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Agricultural Credit in the Baltics, Russia, and Other States of the Former Soviet Union 1/

by

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Abstract

During the early years of transition, agricultural financing needs in the states of the former Soviet Union were high due to limited own funds and inefficiencies inherited from the past. Government involvement in procurement and distribution, implicit price regulations, terms of trade deterioration, payment arrears, and debt overhang increased the sector's financing needs. Supply of credit to agriculture from the emerging commercial banks was low, and substantial amounts of credit were directed to the sector from the central bank or the budget. This weakened financial policies and intensified macroeconomic imbalances. The design of credit market interventions could have been improved.

JEL Classification Numbers:
E65, H81, Q14

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2/ Yuri Sobolev, a graduate student at Rice University, was a summer intern at the European II department in 1995.

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I. Introduction

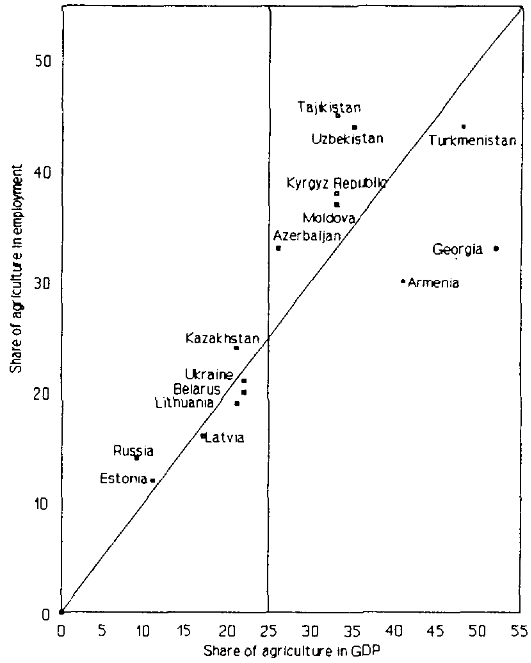
During the early years of transition, namely 1991-94, in the Baltics, Russia, and the other states of the former Soviet Union (FSU), substantial amounts of credit were provided to the agricultural sector directly from the central bank or the government's budget. Inflation was very high--e.g., in the range of 500-1,350 percent per year in 1992--in most countries of the region, and such financing of agriculture led to a considerable weakening of financial policies and further intensification of macroeconomic imbalances. With the limited data readily available on credit and other relevant variables, this paper discusses why and how governments intervened in the agricultural credit markets, the problems created by such intervention, and indicates some measures to alleviate the problem.

The paper is organized as follows: Section II presents a brief overview of the agricultural sector and credit under the old Soviet system. Section III describes the system of agricultural credit, including demand and supply conditions, during the early years of transition. Why and how governments intervened in agricultural credit markets, and whether such intervention was justified are analyzed in Section IV. Sections V and VI contain suggested reforms to solve the problem of agricultural credit, and the conclusions.

II. Agriculture under the U.S.S.R. System

The FSU was an industrial country, but agriculture was important due to its contribution to output and employment (Figure 1), and to concerns about food security under balance of payments constraints. 1/ The sector accounted for about 20 percent of GDP and 18 percent of employment, compared to 2.5 percent of GDP and 6 percent of employment in the European Union. 2/ While the FSU was the country with the most extensive land wealth in the world (with about 230 million hectares under cultivation), inefficiencies and waste led to net imports of food of about US$20 billion annually in the last few years of the Union. 3/

Figure 1.
Baltic Countries, Russia, and Other Countries in FSU, 1992
(in percent; narrow definition of agriculture)



Agriculture was a part of the command system under central planning. Artificially set prices distorted incentives, and resulted in low output, shortages, and rent-seeking. Food processing machinery was obsolete and worn out from consistent underinvestment. Deficiencies in transportation,

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1/ In this paper, agriculture is defined to include both primary producers and agro-processing industries. Financial problems of agro-processors quickly got transmitted to primary producers, and a narrow definition of the sector to include only primary producers does not capture the full extent of the problem of agricultural credit. The data utilized in this paper from sources such as the World Bank Statistical Handbook and the Goskomstat of Russia, however, define the sector to consist of primary producers only, and such a narrow definition of the sector, whenever used in the paper, has been explicitly noted.

2/ See IMF et.al. (1991), Vol. 3, p. 137.

3/ The dissolution of the Soviet Union was preceded by a food crisis in 1991, and this strengthened concerns about food security.

processing and distribution led to the loss of 20-30 percent of output each year before it reached the consumer. 1/ Lack of profitability resulted in the need for large subsidies. 2/

All credit was directed credit. Loans were funded by the Gosbank, and channeled through the Agroprombank (a specialized branch of Gosbank itself) in amounts "necessary" to carry the output and inventory accumulation targets in accordance with the central plan for material production.

III. Agricultural Credit during the Early Years of Transition

After the dissolution of the Union, agriculture continued to be important throughout the region. Large amounts of exceptional financing were extended to the sector to sustain production and distribution. This subsection, after describing how such financing subverted stabilization in the region, analyzes reasons behind the high credit "needs" and low supply by banks. 3/

1. Exceptional financing, and how it subverted stabilization

The abolition of central planning and the introduction of banking on commercial principles led to major concerns about the ability of the emerging banking system to respond adequately to agriculture's credit needs to meet its investment and working capital requirements. Indeed in retrospect, in relation to the proportion of GDP generated in agriculture,

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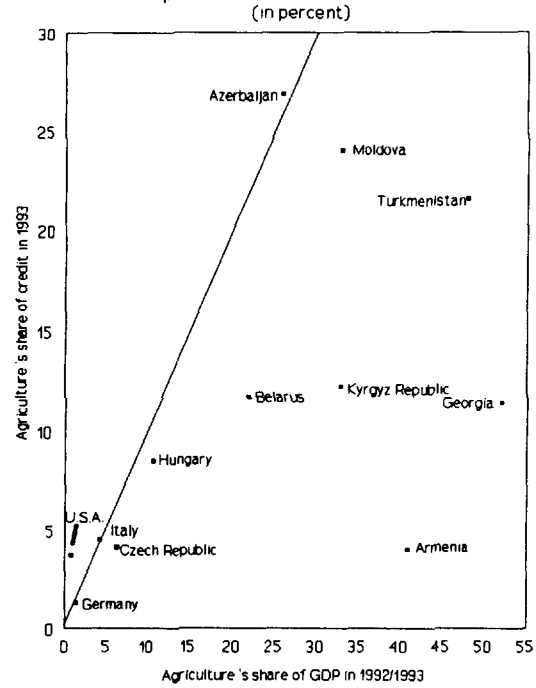
1/ For example, in the FSU, some sources estimated that about 1 million metric tons of meat per annum--equal to the annual import of meat--was lost because of inadequate cold storage and obsolete slaughter and processing facilities. See, IMF et. al. (1991), Vol 3, pp. 150-51.

2/ Food subsidies from the Union Government's budget alone were over 12 percent of GDP in 1990.

3/ Credit "needs", as opposed to credit demand, were unrelated to market rates of interest and repayment capacity, and reflected the perceived amount of financing necessary to sustain production at a certain level.

the sector's share of *total* bank credit was modest by international standards (Figure 2). 1/ In any event, this concern about credit constraints was effectively utilized by powerful agricultural interest groups to lobby for continuing the old system of administratively directing credit to this "priority" sector in relatively large volumes.

Figure 2
Agriculture: Share in GDP and Credit
A comparison of some FSU and other countries
(in percent)



Traditionally, directed credit was extended at heavily subsidized interest rates, and the incentive for lobbying for retaining the old system was high. Also, there were demands for direct loans from the budget or loans secured with state guaranties. The dubious repayment prospects for such loans, the low interest rates attached, and high inflation, blurred the distinction between loans and grants, and arguably the loans were grants in

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1/ Data on total bank credit to agriculture is available only for seven countries of the region in 1993. For these seven countries the share of GDP plotted in Figure 2 refers to the narrow definition of agriculture and to 1992, while for the Czech Republic, Germany, Hungary, Italy and U.S.A. both the share of GDP and credit refer to 1993. For Hungary, credit to agriculture is expressed as a percent of total enterprise credit by banks, excluding saving cooperatives. For Moldova, the share of credit refers to the share of short-term loans to agroprocessing industries in total bank credit. In spite of these differences in the definition of variables across countries, the broad orders of magnitude perhaps give a realistic picture of the extent of the problem of agricultural credit in the various countries.

the year in which they occurred. 1/ Policies were subject to a fierce "political competition for credit" in the early stages of transition.

Russia launched a stabilization program in mid-1993 to bring inflation down from 17 percent in the second quarter to 8 percent in the last quarter. After about a month, the program collapsed partly because of pressures from agricultural interest groups for more credit and subsidies. There was a large increase in budgetary spending on agriculture, *Rosskhleboprodukt*--the state grain procurement agency--defaulted on a government loan equivalent to about 1 percent of GDP, and the government and the central bank extended large scale, unscheduled credits to agriculture. 2/

In Ukraine, after inflation of more than 1,200 percent in 1992, the spring of 1993 saw an attempt to contain the growth in the money supply. But, in June 1993, a presidential decree extended a virtually unlimited line of credit to finance the harvest and its procurement. Agricultural credits from banks amounting to some 18 percent of third quarter GDP were fully refinanced by the central bank; base money expanded by close to 80 percent a month during the quarter, and broad money increased by 3 1/2 times over the quarter. Inflation shot up from 171 percent in the second to 361 percent in the last quarter. 3/ Analogous examples of how such financing subverted stabilization can be found in almost every country of the region.

1/ "...inflation obscures economic reality. In 1992, in Russia, enterprise managers soon bravely stated that they did not demand subsidies, only credits, but at a reasonable interest rate. Naturally, they did not discuss real interest rates but only nominal ones." Aslund(1995), p. 305.
2/ See Hernández-Catá (1995).
3/ Also see Pynzenyk (1994), pp. 199-200.

2. Factors contributing to high credit "needs"

A negligible capacity to self-finance, and inefficiencies led to agriculture's high credit needs. The meager inheritance of retained earnings from the socialist past was rapidly eroded by high inflation, and the sector's reliance on external sources for financing its operations was almost exclusive. Inefficiencies from the past were perpetuated by price controls, trade restrictions, and governments' involvement in production decisions. No ready measure of total effect of intervention--such as the producer subsidy equivalent (PSE) or effective rate of assistance (ERA)--exists. 1/ While quantifying such effects is beyond the scope of this paper, there is some evidence that, in spite of the supply of energy and fertilizer to the sector at below world market prices, total assistance to agriculture may have been *nil*. 2/ Lack of profitability increased the sector's working capital requirements. An analysis of the high financing needs of agro-processing industries, and primary producers follows.

a. Procurement, processing and distribution agencies

A large part of agricultural credit was utilized by procurement, processing and trading organizations. Given the set of prices, technology, and infrastructure, many of these enterprises were unprofitable, and

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1/ PSE measures the total assistance to the sector through: (i) output price support, (ii) input subsidies, and (iii) through assistance to value adding factors by altering the returns to primary factors of production. ERA refines PSE by also taking into account the indirect effects of policies elsewhere in the economy on the inputs into that industry. See, Tyler and Lattimore (1990).

2/ For example in Belarus, "...it [appeared] that the sum of input, output, and credit subsidies allotted to most agricultural products [was] offset by the implicit taxes imposed by price repression..." See, The World Bank (1994a), p.iv.

required financial assistance. Illustratively, during 1993 and 1994, in the Kyrgyz Republic, like in many others, there was an administrative price ceiling on bread, and the bread company--in addition to utilizing humanitarian grain shipments from abroad without compensating the budget--"needed" and received direct transfers of about som 10 million per year (about 0.2 percent of GDP).

In most countries, even though trading and processing enterprises were liberated from the government's orbit, implicit price regulations continued to apply. For example, in Lithuania, such enterprises--"commercialized" fairly early on--had to observe statutory limits on gross profit margins for grain, meat, and milk. Such fixed margins--combined with pricing with historical costs under high inflation--eroded profits, prevented working capital accumulation, led to a build-up of arrears to suppliers, and the government had to compensate processors and farms with subsidized credit.

Furthermore, in many countries, governments continued to be directly involved in procurement and distribution of agricultural products, mainly grains (Table 1), meat and milk products. With the government's objective much wider than profit maximization, its involvement frequently prevented commercialization of the sector, and increased the sector's financing needs.

Table 1. State Procurement of Grain as a Share of Total Output
(In percent)

	Belarus	Kazakstan	Lithuania	Russia	Ukraine
1989	...	31	13	30	35
1993	21 1/	33	20	28	31

Source: The World Bank.

1/ In 1992.

b. Primary producers

Producers' profitability was low and working capital requirements were high due to four important factors: terms of trade deterioration, overdue receivables, a large debt overhang, and sluggish structural adjustment.

i. Deterioration in the terms of trade

Price deregulation resulted in a rapid rise of prices of farm inputs, especially those of exportables such as fuel and fertilizers. Output prices rose as well, but not by as much, and the artificially advantageous terms of trade of the old regime were adjusted downward (see Table 2 for Russia) in line with world prices. 1/ For example, in Kazakstan, in 1993 alone, "the agricultural sector lost close to 50 percent of its purchasing power as the prices of inputs used in agriculture increased by 18.8 times while output prices increased by 7.8 times". 2/

Table 2. Russia: Agriculture's Barter Terms of Trade
Tons of wheat needed to purchase

	1 Grain Combine	1 Tractor	1 ton of Fertilizer	1 ton of Diesel Fuel
Russia				
1990	157	26	0.39	0.44
1991	233	55	0.62	0.52
1992 (March)	294	71	2.33	1.76

Source: The World Bank (1992)

One important factor behind the deterioration of the terms of trade was the government's implicit control over prices of major food items through not only margin limits on processors but also indicative farmgate prices and

1/ See Brooks (1992), and also the World Bank (1992), p.134.
2/ The World Bank (1994c), p.19.

state orders. 1/ Often, local governments also intervened to control prices in violation of federal regulations. 2/ The indicative prices used the cost-plus method, were intended to limit the growth of processors' costs and of retail food prices, and governed transactions between producers and state procurers on the one hand, and processors on the other. These prices were meant to serve as benchmarks in negotiation of contract prices for state orders. But, given the lack of competition in input supply and output marketing, these acted as ceiling prices. Legally, producers were not restricted from marketing through alternative channels, but state trading agencies were able to exert their market power on farms to sell at prices "recommended" by the government. Governments' influence over marketing stemmed from close control of the input supply network by its agencies at ministry level and their dependent enterprises: sales of inputs and credit were tied to delivery of output to state procurement agencies. 3/ With growing interenterprise arrears, private companies were also handicapped in competing with state-owned agencies with access to highly subsidized directed credit. 4/ Another factor behind the adverse terms of trade was restrictions on agricultural exports through quotas as well as high tariffs in many countries. Such restrictions, by limiting producers' access to

1/ The system of state orders replaced mandatory output targets by procurement contracts ("state orders") for direct government needs.

2/ See Rossiiskie Vesti (1995) for a report on Russia.

3/ In addition, in some countries like Ukraine, produce sold through private channels did not qualify for producer subsidies.

4/ According to Galbi (1995) p.12: "A typical argument for the necessity of state procurement is that there are no other firms to take up the job. But private firms will not develop rapidly given the large volume of state procurement and special credit lines for state procurement agencies."

markets with higher prices, suppressed domestic prices for some agricultural outputs and created large price disparities across borders (Table 3).

Table 3. Average Procurement Prices - Neighboring Country Comparison
As of May 1993

(Per kilogram, in U.S. dollars)

Commodity	Belarus	Estonia	Latvia	Lithuania
Cattle	.20	.24	.38	.37
Pigs	.37	.51	.88	.56
Poultry	.28	.39	.43	.44
Milk	.03	.10	.10	.06
Grain	.05	.09	.15	.06

Source: The World Bank (1995a)

The old terms of trade were embedded in production technologies, and the sector could not respond instantaneously to the new relative prices. The terms of trade deterioration squeezed profits and increased credit needs. Government policies to protect consumers from excessively "high" food prices exacerbated this deterioration and hurt the producers.

ii. The arrears problem

Box 1: Payment Delays in Grain-Bread Marketing in Lithuania

Consumer to retailer	Cash payment
Retailer to bakery	Delay 2-4 weeks
Bakery to flour mill	Delay 2-8 weeks
Flour mill to producer	Delay 1-4 months

Source: The World Bank (1995a)

The financial weakness of agricultural producers was aggravated by the problem of arrears, or overdue receivables, from processing and marketing agencies (see Box 1 for payment delays in Lithuania). Transition-specific factors behind the systemic problem of arrears in all sectors included: an underdeveloped payment and banking system which delayed clearing and settlements; an unstable macroeconomic environment with highly volatile relative prices and fluctuating profits of enterprises; and the lack of an accounting and legal framework appropriate for a market economy. 1/

Two specific causes were reported in relation to agricultural arrears. First, processors and distributors were unprofitable, and lacked the liquidity to pay producers on time. Second, weakened central controls on state-owned procurement agencies led to payment indiscipline. For example, grain procurement funds were diverted to other uses for 1-3½ months in Russia. 2/ Payment delays by state procurement agencies were not only very costly to producers under high inflation, but also gave leverage to private traders to purchase output at considerable discounts by offering immediate cash payments. Overdue receivables created a chronic cash flow deficit, and increased the producers' need for funds.

iii. Debt overhang and refinancing need

Many large agricultural enterprises were loss-making, and had a considerable debt overhang. For example, in Russia, in 1994, agriculture accounted for about 19 percent of the total bank debt in the economy, and about 29 percent of the total debt, and 14 percent of bank debt owed by the sector was overdue. 3/ In some countries the overhang increased during the initial years. Thus, in Tajikistan, the share of loan arrears to the Agricultural Bank in total arrears to the banking system rose from 3 percent to 50 percent during 1993. A part of the credit needs was for refinancing purposes, and rising interest rates exacerbated these refinancing needs.

1/ See Lahiri and Citrin (1995) for a detailed discussion of the arrears problem.
2/ See Rossiiskie Vesti (1995).
3/ The World Bank (1995c), p.4.

iv. Sluggish structural adjustment

Sharp decline in real income--cumulatively, GDP in the region is estimated to have declined by almost 50 percent during 1991-94--and changing relative prices brought about dramatic changes in the demand for food and other products. This called for necessary realignment in the pattern of agricultural production. But, adjustments were slow, and the continuation of old production patterns impaired the financial viability of the sector, and generated the need for extra financing. Two policy distortions delayed the process of sectoral adjustment: government involvement through ceilings on margins, state orders and indicative prices, and export restrictions. Availability of cheap directed credit maintained the regime of "soft budget constraints" and postponed the immediate need for adjustment.

3. Causes underlying the low supply of credit by banks

Agriculture's spontaneous access to credit from the commercial banking system was somewhat limited because of financial market imperfections, high market rates of interest, relatively long agricultural production cycle, and discrimination against the sector as a class of borrowers.

a. Imperfections of the underdeveloped financial market

Newly established commercial banks as well as reorganized specialized state banks did not have the experience to evaluate creditworthiness of prospective borrowers, and lacked the necessary legal and accounting infrastructure to support such evaluation and its usefulness. Property rights were not clearly defined, the legal framework was inadequate for contract enforcement, and deficient reporting on financial situation of borrowers led to informational problems. Imperfections caused by these inadequacies affected access to credit of many worthy borrowers.

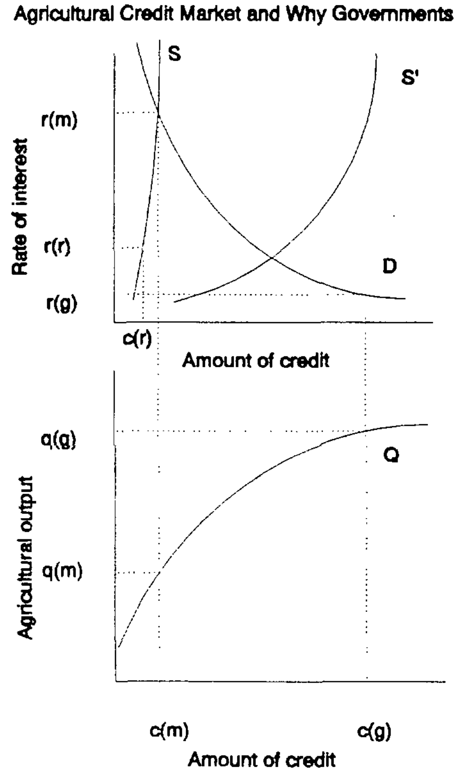
Two additional factors contributed to the imperfections of the agricultural credit market. First, there was no mechanism for establishing collateral due to problems with land transactibility. Second, farms were widely dispersed, loans to private farmers were of small size, and the rural banking infrastructure was extremely primitive. These led to very high transactions costs of lending to large parts of the agricultural sector.

Illustratively, in Figure 3, because of imperfections, the credit supply curve (S) was to the left of what it would have been (S') otherwise.

b. <u>High rates of interest</u>

The initial stages of transition witnessed a sharp rise in the nominal rates of interest on loans charged by banks because of inflation, the relative scarcity of loanable funds, and high risk premium. The agricultural sector, traditionally used to borrowing at very low rates, might have been deterred by the high rates from borrowing from banks. In other words, as illustrated in Figure 3, the supply curve of bank loans was

Figure 3.
Agricultural Credit Market and Why Governments Intervened



"too high up", and the requisite amount was forthcoming only at "too high" a rate of interest. *Demand* for bank credit, c(m), at the market interest rate, r(m), might have actually been low, and much less than the *need* for credit. In 1993 even *negative* real interest rates on directed credit were perceived by 40 percent of Ukrainian farmers as a constraint on borrowing! 1/

c. Long production cycle

The nature of agricultural production requires loans of long maturities--nine months to one year between sowing and realization of proceeds from sale of the produce. 2/ No profit-oriented bank, however, was likely to provide loans with maturities that long. First, with high inflation, commercial banks preferred to provide short-term loans with maturities of three to six months typically for commercial activities with fast sales turnover and strong repayment capacity. 3/ Second, with quarterly, or sometimes even monthly, inflation targets built into stabilization programs, central banks tried to synchronize the maturity of their loans to correspondingly short periods. Commercial banks were undercapitalized, and relied heavily on the central banks for loanable funds. They preferred to onlend central bank funds to agriculture with more or less the same maturities as those obtained from the central bank.

d. Discrimination and rationing

Adverse selection problems, irrespective of the sectoral fundamentals, might have led the commercial banks to not lend to the sector even at high

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1/ See Lerman, et al, (1994), pp.53-55.
2/ The World Bank (1994d), p.58.
3/ The World Bank (1994d), p.52.

rates of interest. Too high a rate of interest would have attracted riskier borrowers, and instead, banks might have chosen to ration credit at a lower interest rate such as r(r) (see Figure 3). Banks discriminate among potential borrowers on the basis of their risk characteristics, and are likely to have perceived the agricultural sector in the region as risky.

Indeed, even outside the region, discrimination by private lenders against agriculture is a problem faced by many countries, including the industrialized ones. 1/ Agriculture is, in general, perceived by the private financial markets as a high-risk activity because of the risk factors specific to the sector such as weather, price volatility, perishability of farm produce, and the covariant nature of the risks. While the sector in the region was no exception to this rule, there were three well observable FSU-specific characteristics that could have created a widespread perception that the sector was undergoing a deep crisis, was suffering from low profitability, and was not creditworthy. First, there was the continued uncertainty in agricultural policies, in particular regarding land ownership, prices and trade. Second, the past record of debt service by the sector led to apprehensions that it would continue to treat credits as essentially transfer payments or gifts. Third, lack of adequate savings from the past left little scope for equity financing by the sector. A very high debt-equity ratio enhanced the riskiness of loans to the sector.

1/ Belongia and Gilbert (1990) used econometric tests for credit rationing to show that U.S. farmers received more of their credit from federal agencies when the aggregate supply of credit declined--a finding consistent with the hypothesis of discrimination against the farmers as a class of borrowers.

IV. Why and How Governments Intervened

Insufficiency--both perceived and real--of credit to agriculture, an important sector from the socio-political perspective, motivated the governments to intervene in agricultural credit markets.

1. Why governments intervened

Governments of the region intervened in agricultural finance for several reasons. First, there was the power of the agricultural lobby. 1/ Directors of kolkhozes (collective farms) and sovkhozes (state-owned farms) had strong connections with politicians and bureaucrats, and constituted a homogeneous group with a unity of purpose. Furthermore, all participants in the sector had a high degree of commonality of interest: they produced fairly homogenous commodities, and with prices set by the state, their common interest was to pressure the state to grant them larger resources. After the dissolution of the Soviet Union, the agricultural lobbies galvanized themselves into political parties and rapidly established their strong presence in the various national parliaments. 2/ With governments responsible for setting prices at "affordable" levels and enforcing contracts, they lobbied for financing on generous terms. Unlike the military-industrial complex, the "consumer value" of food helped the sector to mobilize public support behind its cause. Generous government support to agriculture in developed states of western Europe lent legitimacy to the sector's demands in the region.

1/ See Aslund (1995), pp. 300-11, for an insightful analysis of the issue.

2/ See Aslund (1995), pp. 92-3.

Second, in those countries where the government was directly involved in procurement through state-owned agencies, the financing of purchases fell on the government, and led to the emission of credits to state procurement agencies. A recent example is the order by the Ukrainian government to finance 50 percent of government procurement contracts for 1995 by directed credit from the central bank. 1/ According to the World Bank, the size of the state distribution system relative to that of the banking system complicated any attempt to reduce government activities in financing agriculture in Belarus and Ukraine. 2/

Third, the liquidity flowing to the agricultural sector through the commercial banking system was insufficient to sustain agricultural output and employment at a "reasonable" level. In Figure 3, q(m) is the volume of agricultural output--too low to be "acceptable"--that would be produced without the government's intervention in the credit market. The governments' food security considerations could not allow agricultural output to fall below a critical minimum. Concessional credit and subsidies were the only instruments available in the short run to sustain a particular level of output. In Figure 3, c(g) is the government's estimate of the credit needed to maintain output at a certain "acceptable" level q(g).

2. How governments intervened

The two major operational aspects of government intervention were credit planning, and extension of credit on concessional terms through the

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1/ Interfax Food and Agriculture Report (1995), p.3.
2/ The World Bank (1994a), p.50 and The World Bank (1994b), p.92.

refinancing facility of central banks as well as from the budgets. 1/ Planning was necessary to determine the amount to be "directed", while concessional terms were considered to be essential because of the "too high" rates of interest prevailing in the market.

a. Credit planning and seasonality in demand

Agriculture's annual need for credit was estimated as the difference between projected operating expenditure and retained revenues. Aggregate operating expenditures reported in a previous year, adjusted for past inflation, yielded a forecast of total expenditure. Outputs and prices in a previous year adjusted for inflation, or for quantities and prices stipulated under state procurement plan, yielded total expected revenues. An assumed retention factor was used to project retained revenues. 2/

The methodology suffered from three deficiencies. First, the embedding of historical inefficiencies through past production and cost structures imparted an upward bias to the credit needs estimates. Second, the failure to take account of the arrears problem was a source of downward bias in the estimates, but it is difficult to say whether it fully countered the first bias. Third, the methodology provided no guidance on intra-year allocation of credit. Reportedly, often a large share of the planned annual credit was extended in the first half of the year itself. Part of this seasonal "oversupply" was converted by monopolistic input suppliers into higher prices, some was diverted to non-agricultural activities, and the sector

1/ Although the dividing line between subsidies and credit was often very thin, a comprehensive analysis of government assistance to agriculture is beyond the scope of this paper and we limit ourselves to government intervention in credit markets only.

2/ The World Bank (1994d).

often found itself in an illiquid position at harvest time. Decisions on the "emergency" credit needed to finance harvesting took place in an atmosphere of crisis fueled by political sentiments of "tragic winter" and "impending disaster". In the event, the total amount of credit actually extended through the year often exceeded the amount initially anticipated.

b. Concessional terms, excessive demand, and diversion

Implicit in the demand for directed credit were demands for concessional terms (see Table 4). Such credit was often granted at rates highly negative in real terms: in Belarus in 1993, for example, with inflation of about 1,200 percent, the agricultural sector obtained directed credit at an annual interest rate of 60 percent. While the subsidy entailed by the concessional terms inflated the demand for such credit, the lack of supervision and accountability rendered such credit fungible for use for non-agricultural purposes. Diversion of directed credit negated the basic objective of the scheme to stimulate agricultural production. 1/

Bureaucrats involved in the disbursement of credit at all levels and in state trading agencies (which received the credit) could engage in commercial activities, and their demand for subsidized credit was essentially infinite. Documented examples of credit diversion are plentiful in Russia: in 1992, credit allocated for state grain procurement amounted to twice the value of grain actually procured. 2/

1/ Partly to prevent the diversion of credit, in 1995, Kazakstan introduced a special form of promissory notes to be issued by banks to the grain procurement agency. These notes could only be discounted by input supplies upon presentation of contracts with farms.

2/ Galbi (1995), p.17. More recent examples were cited in Rossiiskie Vesti (1995). It carried a report by the President's Control Department on how credit directed to agriculture was misutilized.

Table 4. Concessional Terms of Credit to Agriculture 1/
Baltics, Russia and Other Former Soviet Union Countries
(In percent per annum)

	1992			1993			1994		
	Interest Charged by Banks to Agriculture		Basic Refinancing	Interest Charged by Banks to Agriculture		Basic Refinancing	Interest Charged by Banks to Agriculture		Basic Refinancing
	On Directed Credit	Others	Rate 2/	On Directed Credit	Others	Rate 2/	On Directed Credit	Others	Rate 2/
Belarus 3/	14	...	15	60	...	106	115	...	225
Kyrgyz Republic	...	20-50	50	190.1	20-50	...	...	...	89
Latvia									
Short-term	27	92	15-120	47	--	54	...	...	27
Long-term	28	7-80	--	...	...				
Lithuania 4/	...	...	60	...	...	80	5	...	45
Russia 5/	83	28	80	213	213	210	183	183	180

Sources: Country authorities; and staff estimates.

1/ Annual average.
2/ Of the central bank.
3/ The National Bank of Belarus provided refinance credit at below the basic rate.
4/ The refinance rate for 1994 refers to the interbank rate.
5/ End of period rates.

3. Were governments' agricultural credit policies justified?

An evaluation of agricultural credit policies must address two important questions: the quantitative aspects--should the governments have done as much as they did, and the qualitative aspects--should they have done what they did?.

a. Were the volumes of directed credit justified?

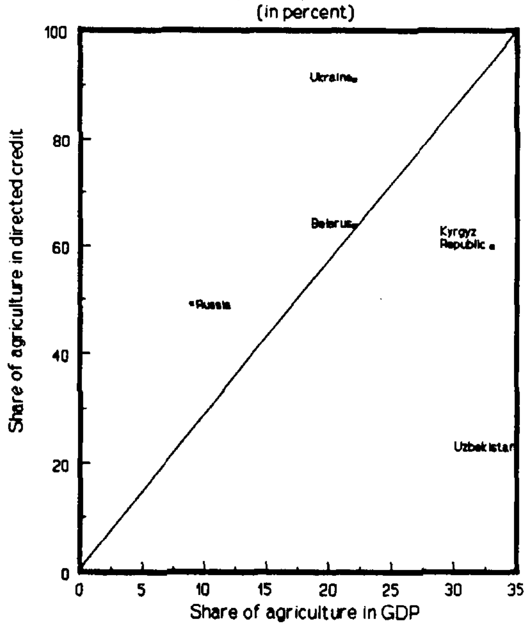
Credit is "directed" to a sector in anticipation of a shortfall of total credit from the banking system below its legitimate requirements. "Too much" *directed* credit, combined with other credit from banks, results in "too much" *total* credit to the sector. "Too much" total credit to a sector is sufficient to conclude that the volume directed was excessive.

No rigorous benchmark of "how much credit to agriculture is too much" exists. But, prima facie, the available data on bank credit to agriculture does not lend support to the presumption that the volumes of total credit to agriculture in the countries of the region were too high and unjustified. Figure 2 is a scatter diagram of agriculture's share in bank credit and in GDP in seven countries of the region as well as in some others. Data points for all the seven lie below both the 45 degree line, and the broad trend line for the five countries from outside the region. Thus, from the narrow sectoral perspective, credit to agriculture may not have been "too much".

The evaluation criterion for adequacy of credit, however, can be defined from three alternative perspectives other than a purely sectoral one. First, from the <u>monetary management perspective</u>, there was probably too much budgetary and central bank credit to agriculture that led to excessive money creation and undermined efforts at inflation control. The fiscal position was tight, and budgetary lending had to be financed through additional credit from the central bank. Such credit together with that extended directly from the central bank led to an equivalent increase in base money, and the liquidity impact of the operation--through the money multiplier--was far greater than that of normal credit from banks. Data available for five countries in the region indicate that, in at least two countries--namely, Russia and Ukraine--agriculture's share of directed credit from the central bank was considerably higher than its share in GDP

(Figure 4). 1/ For these two countries, the excess of agriculture's share in directed credit over its share in GDP suggests that directed credit to agriculture, in so far as it was "more" than to other sectors, may have been one of the dominant causes behind monetary expansion, and hence high inflation, during the early stages of transition.

Figure 4.
Baltic Countries, Russia, and Other Countries in FSU
(in percent)



Second, credit was scarce not only in agriculture, but also in other sectors. Directed credit for agriculture, by preempting funds from more profitable sectors, entailed a loss from the <u>efficiency perspective</u>.

Third, given the relative importance of food and agriculture in the FSU countries, a targeted physical volume of agricultural production or employment was an

1/ The share of GDP plotted in Figure 4 refers to the narrow definition of agriculture and to 1992. The share of directed credit refers to the average of the ratios of outstanding amounts at the end of 1992 and 1993 in all countries except Ukraine, where it refers to the ratio at end-1993. The sectoral classification of credit is not uniform across countries.

important political economic consideration for governments. 1/ In very elementary terms, for any particular country in the region, it is difficult to prove that less directed credit to agriculture in that country would not have had an adverse impact on output and employment in the sector. However, there is no evidence either that countries which extended a higher amount of directed credit to the sector in one year than in another year, or than other countries in the same year, were any more successful in containing the sectoral decline in output and employment. This raises doubts about the justification for the large amounts of directed credit that was extended to agriculture in some countries of the region.

b. Were the qualitative aspects of the policy justified?

There were four qualitative aspects of the intervention policy of governments which had adverse impacts on development of financial markets.

i. Negative real interest rates

Directed credit at highly negative rates of interest in real terms was often allocated by forcing commercial banks to lend at those rates. Such a policy depressed the deposit rates of interest and mobilization of deposits, and led to a shortage of loanable funds. This shortage, in turn, aggravated government's intervention in providing credit, as loanable funds became

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1/ Ideally, a planning problem of optimal intersectoral credit allocation to maximize GDP subject to an aggregate amount of credit consistent with an inflation target, as well as other constraints such as a minimum amount of agricultural output or employment, could have been solved. Credit could have been treated as an input in production, with the inflation target acting as a constraint on its aggregate volume. While the solution to such a well-specified planning problem was not available, with a long and unhappy history of central planning, the practical usefulness of such a methodology would have been highly suspect.

available only to well established and more powerful enterprises with closer linkages to commercial banks.

When the central bank or the budget made funds available to banks for onlending to agriculture at low rates of interest, the public sector bore the subsidy element of directed credit to agriculture. Although such subsidization was rarely recognized in the budget or in the central banks' books of accounts, it weakened the net worth of the consolidated public sector and had an adverse impact on the economy. Moreover, the interest concessionality of directed credit programs encouraged waste of resources through directly unproductive rent-seeking activities.

ii. Debt forgiveness

The initial debt overhang and refinancing needs of the agricultural sector were aggravated by further credit to nonviable borrowers in the sector, and repayment difficulties eventually led the government to grant debt forgiveness to the sector in many countries. For example, in Turkmenistan in June 1994, in a debt write-off operation, the government took over the debt of agricultural enterprises equivalent to almost 4 percent of GDP. Similarly, in Russia, the government issued *veksels*--bonds to cover debt write-offs--worth about Rub 15 trillion (2.4 percent of GDP) for debts incurred by agricultural enterprises in 1994. Loan waivers alleviated the problems of agriculture in the short run, but reinforced the politicization of banking and damaged credit discipline by encouraging defaults. By undermining the very concept of credit, debt forgiveness prolonged the dependence of the sector on exceptional support.

iii. <u>Specialized lending institutions</u>

In several countries specialized institutions--for example, AKKOR in Russia--were set up to serve primarily as distributors of directed credit from the central bank to the agricultural sector. These institutions had very little of own funds, lacked depository facilities, and direct lending through them removed commercial responsibility from financial decision-making, supplanted the borrower-lender relationship, and inhibited development of independent financial intermediation. These parastatals not only suffered from a lack of accountability and control, but also had poorly diversified portfolios because of covariance in supply and demand for funds within years (planting and harvesting) and across years (a bad year or a good year), as well as covariance in yield risk. 1/

iv. <u>Government loan guarantees</u>

Governments extended loan guarantees to ensure credit to agriculture in the region. For example, a large part (nearly $20 million) of the foreign official loans that Latvia received in the first half of 1993 was onlent to the sector under government guaranty. Such guaranties were appealing in the political process as these were regarded as virtually "costless", showing up in the budget only when the guaranty was exercised. But the supply of resources in capital markets was determined by national rates of saving and long-term capital inflows. The additional demand for funds by the guaranteed borrowers, which otherwise would not have been able to obtain

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1/ For example, AKKOR in Russia, while providing technical assistance and disseminating information to emerging private farmers, continued to depend on its ability to lobby the government for credits and subsidies for its existence. Extending credit to private farmers through the new central bureaucracy of AKKOR turned out to be costly and ineffective, and obscured market forces that would select and reward successful private farmers. See Galbi (1995), p.9.

credit, put upward pressure on interest rates, distorted the allocation of credit, and had negative implications for investment and growth. In cases where the central bank prevented the upward pressure on interest rates and offset crowding out with monetary expansion, this had inflationary implications. In addition, guarantees reduced the lenders' incentive to evaluate and manage loan risks, led to high rates of default and, eventually, to budgetary strain. 1/

To conclude, the government's financial support to agriculture on concessional terms and with guarantees may have helped the agricultural sector in the short run, but undermined macroeconomic stability. Furthermore, such support hampered the development of a competitive financial system to serve an economically viable agricultural sector.

V. Some Suggested Reforms

The root of the agricultural credit problem lay in the misaligned structure of production and distribution, and an underdeveloped banking system at the beginning of transition. The full agenda of structural reform to remove these misalignments and limitations is long and hard, and beyond the scope of this paper. However, lack of reforms on some fronts can seriously impede progress of structural adjustment relevant to agriculture, and cause continuing problems with agricultural credit. This section focuses on a few such issues classified under two broad categories: first, reforms designed to enhance profitability and reduce the need for credit in agriculture; and second, policies to encourage banks to lend to the sector.

1/ For example, in September 1995, a parliamentary committee in Latvia concluded that the state had suffered losses worth about $55 million (including principal and interest) on account of loans extended to agriculture under government guaranties. See Baltic News Service, September 21, 1995.

1. To decrease the need for bank credit

a. Boosting profitability, self-finance, and creditworthiness

To boost profitability, the government should allow producers, processors, and distributors to receive and pay market prices for their outputs and inputs, and eliminate any remaining price and trade distortions. Complete withdrawal of governments from procurement of output, the breaking up and privatization of state-owned processing and distribution enterprises, and the creation of competition in input supply are essential for the completion of price liberalization and the development of competitive output markets. Restructuring production in line with the newly established set of relative prices is vital for the emergence of a financially viable agriculture. Coverage of losses through debt forgiveness or provision of subsidized loans creates a moral hazard problem and only perpetuates the operation of production lines with negative value added.

b. Providing intermediary credit and smoothing seasonal demand

Demonopolization and privatization of state-owned processing and distribution enterprises will promote the emergence of supplier credit whereby market intermediaries will provide inputs against contracted delivery of future output. 1/ Because of their informational advantage, such intermediaries will not only be able to provide credit on cheaper terms than banks, but also improve the loan-loss ratios. Establishing futures markets and building on-farm storage facilities will spread demand for credit more evenly through the year. Policies conducive to equity financing through venture capital and foreign investment should also be pursued.

1/ For more details see the World Bank (1995b), p.42.

2. <u>To increase the supply of credit to agriculture by commercial banks</u>

To facilitate the development of commercial credit markets, the policy of preferential interest rates, debt forgiveness, and lending through specialized state banks must be stopped. Interest rates must be allowed to be determined by market forces and hard budget constraints must be imposed. A supportive accounting and legal framework, including functional land markets and collateral mechanism, must be established. To this end, transfer of land and productive assets to private ownership must be expedited.

In the nearest future, it might remain necessary to provide some form of government financial assistance to agriculture, given continued financial stress in the sector. Such support should be provided mainly from the budget, strictly limited and conditional, and with clearly specified sunset provisions. Government loan guarantees should be considered purely as a transitory measure.

VI. Conclusions

During the early stages of transition, financing needs of agriculture in the FSU countries were relatively high. With an underdeveloped banking system, there was the problem of this sector securing the necessary credit to carry on its operations at a level deemed acceptable from the political economic considerations, and the governments of many countries in the region provided large amounts of credit to agriculture from the budget or the central bank under concessional terms. That exacerbated the problem of stabilization and preempted resources from other sectors. While it could be argued that agriculture deserved some targeted financing to offset disincentives created in the policy, pricing, and regulatory regimes, the recipe for success lies in removing the sources of distortions and in promoting well-functioning markets. As various policy distortions are being removed, targeted agricultural credit programs act as a major impediment to adjustment by "covering" enterprise losses, have adverse impact on financial systems, and, as a consequence, deepen the financial stress in agriculture.

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