status quo*.

Another novelty of the law as compared with the government draft is the lowering of upper limit that a constituent member of Federation can set for one landowner. The Law

¹⁰ *AFE Centre Bulletin*, № 2 (12) 2002.

stipulates that regional authorities can (but do not have to!) set such a limit that is not to be below 10% of the total farmland area of an administrative unit. The latter implies a rayon, but since the effective legislation doesn't contain its definition the euphemism is used.

This provision is targeted against monopoly. There are no regulations restricting monopolization of access to land (the key factor of farm production) in the Russian anti-trust legislation. The Law on agricultural land transferability fills this gap.

Agrifood sector will be mostly affected by the Law's regulations pertaining to transfer of land shares. There are almost 12 million of them issued in the process of collective and state farms' restructuring in 1992-1994. In recent years their transfer became a common practice. Moreover, in the last 3-4 years it was the predominant form of land transfer in agriculture (primarily effected through renting of land shares).

The new Law defines land share as a title in joint share ownership with minor (as compared with the Civil Code) transfer peculiarities.

The initial version of the government bill actually did not alter the existing mechanism of buying and selling land shares while abolishing their rent (rent was declared a trustee management agreement)¹¹. This regulation stirred up heated discussion. It affected interests of both large business (the Russian Industrial and Entrepreneurial Union appealed to Prime-Minister twice asking to review this clause, Russia's Grain Union (representing interests of large grain operators) also spoke against) and individual farmers that so far enlarged cultivated area by renting shares (AKKOR (the Association of Peasant and Private Farms) opposed the idea). None of the 5 draft bills introduced to the Duma by its deputies abolished the existing transfer of land shares signifying that they didn't support such an approach.

In the course of perfecting the bill after its first reading these provisions became even more unacceptable as compared with the initial version. First, the procedure of buying and selling land shares became so complicated that a rural resident can hardly go through it. To sell a land share its owner has first to notify (in writing or through a local newspaper) all other co-owners of the joint land holding. In case none of them is interested, the owner has to notify the local administrative body of his wish to sell the share. Only in case this body also rejects the offer, the land share can be sold to an outside buyer but the price cannot exceed the one declared in the first two notifications. In case the price is lower the procedure is to be repeated from the very beginning.

According to the final version of the Law land share rent is not automatically transformed into a trust agreement but the transaction can actually no longer be conducted by individuals. Until recently a land share owner could rent it out individually and it was the tenant's problem to consolidate rented shares into one land plot. From now on it is to be done by share owners. Earlier a tenant wishing to cultivate a certain land area could sign individual agreements with all shareholders and then require to parcel out the corresponding physical plot (or several large plots). Each owner in this case received rentals individually (in theory they could differ but in practice it happened rather seldom). Under the new Law shareholders have first to come to an agreement on joint renting out of the common land holding, to parcel it out from mother farm lands and only then to rent it out on behalf of the whole collective. The latter becomes the recipient of rental payments.

What's the difference? First of all, collective rent will raise rentals, i.e. the cost of getting access to land for outsiders: reaching an agreement with each individual shareholder is

¹¹ Ibid.



ceteris paribus less expensive than that with the whole collective. This in turn will result in smaller outside investments in farming: external investors will have to pay more for accessing land and respectively will have less funds for investing in production. Besides, collective rent is most likely to get under control of large farms' managers thus enhancing their power to dispose of land that they do not own.

One more after-effect is the lessening of social buffer function performed so far by share renting. In many cases shares were not even rented out - they were transferred on the condition of life-long upkeep. This mechanism ensured some (although minor) support to elderly rural residents that were largely deprived of basic social securities. The new Law makes no provisions for such a transfer. Rentals received by each shareholder under collective tenancy agreements may be far below the ones under individual agreements (although the total amount of rent to be paid by the tenant is most likely to increase).

As a result this provision of the new Law will induce holders of shares to invest them in authorized capital of their mother agricultural enterprises: all other options are too complicated and non-beneficial. This is just the process reformers fought against all the years of reforms and that agrarian opposition secretly dreamed about: all land is transferred to the large farms' ownership.

Summing up the above, the adoption of Law on agricultural land transferability 1) gave a clear signal that development of private land ownership in agriculture is a long-term strategy, and 2) laid the legal basis for land transfer. This act won't bring about (and was not supposed to) revolutionary changes in the agrarian sector. At the same time it will result in a certain cut of investments therein. It will also lower the level of social security of rural residents (especially the elderly ones).

The pole conducted in three Russian regions (Ivanovskaya, Nijegorodskaya and Rostovskaya oblasts) at the end of 2002 showed that most agricultural producers have not realize the radical alteration of land regime as regards land shares: they still plan to rent individual land shares. The negative sides of the new law will be most likely leveled off by its poor implementation, as it has not once happened in the recent decade.

From the political point of view adoption of the above described Law signifies the redistribution of power at the federal level: the Government insisted on its version regardless of opinion of various and numerous social groups.

Financial programs in agriculture

In June 2002 the RF Government Resolution specified the Rules of partial compensation of interest paid on 3-year-term credits granted by Russian banks to agricultural producers for purchasing farm machinery and equipment. The subsidy can amount up to 2/3 of the Central Bank's refunding rate and is to be paid monthly. This government decision signifies a further step away from the former highly inefficient system of agricultural credit support that formed after the start of reforms.

Before 2000 the only actual source of short-term credits to agriculture were budget funds. Initially they were distributed by officials, later - by commercial banks. Still, the essence of these operations remained actually the same. Beginning from 1995 state commodity crediting got widely spread. We have continuously stressed the inefficiency of these credit schemes and advocated subsidizing of interest on loans granted by commercial credit institutions. The Nijegorodskaya oblast was the first to conduct this experiment in 2000. Later in the

year (by the beginning of harvesting) the federal government tested the same scheme to be initially applied as an experimental one. In 2001 the system of subsidizing interest on private loans was finally approved at the federal level and almost in all oblasts that launched similar regional programs of supporting credits to the agrifood sector. Already the first year brought remarkable results. In 2002 agriculture got additionally nearly 23 billion rubles under the program. This amount is above the federal budget expenditures on agrifood sector in the past year and exceeds the 2001 indicator by almost $\frac{1}{4}$ in real terms.

However, growth observed in the agrarian sector for the fourth successive year enables agricultural producers to set to attaining further goal - the restoration and restructuring of production facilities, the technological re-equipment of farming. Until recently the only mechanism of supporting medium-term investments in agriculture was state leasing developed both at the federal and regional levels. Not once we wrote about its shortcomings. In addition to raising the cost of agricultural inputs, it creates a monopoly that hampers the development of competitive and efficient system of leasing companies in the agrifood sector.

The limitations of state leasing system became more and more apparent. Some regions abandoned it or supplemented with other schemes: e.g. Chuvashiya in 2001 complemented leasing with the program of subsidizing medium-term loans for purchasing farm machinery, Perm oblast replaced leasing with compensation of expenses on buying machinery. Finally, the federal government took the same decision: it adopted the program of subsidizing medium-term (3-year-long) private credits to the agrifood sector. In addition to its own obvious merits, the program will offset negative after-effects of creating the state "Rosagroleasing" monopoly and the apparent failure of leasing program in 2001-2002. When the program was initiated we predicted that the subsidizing of interest on medium-term credits would be more attractive for producers as compared with state leasing. That's exactly what has happened: as of October 2002 the first program helped to attract over 6 billion rubles to the sector while supplies under the leasing program totaled less than 4.8 billion rubles.

At the end of 2002 the decision was taken to subsidize also interest on 5-year-long credits. It further widens agricultural producers' opportunities to benefit from medium-term credits.

To our mind, further steps in this direction should be the dismantling of federal leasing system in its current form and the extension of subsidies on 5-7-year-long credits and on interest paid under private leasing contracts.

The problem of financial sanitation of Russian agricultural enterprises remains in the agenda beginning from 1994 when their debts were restructured (actually - written off) for the first time. Afterwards various bills in one or other way pertaining to agriculture's financial recovery were introduced to the Legislative Assembly. During the 2002 spring session the State Duma has at last adopted such a law. At the beginning of 2003 a package of government regulations was approved to implement this law.

First of all we'd like to discuss the compliance of the Law's name with its contents. Already the first clause reads that the subject of the law is restructuring of agricultural producers' debts. But then the Law's name implies much more as compared with the issues that are actually regulated by the document. Financial performance of the farm sector is affected by a great number of external factors the effect of which cannot be eliminated by restructuring of debts and reorganization of agricultural enterprises.

There is a lot of marginal enterprises in the country. Slightly over 40% of financially healthy farms produce $\frac{3}{4}$ of the sector's gross output. Profitability of producing basic commodities in the 300 best farms is from 3 to 4 fold over the agriculture's average. In case the



most obvious failures discontinue operation, the efficiency of all other farms will grow. For instance, northern areas still get subsidies for purchasing seeds of grains because people there need to have a source of income. That's why they sow free seeds, harvest less than it was sown but thanks to the subsidized seeds and fuel their output competes with grain from major producing regions pulling prices therefor and, respectively, profitability thereof down. Nevertheless, all around the country the task is formulated to preserve all agricultural enterprises; bankruptcies are still rare to say nothing of bankruptcies resulting in liquidation of an enterprise. One may argue: what to do then with population of these areas? There are examples of solving such a problem in the world. For instance, in Europe rural employment dropped 4-fold beginning from 1960 but the problem of rural unemployment was somehow resolved. Russian authorities still prefer to do it at the expense of successful farms: one should understand that employment in farms-bankrupts is primarily supported at the expense of profits received by highly efficient farms and only secondly - at the expense of taxpayers (budget subsidies) and energy consumers from other industries (cross subsidies and restructuring of natural monopolies' debts).

Thus, the most essential problems of agriculture's financial performance are excessive rural population, poor mechanism of bankrupting agricultural enterprises and the lack of strong rural development policies targeted at creating alternative employment opportunities in rural areas. None of these problems is mentioned in the adopted Law. Moreover, the new bankruptcy law adopted during the same session of the State Duma doesn't tackle the problem of rural bankruptcy (having some specifics that need to be addressed by legislators).

One more problem of agriculture's financial performance is the level of prices for basic agricultural commodities. This is an extensive topic and we have no intention to examine it here in full. Still, the efficiency of the recent campaign of restructuring agriculture's debts was undermined by agricultural prices' trend. Many farms that joined the restructuring program in autumn-winter 2001 already in spring found themselves unable to meet their current obligations: due to the limited export of grain domestic prices for it were very low, prices for milk dropped due to the non-coordinated tariff policies of the CIS countries. As a result farms did not receive the revenues that they counted upon when signing the restructuring agreements. In this case too they were made financially responsible for errors in the agrarian policies.

Russian farms urgently need investments but legislators passed the Law on agricultural land transferability that, as noted above, will hinder their growth that has just started. Here again we see that the problem of solvency lies beyond the farm managers' competence.

We could cite many more examples of unsound agrarian policies affecting the efficiency of farm production, but here we won't do it. Our goal is to show that agriculture's financial recovery implies far more than restructuring of debts. Such a narrow view makes the problem perpetual: debts are first restructured, then deferment becomes an actual writing off, then debts are accumulated again and everything is repeated from the very beginning. From 1994 several such cycles have already been completed.

The adopted Law doesn't go beyond restructuring of agriculture's debts. The mechanism is actually the same as the one used during 2001 campaign. The only novelty is an attempt to involve in this process natural monopolies, i.e. the energy and gas concerns (RAO EEC and Gazprom). In addition to debts to budget and non-budget funds, agriculture accumulated debts and penalties to these two organizations. All attempts to involve them in the previous restructuring campaign failed. Now legislators decided that this could be done with legal

means. We find it hardly possible: no law can make a creditor to write off debts if he sees no benefits therein.

But even in case large creditors agree to restructure agricultural producers' debts, the latter will find themselves in even a more difficult situation since small creditors will get an opportunity to recover their debts through bankruptcy proceedings and it will induce them to submit applications to arbitration courts. Thus, after the "financial sanitation" agriculture will face many small poorly predictable creditors instead of few well-known, large and quite predictable ones.

Besides, the procedure of "financial sanitation" envisages the division of all agricultural producers in 5 groups by their solvency. This means that an official without any judicial proceedings will actually declare some enterprises insolvent, and thus many farms that haven't yet been adjudged bankrupt will be deprived of an opportunity to normally operate since no potential counterpart will wish to deal with an entity included into the insolvent group.

In view of the above we have to state that the Law in its current version will hardly contribute noticeably to the farm sector's financial recovery. It can have only one positive effect - people will see at last that the problem's origin is not where it was believed to be for several years. Then there is a hope that the problem will be ultimately solved.

Market regulation

For a number of years the market regulation policies demonstrate one remarkable trend: as soon as an agrifood sub-sector makes progress, large players emerge therein and in a little while protective or supportive measures are introduced for this particular sub-sector. For instance, during all the reform years quite profitable and historically record high sugar production has been the most protected agrifood sub-sector. As soon as Russia became a stable producer of grain, grain interventions started. Today the fastest growing agricultural sub-sector is meat poultry production – just the field of the trade war launched by Russia against the US. Finally, meat sub-sector that started to grow recently, at the beginning of 2003 has also succeeded in setting quotas. These developments are in full concord with political economy of the Russian agrifood sector: large producers, private businesses emerge in growing sub-sectors and thus influential groups of interests capable of conducting effective lobbying campaigns are formed. Thus the so called protective measures eventually protect not the weakest links of the food chain but *vice versa* – the most successful ones.

In 2002 the major tools of regulating domestic markets were grain interventions, conducted for the second year in succession.

Foreign trade regulation

Foreign trade regulation becomes more and more targeted at import substitution instead of supporting export. It has been shown above that growth in the agrifood sector is slowing down. Further progress will be determined by an increase of real personal incomes that is hindered by expectedly low GDP growth rates, steady rise of population's expenditures on housing, communal and other services, persisting differentiation of consumers by income level (since the demand for food is primarily determined by income trends in the poorer strata). In this situation import substitution will result in sharp agrifood sector's growth within 2-3



2-3 years, and then the boom will be curtailed by purchasing power of population. To further develop the sector will need access to foreign markets but due to protectionism the competitiveness of medium-scale producers will weaken and the country's export potential will be undermined. So, given currently low rates of domestic demand growth import substitution is a way to agrifood sector's stagnation. Today the only opportunity for it to expand is the implementation of aggressive export policies that unfortunately does not take place.

In 2002 the agrifood foreign trade regulation primarily focused on protection of two domestic markets: those of sugar and poultry meat.

The traditional regulation of raw and white sugar markets was effected with the help of the same tools as in the previous years – import quotas and tariffs. Any unbalanced measure entails new and new regulation efforts on adjacent markets. The sugar market regulation is an illustrative example of self-escalating protectionism. The introduction of quota auctions necessitated additional protection of domestic white sugar market – as a result seasonal tariffs were enforced. In 2002 special import duty on caramel was set that will be in effect for 2.5 years. All this leads to higher prices for sugar, shift of industrial consumers to maize sweeteners, import of sugar in the syrup form, etc. That's why there are plans to limit import of sugar syrup in 2003. Later on constraints on maize sweeteners and sugar substitutes are likely.

The auction sale of raw sugar quotas demonstrates its inability to fulfill the set tasks. First, the import of raw sugar in excess of the quota is beyond domestic regulation: its basic determinant is the level of world market prices. In case they are sliding down, non-quota raw sugar is supplied to Russia despite ordinary, seasonal and even special rates of import tariff since low prices make up for suppliers' losses from paying duties. For instance, in 2001 (i.e. already after the quotas' enforcement), imports of raw sugar increased by 18% as compared with 2000 (when there were no quotas) due to the supply of over 1.5 million tons in excess of the quota. Second, the domestic sugar beets production has not undergone any radical changes. The state has no idea of how to support home producers while private investments therein have not yet altered the existing market trends and, besides, negatively correlate with import supply of raw sugar. In case large volumes of cheap sugar are supplied to the country, it's hard to expect that investments in domestic production will grow.

The Ministry of Economic Development has already declared its intention to review the mechanism of sugar market regulation in Russia. This is the basic outcome of auctions conducted for three years. Quotas will remain but they won't be distributed at auctions (just as we advised as far back as 2000). There are three potential ways of distributing quotas so that to really support domestic producers of sugar beets:

- the quota sets the share of processed raw sugar in the total volume of processing at each sugar plant;
- distribution of quotas by companies proportionate to the average volume of quotas purchased by them at auctions in the three preceding years;
- setting of the common upper limit of imports distributed according to “the first come” principle.

The second way would be a form of rewarding companies that fairly participated in auctions. But this way as well as the third one will benefit large sugar speculators while sugar plants may be faced by higher prices. We find the first way to be the most rational since it will be a kind of miller limit that was effective for grain in some European countries in XIX – early XX century.

The auction distribution of import quotas will be discontinued only in 2004. In 2003 3.9 million tons of raw sugar will be supplied within the quota – more than in the two preceding years. However, import duties on both quota and non-quota sugar are elevated.

Meat market was also an object of active state regulation. In March 2002 a temporary ban on poultry imports from the US was enforced. Although in April the deliveries resumed, their volumes were much smaller than before. The bilateral conflict was settled only by September. On September 15, 2002 a new veterinary certificate on broiler meat import was validated that set more strict sanitary and hygienic requirements as compared with the former ones. This measure is rational from the point of view of veterinary control but does not fulfill a protective mission for home poultry producers due to the non-homogeneity of domestic and imported products (see section “Poultry market”).

In 2003 imports of basic meats – beef, pork and poultry – will be limited by quotas.

At the end of January 2003 the government introduced quotas on import of basic meat products: beef, pork and poultry meat. Three principal questions arise in this connection: what is the rationale for their introduction, how will they affect domestic producers and consumers and what will be their impact on Russia’s position on the world markets.

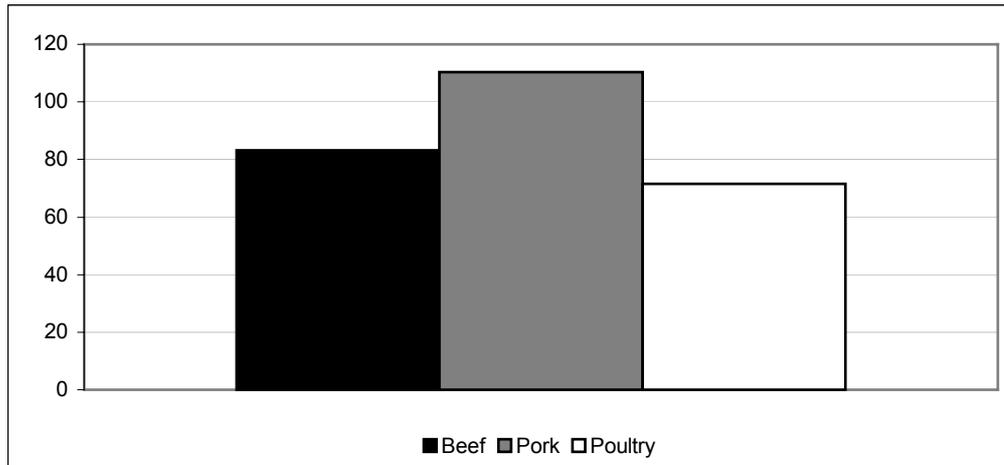
90% of pork and beef import quotas are distributed between countries-suppliers on the basis of previous supplies (proportionate to the average imports in 2000-2002) while the remaining 10% are to be sold at quota auctions. The import duties on supply of these commodities to Russia in excess of the quota will be higher. The import of poultry meat is rigidly restricted by the quota volume that is fully distributed between countries-suppliers proportionate to previous imports.

The size of quotas for 2003 is as follows:

- beef – 315 thousand tons; customs duties on import within the quota equal 15% but not less than 0.15 EUR per kilogram (selected items – 0.2 EUR per kilogram), on import in excess of the quota – 60% but not less than 0.6 EUR per kilogram;
- pork – 337.5 thousand tons; customs duties on import within the quota equal 25% but not less than 0.25 EUR per kilogram (selected items – 0.2 EUR per kilogram), on import in excess of the quota – 80% but not less than 1.06 EUR per kilogram;
- poultry meat – 1050 thousand tons.

The data on meat imports in 2002 is not yet available, that’s why we compare the set quotas with the average import volumes in 2000-2001. It’s easy to notice that the pork quota is quite liberal – it’s above the average 2000-2001 indicators, the beef quota exceeds 80% of the previous import volumes while the poultry quota is most restrictive – about 73% (Fig. 19). Due to the large size of quotas they are not preventive and won’t result in higher prices. Still, an upspring of retail prices is quite possible as a psychological reaction to the mere fact of quotas’ introduction. But their growth won’t be long-term due to the consumer demand constraints.

Formally, the respective normative acts declare that the rationale for introducing quotas is the protection of domestic producers. However, in 2002 the growth rates in all the meat sub-sectors concerned exceeded the average for 4 preceding years that were not the worst ones. Besides, the size of quotas is rather large and they are not to be applied against the CIS countries. This means that the effect of constraints on import from the non-CIS countries can be well offset by gray supplies through the CIS countries. Accordingly, the quota mechanism will hardly support domestic producers.



Source: calculated using provisions of the Government Regulations and the data of RF Customs Committee.

Fig. 75. Quotas as percent of average imports in 2000-2001

Another matter is that this growth led to overproduction, lower prices received by producers and the corresponding worsening of their financial performance in 2002. Still, last year almost all agricultural products were overproduced (e.g. the overproduction problem encountered by milk producers was no easier). In other words, the need to protect just meat producers and just in 2003 is poorly motivated. Besides, protectionist measures of this kind always result in lowering of the sector's competitiveness – one moment quotas are lifted and then domestic producers are left unprotected from foreign expansion, unready for stiff competition.

Quotas could have had sense if they were introduced not in general but against countries dumping their meat on the Russian market. Then it would have been an economically justified measure. In particular, European beef and pork are apparently dumped on the Russian market. Anti-dumping measures against the European meat could have supported domestic producers as well as played their role in the dialogue with the EU concerning quotas introduced against Russian grain beginning from January 1, 2003. Grain quotas restrict Russian export to Europe and thus affect Russian grain producers. The share of groups interested in export of meat to Russia in the EU is supposedly higher than that of groups lobbying restriction of grain imports from Russia, and just a mere threat to introduce meat quotas could have fostered alleviation of grain restraints against our country.

Thus one can conclude that the introduction of meat quotas won't favor development of the Russian agricultural sector. The only positive effect can be the replenishment of federal budget.

The overproduction of dairy products resulted in the excessive supply of butter on the domestic market and lower prices received by milk producers. In October-December 2002 an attempt was made to constrain imports of butter with the help of special customs duty (5% but not less than 0.07 EUR per kilogram) that is to supplement the constant 20% duty.

Export was supported primarily by measures fostering shipments of grain. With this purpose the difference between transport tariffs for internal and export deliveries was diminished, lower tariffs were set for grain shipments in autumn season. The government discusses plans of port infrastructure development. The licensing of sunflower seeds, rapeseeds and soybeans export was abolished although export tariffs on these items remained in force.

At the same time the government hasn't taken any steps to counteract grain import quotas introduced by the EU against East European countries (including Russia) although they severely constrain access of Russian grain to the European market.

3.4.6. Outlook for agrifood sector development in 2003

On the one hand, positive trends that originated in the country's agrifood sector in the 4 preceding years will stipulate its successful performance in the nearest future: investments will start to bring results, yields and output will become more sustainable to the weather factor, a class of rapidly growing producers highly competitive on both domestic and foreign markets has formed.

On the other hand, factors that conditioned the after-crisis¹² growth are vanishing, the ruble revaluation induces imports, exports become less profitable. The price scissors that reopened in 2002 undermined the sector's financial potential, made it less attractive for investments. The over-production of grain has already resulted in smaller areas planted in winter grains (down almost 13%). As different from other experts¹³, we do not find that this will entail a drastic drop of grain output but it will surely be a constraining factor.

Protectionist measures enforced in 2002 may foster growth but their effect will be short-term and will benefit processors rather than farm producers: agricultural cycle is rather long while market regulation measures are implemented too spontaneously to influence farm production decisions. As shown above, in the medium run these measures can lead only to the agrifood sector's stagnation.

On the whole we can suggest that in 2003 the sector will continue growing but the rate of this growth will hardly exceed 2%. The grain crop will be smaller as compared with 2002 but won't fall below 80 million tons (unless serious natural calamities take place). Growth in the livestock production will slow down due to the limited purchasing power of population. The process of producers' differentiation will accelerate both in agriculture and in the upstream sectors; the number of bankruptcies will increase despite the government's preventive efforts; this will urge steps fostering social development in rural areas. It's hard to expect larger investments in the sector as compared with 2002 implying that farm machinery building has poor chances to grow. Still, it should be noted that here we make general forecasts for the country at large while the situation will increasingly vary by regions, companies and producers, i.e. breakthroughs in specific fields are possible.

Appendix 5. Producer support estimate

Large amounts of budget expenditures on agriculture say nothing about the efficiency of government policies. There are special methods of its estimation. These are indicators based on the comparison of current domestic prices for agricultural products with prices on similar markets that adequately reflect alternative production costs, i.e. with prices assumed to be equilibrium. When calculating estimates of state support to agriculture, it's customary to assume world prices for similar products to be the equilibrium ones. This approach is based upon the presumption that given no state intervention and free competition on domestic and foreign markets, prices thereon would be the same without any spread.

¹² The 1998 financial crisis.

¹³ See, for instance, *Agribusiness*, № 1 2003, p. 58.



As a result of state policies implemented in specific countries such a spread appears. Its positive value implies support to domestic producers, negative – their taxation.

The most widely applied coefficient of such a kind is *producer support estimate (PSE)* that gives the most comprehensive estimate of the state support level. This indicator does not require calculating of value added and thus is simpler to compute.

The PSE indicator includes two components: *direct support*, or *budget transfer* (i.e. budget expenditures on supporting agriculture) and indirect support otherwise called *market price support*, or *price transfer (MPS)*. MPS reflects the spread between domestic and reference prices.

$$PSE_i = (P_i^d - P_i^b) + (S_i - T_i),$$

where P_i^d – domestic price for i -product,
 S_i and T_i – direct subsidies and taxes,
 P_i^b – reference price.
 $(P_i^d - P_i^b) = MPS$ - market price support,
 $(S - T)$ – budget transfer.

Here we'll examine percent PSE – the ratio of PSE money value to the sum of gross agricultural producers' money receipts from marketing their output at domestic prices and budget transfers received by them.

$$PSE\% = \frac{PSE}{\sum_i P_i^d Q_i + (S - T)} * 100\%,$$

where $\square P_i^d Q_i$ – value of marketed output in domestic prices,
 S – subsidies to producers,
 T – taxes paid by producers.

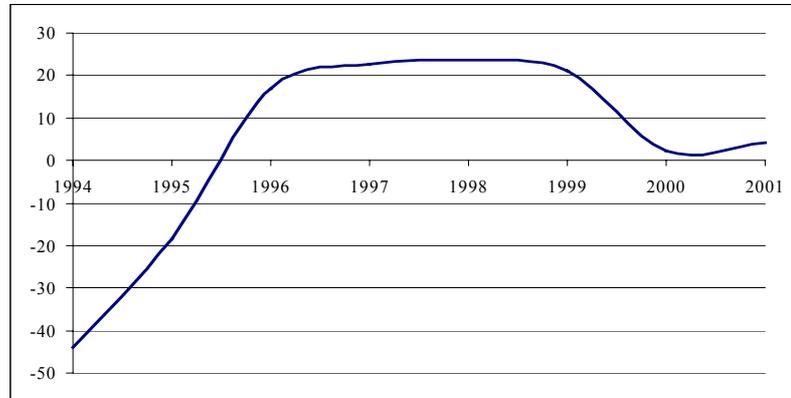
In 1994 PSE started to grow and since 1996 became positive. Greater support level was provided by introduction of protectionist measures in foreign trade and by some shifts in infrastructure development. In 1995 PSE grew due to the sharp increase of direct budget transfers.

After the 1998 ruble devaluation Russian agricultural producers' performance improved despite lower budget support since their output has got competitive advantage over imported products. In 2000, when favourable crisis' aftereffects vanished, PSE dropped sharply. In 2001 it started to rise again evidencing that producers managed to build up a certain growth potential. Besides, 2001 was the first after-crisis year when budget subsidies to the sector enlarged. Still, the level of state support to agriculture in Russia remains below that of other countries. For instance, in other transitional economies PSE ranges from 10 to 20%. In 2002 price situation was unfavourable for agricultural producers and one can expect that PSE will fall again since the market price support (MPS) reflecting spread between domestic and the world prices was down while budget transfers did not increase.

Pictures 77 and 78 show PSE levels for selected products in 2000 and 2001. During these years the bulk of budget subsidies was allocated to livestock sector. In 2000 PSE indicates inefficiency of beef production support since positive budget transfer did not offset negative market price support. Negative PSE for milk was also due to low prices received by producers. In 2001 market price support for all livestock products becomes positive and PSE accordingly grows.

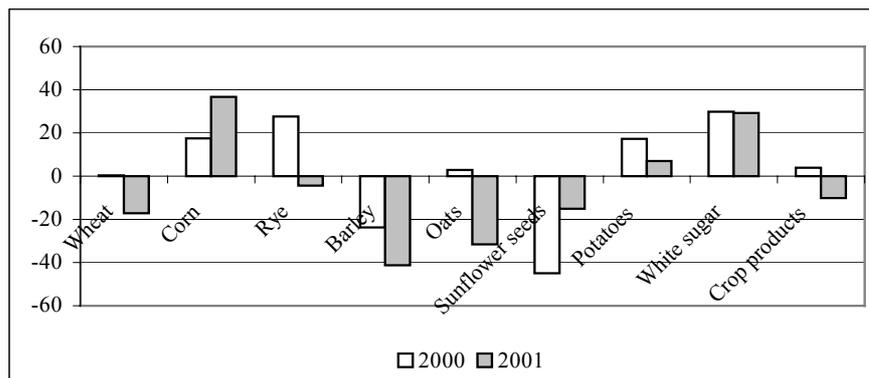
Meanwhile, the trend for crop products is opposite – PSE decreases as compared with the previous year. The overproduction of grains resulted in lower purchase prices and respectively market price support for most of them became negative. Budget transfers did not offset

negative MPS values evidencing inefficiency of crop production support programs (and first of all that of state leasing) in 2001. The state support level for corn remains high due to the high domestic and relatively low world prices for this crop.



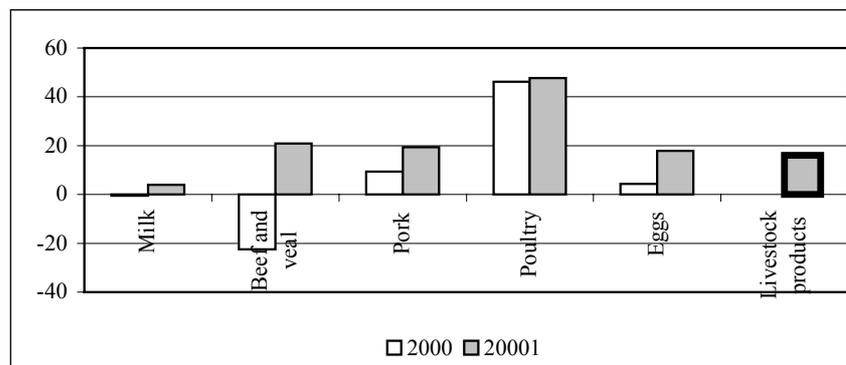
Source: own calculations.

Fig. 76. Russia: producer support estimate (PSE) in 1994-2001



Source: own calculations.

Fig. 77. Crop production: producer support estimate (PSE) in 2000-2001



Source: own calculations.

Fig. 78. Livestock production: producer support estimate (PSE) in 2000-2001