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Abstract

Three institutional pillars form the foundations of sustainable financial markets: The existence of a pool of profitable and diverse rural clients with the ability to service loans, well-run financial institutions which are financially self supporting and an enabling policy environment. Ukraine has not been successful in developing robust rural financial markets because it has consistently undermined these three institutional pillars through soft government-provided or government-subsidized directed credits that have had an overwhelming role in rural policies in the post-Soviet period. Instead of a pool of profitable clients, the Ukrainian countryside is dominated by unprofitable farm enterprises which employ the overwhelming majority of rural residents. Second, financial institutions serving agricultural enterprises in Ukraine have largely distributed government directed soft credit at unsustainable interest rates to financially troubled farms in order to cover losses. Third, there has been abiding opposition to policies to ensure clear property rights, enforceable contracts and transparent farm restructuring and privatization, because such policies would imply the dissolution of large scale farms which are the object of most rural policies.

Instead of creating sustainable rural financial markets, Ukrainian policies were instrumental in causing a substantial accumulation of bad debt by agricultural enterprises by the end of the 1990s. Partly as a response to this problem, the Government of Ukraine privatized agricultural enterprises in a four month period in 2000 and wrote off or rescheduled much of farm debt. The government also subsequently changed its main form of financing agricultural input markets from direct state involvement to substantial credit subsidies. In these policy changes the government of Ukraine adhered to its well-established legacy of addressing the symptoms of financial problems without altering fundamental causes.

***Key Words**: Ukraine, Rural Finance, Agriculture, Farms, Debt*
***JEL:** P31, Q14, O13*

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The failure of government-directed credit programs of the 1970s in developing countries led to a greater awareness that sustainable farm finance requires the development of viable financial markets in rural areas. Three institutional pillars form the foundations of sustainable financial markets: The existence of a pool of profitable and diverse rural clients with the ability to service loans, well-run financial institutions which are financially self supporting and an enabling policy environment.[1] Certainly, no country can claim to develop these 3 institutional foundations perfectly. The U.S. and other OECD countries have government programs for farm finance, and in the U.S. these programs have had many of the same problems encountered in directed credit programs in developing countries.[2] Most important is the promotion of policies that ensure progress toward developing the three institutions and not to undermine the development of genuine rural financial markets through soft government credit policies that dominate farm financing.

Ukraine has not been successful in developing robust rural financial markets because it has consistently undermined the three institutional pillars cited above through soft government-provided or government-subsidized directed credits that have had an overwhelming role in rural policies in the post-Soviet period. The driving force behind soft credit policies has been that the broad objectives of government rural policies in the post-Soviet period—whether by default, habit or design--continue to be control over agricultural production in order to ensure that the nation produces enough food for its own needs.[3] The government of Ukraine has pursued this objective through preservation of large farms and highly interventionist management of the rural economy.

Reform in this context has been less than robust. Though collective and state farms have been privatized and restructured, this reform has meant little more than “changing the sign on the door”. Though state commodity procurement was officially eliminated in 1997, the system of state-led farm debt collection after 1997 approximated procurement in all but name.[4] And though the state monopoly on input supply to farms was eliminated, state-sponsored barter financing of inputs dominated input markets. The lack of robust reform has allowed the state institutions of management of the Ukrainian economy to remain very similar to their Soviet precedents. The Cabinet of Ministers, the Verkhovna Rada and local administrations are largely inheritances from structures that existed under the Soviet regime, and faced with unforeseen problems, they pursue policies designed to resolve them in the way they are accustomed.[5]

Within this rural policy and institutional setting Ukraine has had little success in developing the 3 institutional pillars required for support of genuine rural financial markets. First, the Ukrainian countryside is dominated by unprofitable farm enterprises which employ the overwhelming majority of rural residents. In 1998, 93 percent of Ukrainian agricultural enterprises were unprofitable.[6] Second, financial institutions serving agricultural enterprises in Ukraine have largely distributed government directed soft credit at unsustainable interest rates to financially troubled farms in order to cover losses. Third, there has been abiding opposition to policies to ensure clear property rights, enforceable contracts and transparent

[1] Von Pischke (2001), pp. 40-48.

[2] The Farm Service Agency (FSA) is the major government lender servicing U.S. commercial agriculture. The FSA offers two major lending programs, direct lending and guaranteed lending.

[3] This paper discusses financial markets for agricultural enterprises, in recognition of their central importance in the Ukrainian rural economy. On January 1, 1999 agricultural enterprises held 75 percent of agricultural and 78 percent of arable land in Ukraine. Agrarian policies relevant to rural financial markets revolve around these enterprises, rather than individual or private farms.

[4] Sedik, et al. (2000), pp. 68-69.

[5] Van Atta (2001), p. 74.

[6] Ukrainian farm annual financial reports.

farm restructuring and privatization, because such policies would imply the dissolution of large scale farms which are the object of most rural policies.

Instead of creating sustainable rural financial markets, Ukrainian policies were instrumental in causing a substantial accumulation of bad debt by agricultural enterprises by the end of the 1990s. Partly as a response to this problem, the Government of Ukraine privatized agricultural enterprises in a four month period in 2000 and wrote off or rescheduled much of farm debt. The government also subsequently changed its main form of financing agricultural input markets from direct state involvement to substantial credit subsidies. In these policy changes the government of Ukraine adhered to its well-established legacy of addressing the symptoms of financial problems without altering fundamental causes.

Development of Genuine Rural Financial Markets

Until the early 1980s the topic of rural finance was dominated by donor and government funded directed agricultural credit programs. Green revolution technologies were costly and small farmers were perceived to be too poor to finance the required investments.[7] Agricultural development banks were not meant to operate as viable financial institutions, but, instead, to channel subsidized government and donor funds to farmers. These banks often performed poorly, since they concentrated exclusively on agricultural lending, exposing themselves to high risks. Loans often required frequent rescheduling, which undermined loan recovery efforts by bank staff and loan repayment of farmers.[8] Many of these banks have now been restructured or liquidated.

Dissatisfaction with directed credit programs led to a paradigm shift in the 1980s towards development of genuine financial markets.[9] While recognizing the difficulties of developing rural financial markets (box), the new approach was based on the underlying observation that sustainable development of rural areas can best be ensured by building on the genuine financial markets that already existed in rural areas, rather than undermining them with soft credits. In addition to large government funded credit programs, there were always informal money lenders, credit cooperatives and a few banks serving rural clientele. The new paradigm sought to build on this base using formal banks, such as suitably reformed agricultural development banks, rural branches of commercial banks, cooperative banks or community banks. The key role that less formal lenders, such as credit unions, cooperatives or micro-credit facilities operated by NGOs can play in the development of rural credit markets is also acknowledged. Finally, it was recognized that input suppliers, crop buyers and processors often supply credit to agricultural producers.

The basic principle of developing such markets centers on the need to establish a commercially viable client base.[10] Only after commercially viable small and medium enterprises, as well as farms, are in place is there a chance to develop rural credit markets. Directed credit programs focusing exclusively on agriculture are usually counterproductive for the robust development of agriculture, the rural economy and the sustainable development of rural financial services. These government-influenced or -provided programs tend to reward inefficient, rent-seeking businesses. Producers that borrow at subsidized interest rates are discouraged from adapting their production profile to meet market demands. Loan programs

[7] Many Ukrainian politicians and academics make a similar argument that farms are not sufficiently profitable to borrow at interest rates of 40 percent and more (Striewe, Chapko and Starikov (2001), p. 60).

[8] Adams, et al. (l984).

[9] The literature on development of rural financial markets is quite voluminous. Some key contributions are Adams, et al. (1984), Buttari (1995), Krahnen and Schmidt (1994), Von Pischke (1991) and Yaron, Benjamin and Gerda (1997).

[10] Fries (2002), pp. 5-8.

subject to political intervention, that specify production practices, discourage innovative production and marketing and reward government favored crop and livestock production. Such programs usually involve imprudent loans which are often rescheduled or forgiven, fostering bad client behavior and diminishing the effectiveness of prices as market signals.

Box
Features of Agricultural Lending in Ukraine

1. **Lending activities in a politically sensitive environment**
Agriculture is a politically sensitive and highly subsidized sector.

2. **Unclear property rights for land and physical assets:**
Large former collective and state farms dominate the countryside.
Land "shares" of large farms (rather than physical plots) owned by farm workers, pensioners and others.
Physical assets of large farms owned collectively, divided into "shares."

3. **Limited Enabling Policy Environment for Financial Markets:**
Farm bankruptcy and buying/selling of land inhibited to protect large farms.
Frequent state interventions in rural input, output and financial markets.
Frequent state intervention in commodity export and import markets.

4. **Risks associated with agricultural lending**
Similar economic activities of borrowers generate covariate risks due to market and price fluctuations, yield uncertainties, changes in domestic and international policies.
State interventions (e.g., waiver of loan overdues).
Low loan repayment discipline in externally-funded credit.
Collateralization of farmland and farm assets inhibited.
Legal contract enforcement problems arise even when collateral is available.

5**. High financial transaction costs for lenders and borrowers**
Long distances to serve a dispersed rural clientele.
Poorly developed transportation and communication infrastructure.
Little knowledge about heterogeneous farms.
Expensive management and supervision of rural bank branch networks.
High additional costs for borrowers: opportunity costs (e.g., lost working time), transport costs, bribes, fees.

6. **Specific credit demand**
Reduced turnover of agricultural loan portfolio over the year.
Seasonality in agricultural credit demand.

7. **Farms are integrated production and consumption units**
Due to the fungibility of money borrowed, funds can be used in the farms for consumption, social insurance, production and investment purposes.

Source: Adapted from FAO and GTZ (1998), no. 1, pp. 34-44.

The development of viable rural financial markets consists in increasing the debt holding capacity of borrowers and lenders in the economy. Increasing debt capacity depends vitally on three institutional pillars: (1) profitable loan recipients, (2) lenders with the liberty and ability to set loan policy based on repayment capacity, and (3) an enabling public policy, including macroeconomic policy and business environment.[11]

Ensuring Profitable Loan Recipients. Development of rural financial markets depends on the existence of a healthy rural client base, including farms, as well as other small and medium enterprises. A number of characteristics of rural businesses (including farms) can increase debt capacity by augmenting demand for capital. Because loans are serviced out of profits, the most basic prerequisite of rural lending is profitability. An environment in which many or most farms are unprofitable severely restricts the development of debt capacity. On the other hand, growth in rural incomes increases debt capacity. A second factor supporting the development of debt capacity is growth of farm efficiency. Increased technical efficiency implies that farms organize production and utilize inputs judiciously, thus reducing costs of production. Obviously, an environment in which poorly performing farms continue to operate, have their debts forgiven and receive soft loans does not encourage increases in technical efficiency. Only rewards for better performers and exit for non-performers can ensure that competition will force firms to reduce costs of production by increasing efficiency.

Ensuring Effective Financial Institutions. Many factors connected with financial institutions affect the development of debt capacity. Perhaps most important is the pernicious effect that government or donor directed credit policies have on private sector efforts at developing genuine financial markets. Soft government-directed or insured loans and credit subsidies undermine repayment discipline among potential clients. These policies also decrease incentives for lenders to evaluate repayment risk based on client information and prudent lending practices and to offer well-structured loans. They also decrease lender incentives to locate offices near agricultural producers and develop reasonably simple application procedures. However, prudent risk assessment by lenders, collateral and lower transaction costs for clients to obtain loans are essential to the development of genuine debt capacity.

Establishing an Enabling Public Policy. Public policy to facilitate growth in debt capacity in the economy means, first, that governments desist from discretionary interventions in managing the national economy. Instead, the government should set stable monetary, tax and border policies to allow rural firms to plan their actions in the medium term. For example, while monetary stability assists in the development of financial markets, inflation destroys confidence and is harmful to building debt capacity. Moderate tax policies allow companies to plan for longer terms and disclose financial information without fear of confiscation, while predatory tax policy keeps planning short term and prompts companies to hide their actual financial state. Concealed information practices are detrimental to the development of debt capacity. Good public policy at the macro level can be supplemented by predictable and rational border policies for agricultural producers. Export duties on agricultural commodities not only discourage production, they lower farm incomes by lowering domestic commodity prices, which in turn lowers debt capacity in agriculture.

A second public policy that can increase debt capacity is to create a legal system supportive of secure private property rights, including ease of transfer of private property. A secure system of private property is ensured through contract enforcement, land collateralization, a uniform and effective commercial code, routine and easy procedures for bankruptcy and loan foreclosure, titling registers, international accounting standards, international banking standards, etc. Financial markets are particularly reliant on the security and ease of transfer of property rights, since they usually rely on some form of collateral to reduce risk. Moreover, clear accounting standards are important for the development of debt capacity, since they help lenders to accurately judge repayment capacity.

[11] Von Pischke (2001).

A third public policy that can increase debt capacity is competition policy, particularly in financial markets. Monopolistic state-owned agricultural lending banks of the post-Soviet type do not facilitate debt capacity, because they are not viable financial institutions. On the other hand, allowing a multitude of small credit facilities, cooperative lending institutions and commercial banks to operate under adequate prudential regulation fosters the development of debt capacity. Effective financial sector regulation, the opportunity to transfer funds quickly and efficiently and a multitude of other financial instruments (such as government securities markets, private pension funds) are also important determinants, as well as indicators, of debt capacity in the economy.

Competition policy in farm input and output, as well as in transportation markets is important for the development of debt capacity as well. One of the chief reasons why Ukrainian grain producers receive low commodity prices is the high cost of storage and transportation, markets in which there is very little competition. Monopolistic parastatal storage and transportation markets mean that Ukrainian farms receive a lower portion of world prices for exported commodities than their counterparts in other countries. While farmers in Germany received a farmgate price of approximately 70 percent of FOB prices in 1998, Ukrainian farmers received only 40 percent.[12]

Ukrainian Rural Reforms and Finance

Ukrainian agricultural reform policies have been limited by the government's apparent desire to ensure political control over agricultural production and the rural population through large farms. T he desire to preserve large farms, perhaps more than any other reason, is responsible for the nature of rural reforms in Ukraine. Though this desideratum is seldom discussed, it pervades the legislation of the period and is in evidence when speaking with Ukrainian agricultural officials in Kiev and in the regions.

This political context has meant that rural policies in Ukraine, by and large, have not been supportive of sustainable financial markets. Instead, they have undermined the three pillars upon which genuine financial markets are built. In each of the three areas identified in the previous section, rural policies have been aimed more at agricultural production, rather than developing sustainable financial markets. First, farm privatization and restructuring in Ukraine has been ineffective in transforming collective and state farms into technically efficient and financially viable farms. Moreover, efforts to arrest the decline in agricultural production in large farms through soft credit policies have not provided incentives for improvement in farm performance. Second, the dominant role of the government as provider of inputs to agricultural enterprises through elaborate barter deals undermined the development of genuine financial institutions for large farms in Ukraine. None of the sources of finance for agricultural enterprises in Ukraine seem to have advanced credit to agricultural enterprises based predominantly on repayment capacity. Finally, public policy or what is often called "enabling environment" was subordinated to the aims of preserving large farms and arresting the decline in agricultural production. Thus, adjustments were made in order to "normalize" the financial state of large farms through soft credits. But this support for agricultural enterprises regardless of their financial state made it necessary to prevent the operation of financial as well as many other markets.

Agricultural Enterprises

Agricultural enterprises have been at the center of Ukrainian reform policies, which have attempted to transform collective and state farms into profitable market-oriented farms, first, through transferring land from state to collective ownership (1992), and then from collective to private ownership (2000). This reform has been largely legalistic and ineffectual, leaving

[12] Von Cramen-Taubedel (2001), p. 107.

the Ukrainian countryside with a great number of large farms of low technical efficiency lacking in managerial ability and innovation. The reform also failed to stem the decline in agricultural production which began in 1990 and continued through 1999. The government of Ukraine then supported large farms with credits, with little regard to their financial performance, in an effort to arrest this decline. Support to farms extended to nullifying land markets, as well as prohibiting bankruptcy of farms. Such policies created an immense moral hazard problem, further limiting incentives for sound financial performance.[13] And in fact, farms in Ukraine frequently engage in coping behavior that, while quite logical in the institutional context of Ukraine, can only be called perverse from the point of view of profit-making.

These agricultural policies have deterred the formation of debt capacity in Ukrainian rural areas by undermining part of the institutional basis for debt capacity, profitable farms and small and medium enterprises in rural areas. The key policies and starting point have been farm privatization and restructuring policies and their poor performance, which is used to justify support policies.

Lack of Farm Restructuring and Low Factor Productivity

There is general agreement in Western literature that land privatization and farm restructuring in Ukraine has been ineffective.

> . . . the general picture in Russia and Ukraine, which represent most of the agricultural land and rural population in CIS, is that very little has changed in the organization and operation of farm enterprises in the process of restructuring. There are clear symptoms of the "stay as is" approach, which does not go far beyond formal re-registration and is accordingly referred to in CIS as "changing the sign on the door."[14]

Lack of farm restructuring is most evident in the excess land and labor employed by Ukrainian farms. Ukrainian farms are far larger (in hectares) and employ far more people than US farms of a similar economic size. Characterizing the lack of restructuring requires comparison with a reference group of financially healthy farms.

Table 1 compares Ukrainian large farm indicators with similar indicators for a sample of farms in the Heartland region of the United States with gross sales revenue of $250,000 to $500,000 for the period 1994 to 1998.[15] This sample of US farms constitutes a reasonable

[13] Moral hazard is the economist's term for the problem in insurance theory where one party insures another against an adverse event that is dependent on the second party's actions. If the insured party knows that it is fully insured, it will have little incentive to take the requisite actions to prevent the adverse event. Thus, the probability of the adverse event is increased, which raises the cost to the insurer.

[14] Lerman, Csaki and Feder (2002), p. 121. Earlier studies of farm reform and restructuring and its results were Lerman, Brooks and Csaki (1994), Csaki and Lerman (1997) and Lerman and Csaki (2000). Though Ukraine and Russia are often grouped together, because of the similarity of land reform in these two countries, in a legal sense, Ukraine has certainly been the laggard. Only in 2000 were Ukrainian large farms converted to private ownership, thus attaining the legal status attained by Russian farms in 1993. Privatization of agricultural enterprises was decreed by Presidential Decree 1529/99, "On Immediate Measures to Accelerate the Reform of the Agricultural Sector of the Economy" (December 3, 1999).

[15] Gross sales are the standard measure of farm size in US farm statistics. US data is taken from the USDA Agricultural Resource Management Survey published by the Economic Research Service of USDA. For the purposes of this survey the US heartland is defined as farms in the states of Iowa, Illinois, Indiana and parts of Ohio, Kentucky, Minnesota, Wisconsin, South Dakota and Montana. For US farms "gross revenues" in Table 2 refer to gross cash income. Gross cash income includes cash receipts from farm sales, farm related income and government payments. It does not include the value of other elements that are not cash based, such as home consumption, imputed rental value of owner

comparison for Ukrainian farms, because they are of similar economic size. An average Ukrainian large farm sold $313,544 worth of agricultural and other products in 1998, whereas an average Heartland farm in this category had sales of around $300,000. Heartland farms also make a good comparison with Ukrainian large farms because these farms grow field crops such as wheat, soybeans and corn on large plains. Ukrainian large farms typically grow wheat, barley and sunflower seeds on large plains.

The lack of farm restructuring has left Ukrainian farms with a comparatively low output and profit per worker. Ukraine ranks exceedingly low in net value of agricultural production per worker compared to with other transition economies (Figure 1). Moreover, Ukrainian production per worker fell quite rapidly in the 1990s, while that of a number of Central and East European countries rose. In 1998 profits per worker were negative for an average Ukrainian farm as well as for each quintile of farms arranged by profits (Table 1 and Table 2).[16] Examining Ukrainian farms by quintiles based on profits shows that there was an important change in the type of farms with better financial performance between 1994 and 1998. While the most profitable Ukrainian farms in 1994 had large land areas and a high number of employees, the most profitable in 1998 were those with the smallest land area and lowest number of employees.

On the more general question of technical efficiency of Ukrainian farms, Lerman and Csaki (2000, p. 50) found that reorganized farms in their sample performed slightly better than non-reorganized ones. Despite this encouraging sign, they judged technical efficiency in both types of farms to be low. They also observed a similar pattern as in Table 1 and Table 2. Profit margins were generally negative, though less so in reorganized farms.

dwellings or inventory adjustment. For Ukrainian farms, the indicator in this table includes total sales revenue from farm and non-farm goods and services plus government support payments. The Ukrainian monetary value was converted to US dollars at the annual auction exchange rate for the years in question.

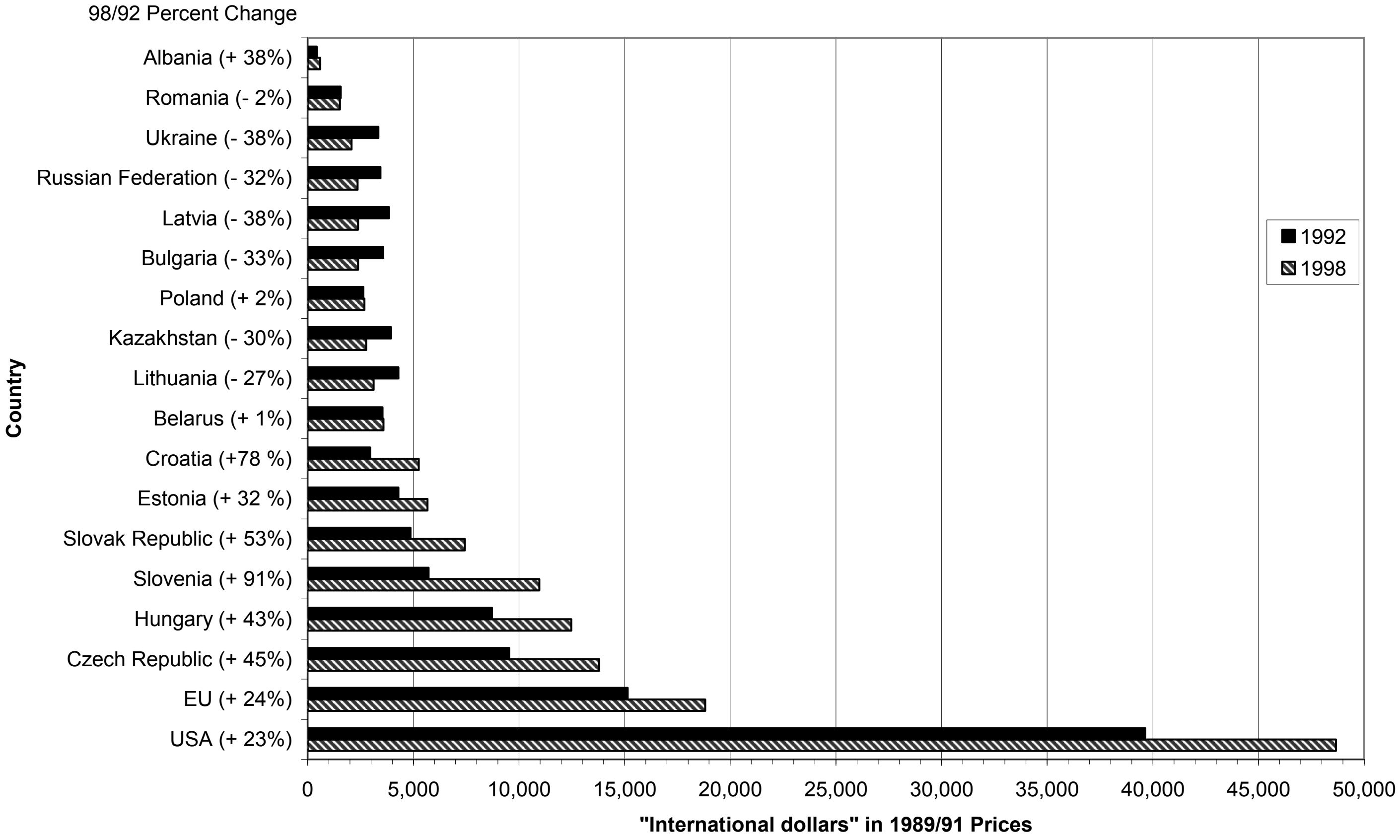
[16] This table is based on a data set containing the annual financial reports of all Ukrainian large farms subordinate to the Ministry of Agrarian Policy in these years. The data set was restricted to cover only those farms that were in existence in both 1994 and 1998. Of 11,980 farms in 1994 and 12,296 farms in 1998, only 10,279 could be followed through all of the intervening years. The data was thoroughly cleaned, reducing the sample size to 9,224 observations.

Table 1 Land, Employment and Net Cash Income per Farm in US and Ukraine, 1994, 1998

Year	1994	1998
Land per Farm (ha)		
US Heartland 250-500K Farms	311	320
Ukrainian Large Farms	2,571	2,522
Labor per farm		
US Heartland 250-500K Farms	1.36	1.32
Ukrainian Large Farms	256	195
Net cash income per farm (USD)		
US Heartland 250-500K Farms	77,105	98,729
Ukrainian Large Farms	94,607	-49,053

Sources:
Ukrainian large farms: Ukrainian farm annual financial reports.
Heartland farms: USDA, Agricultural Resource Management Study. Labor and land are estimates based on BEA Agricultural Census and USDA NASS figures.

Figure 1 Net Value of Agricultural Production per Worker in Transition Countries, 1992, 1998



Sources: FAOSTAT (value of output); OECD Beyond 20/20 database and World Bank World Development Indicators (labor).

Table 2 Median Performance Indicators for Ukrainian Farms Arranged by Profit Quintiles, 1994, 1998

Indicator	Quintiles by median profit					
	highest	2	3	4	lowest	total
1994						
Profit (mln krb)	10,516	5,447	2,974	1,390	316	2,973
Revenue (mln krb)	24,372	14,383	10,119	7,143	5,735	11,662
Profit per unit of revenue	0.47	0.38	0.29	0.19	0.05	0.29
Average number of farm workers during	351	275	242	210	198	251
Total land area, ha (selkhozugodiia)	3,263	2,443	2,167	1,737	1,691	2,213
1998						
Profit (1,000 UAH)	-58	-180	-282	-417	-680	-281
Revenue (1,000 UAH)	502	386	490	616	879	577
Profit per unit of revenue	-0.11	-0.47	-0.58	-0.68	-0.82	-0.56
Average number of farm workers during	137	147	172	201	255	182
Total land area, ha (selkhozugodiia)	1,522	1,666	2,056	2,575	3,682	2,204

Source: Ukrainian farm database (see text for description).

Perverse Farm Coping Behavior

The system of incentives facing Ukrainian farms actually encourages them to incur balance sheet losses by producing livestock products. Sales of meat, milk, cheese and other semi-processed products generate cash to pay workers in a way that eludes confiscation by input suppliers and the state. The proximate cause for most farm financial losses is continued production of livestock products, despite the unprofitability of these products. In 1998 Ukrainian large farms lost 2.8 billion UAH in the production of livestock products. This was four-fifths of total losses in agriculture. If farms had not produced any livestock products at all sectoral losses would have been only 10 percent of total sales. As it was, losses were 35 percent of total sales in 1998.

In farm level interviews conducted in 1999-2000, managers noted two important reasons for the continued production of livestock products, which demonstrate the preeminence of concerns outside of profitability. First, there was direct local administration pressure on directors to preserve livestock herds.[17] Second, directors themselves continued to produce unprofitable livestock products in order to provide for a constant income flow in order to pay in-kind wages or other monthly expenses. In addition, farms preserved livestock herds in order to preserve employment and provide organic fertilizer for crops. The problem of a constant flow of income is solved in Western crop raising farms, first, by being profitable, second, by selling stocks throughout the year and, third, by earning income from non-farm sources. About half of farm income in the US is from non-farm sources. In Ukraine, however, the avenues for holding stocks and non-farm income are quite limited. Typically, the Ukrainian large farm must sell all its production in the fall, in order to pay off debt both from the current year and from previous years. Moreover, since Soviet times the business of Ukrainian farms has been farming. Though farms have made some efforts to develop non-farm income sources, there is little incentive for farm managers or farm workers to engage in risky, entrepreneurial activities.

Financing Agricultural Enterprises in Ukraine

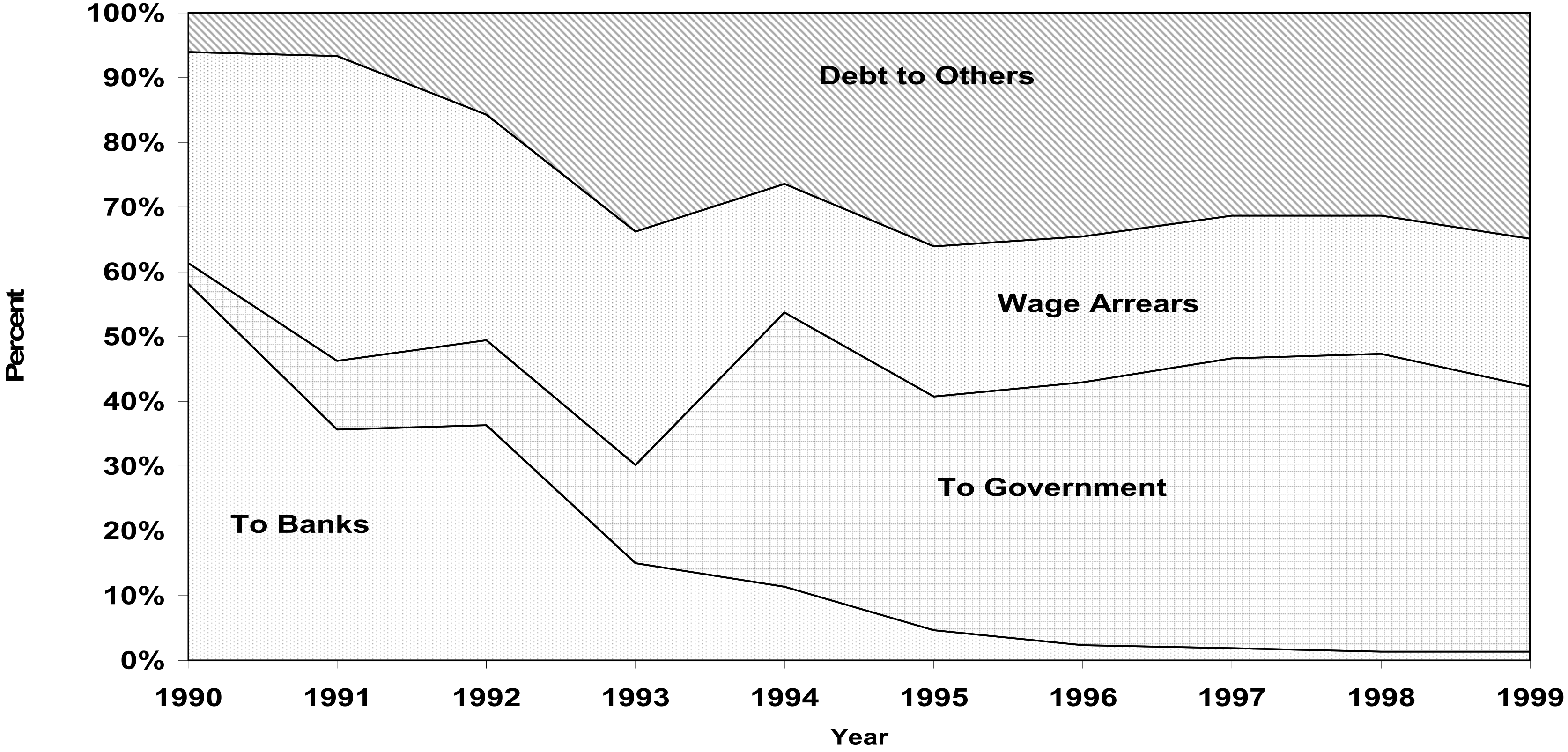
Directed credit and direct input supply policies of the government of Ukraine have undermined the second institutional pillar of support for genuine financial markets, the existence of lenders with the liberty and ability to set loan policy based on repayment capacity. Thought there are micro finance projects and banks in Ukraine which finance small and medium enterprises, even in rural areas, the rural clients of these banks are not the large farms that are the topic of this paper and represent a small fraction of commercial agriculture in Ukraine.[18] Lenders to agricultural enterprises in Ukraine have not advanced credit to agricultural enterprises based predominantly on repayment capacity.

[17] Despite official pressure and internal incentives to support livestock herds, farms have reduced their livestock herds rather dramatically in the past 10 years. The question only concerns the pace of reduction. The fact that most directors interviewed cited official pressure to maintain livestock herds as one reason for decreased profits indicates that they themselves might have reduced herds faster, had they sufficient freedom.

[18] For example, the Ukraine Micro Finance Bank (MFB) (www.mfb.com.ua) was established in February 2001. The MFB is owned by the International Finance Corporation (20 percent), the EBRD (20 percent), the Western NIS Enterprise Fund (20 percent), the German-Ukrainian Fund (20 percent), the Internationale Micro Investitionen AG (IMI) (10 percent), and the Dutch Stichting DOEN (10 percent). The bank disbursed 5,000 loans for USD 33 million to small and medium sized enterprises during the first 18 months of its existence. .

There have been four main sources of finance for agricultural enterprises in Ukraine: banks, the government, employees (through wage arrears) and other enterprises (primarily input suppliers) (Figure 2). There exist no consolidated accounts of farm lending in Ukraine in this period. It is therefore necessary to draw conclusions from data on farm debt taken from farm financial accounts. Changes in farm debt give a qualitative idea of changes in the sources of finance over the period 1992 to 1999.

Figure 2 Farm Debt in Ukraine, 1990-1999



Source: Ukrainian farm annual financial reports.

Debt to each of these lenders was "soft" in the sense that it was frequently rescheduled, forgiven or simply taken (in the case of unpaid wages). Bank Ukraina was the primary institutional lender for agricultural enterprises. It was one of three specialized lending banks reorganized in Ukraine in 1990.[19] Though Ukraina was reorganized into a joint stock commercial bank, it remained a government-controlled directed credit lender. Bank Ukraina did not use normal banking criteria to lend to state-owned processors, input suppliers and storage facilities, as well as collective agricultural enterprises. It essentially advanced credit to cover losses. After 1994 the Government of Ukraine was under considerable pressure from the IMF and World Bank to halt quasi-fiscal lending by Bank Ukraina as part of the stabilization program. The accumulation of bad debt by Ukraina led to its effective bankruptcy in 1994, though it continued to operate until quite recently. Ukraina's banking license was revoked by the National Bank of Ukraine in July 2001 and the Ukrainian government moved toward liquidation of the bank.

After 1994 the government became the primary direct and indirect source of finance for Ukrainian farm enterprises. A significant portion of markets for farm inputs were financed through government programs under which the state financed and distributed inputs to farms without regard to debt repayment capacity. It is not surprising, therefore, that only 41 percent of state loans to large farms in 1998-99 were repaid.[20]

The government financed and distributed inputs to large farms through a five-way contract, including the oblast or raion administration, the local Department of Agriculture, the input supplier, a procurement organization or processor (such as Khlib Ukrainy) and the farm. Under such contracts, the Ministry of Agricultural Policy and oblast and raion departments distributed fuel and mineral fertilizers to farms under government loans, which were to be repaid with liquid agricultural products delivered to the processor. Khlib Ukrainy was primarily responsible for passing on farm commodities procured under such schemes to the food processing industry, which in turn sold processed foods to the population and repaid the loan to the government. The government paid suppliers for input deliveries and food processors were supposed to remit payment to the government in accordance with the amount of commodities surrendered by farms.

Table 3 illustrates the degree of government direct financing and direct distribution in input markets for large farms in Ukraine from 1998 to 2000.[21] In total, the government directly distributed about 28 percent of purchased inputs in 1998 and 35 percent in 1999. In July 2000 it was estimated that the government would finance around 35 percent of input markets in Ukraine in 2000. The role of the government in directly financing and distributing agricultural inputs was considerable, though not overwhelming, depending on the input.

The role of the state in financing agriculture went far beyond direct financing, however. In essence, the government of Ukraine needed to convince agro processors and input suppliers to lend to agricultural enterprises in an environment in which only 8% of them were profitable in 1998. For this reason, the government offered numerous economic incentives to input suppliers in order that they continued to sell or advance credit to farms. These incentives ranged from tax write-offs or temporary tax credits to special import tariff exclusions to government price discounts

[19] World Bank (1994), pp. 90-91.

[20] Cabinet of Ministers Resolution 2147, November 26, 1999.

[21] Von Cramen-Taubadel and Zorya (2001) cite significantly higher figures of 1.8 billion UAH in 1998 and 1999 based on newspaper accounts.

on natural gas and oil sold by state enterprises. Unfortunately, it is difficult to determine the extent of these subsidies, since though they are included in most legislation on the issue, to what extent they are actually received is impossible to determine.

However, a suggestion of the cost of input financing for the Ukrainian government can be seen in calculations concluded for spring sowing 2000 (Kobuta, Noga, 2000). For spring sowing 2000, the value of inputs (mineral fertilizers and oil products) supplied to farms in accordance with government resolutions was a mere 296 million UAH (53.6 million US dollars). However, the cost to the Ukrainian budget in order to interest banks, distributors, processors and others in working with agricultural enterprises was much larger, 922 million UAH (167 million US dollars). These economic incentives included:

- Central bank subsidies to Bank Ukraina, the sectoral bank responsible for agriculture (135 million UAH),

- Funds earmarked for interest rate subsidies for commercial banks lending to agriculture (85 million UAH),

- Local budget funds (168 million UAH),

- Government losses from oil import tariff discounts (70 million UAH),

- Milk and meat subsidies for farms, to be used specifically for input purchases (60 million UAH),

- VAT discounts for farms to be used for input purchases (168 million UAH), and

- Discounted sales of oil by government enterprise to distributors (236 million UAH).

Table 3 Ukrainian Government Role in Direct Financing of Input Purchases by Agricultural Enterprises, 1997-2000

	Total	Petroleum products		Mineral fertilizers		New agricultural machinery	Machinery spare parts	Plant protection agents	Seeds		Feed grains	
	mln UAH	mln UAH	1000 tons	mln UAH	1000 tons	mln UAH	mln UAH	mln UAH	mln UAH	1000 tons	mln UAH	1000 tons
Year 2000 Estimate												
Total Farm Purchases	4,050	3,112	1,937	252	275	257	150	177	102	-	-	-
Government distributed and financed	1,398	1,008	630	220	240	120	0	0	50	-	-	-
Percent of market distributed by government	35	32	33	87	87	47	0	0	49	-	-	-
1999 Fact												
Total Farm Purchases	3,722	1,844	2,714	498	415	470	470	280	160	-	-	-
Government distributed and financed	1,288	524	847	336	357	287	27	27	87	-	-	-
Percent of market distributed by government	35	28	31	67	86	61	6	10	54	-	-	-
1998 Fact												
Total Farm Purchases	4,055	1,921	3,324	615	515	455	590	319	155	-	-	-
Government distributed and financed	1,122	556	963	287	330	67	27	0	90	181	95	630
Percent of market distributed by government	28	29	29	47	64	15	5	0	58			
1997 Fact												
Total Farm Purchases	4,507	1,580	4,019	748	562	-	-	-	-	-	-	-
Government distributed and financed	1,092	495	1,002	281	390	-	-	-	-	-	-	-
Percent of market distributed by government	24	31	25	38	69	-	-	-	-	-	-	-

Source: Estimates based on government resolutions and Ministry financial documents.

Public Policies Relevant to Rural Finance

State policies on rural finance have not been the result of well thought-out and agreed-on basic tenets about the role of the government and the market in developing sustainable financial institutions in the Ukrainian agricultural economy. There is little agreement between policy-makers on what should be the basic tenets of agricultural policy, and the development of genuine financial markets for large farms has not been a subject for serious consideration. Rather, agricultural policy has been a mixture of market liberalization with the Soviet period inheritance. Socialist-era controls on agricultural production and finance have been dismantled, such as state input supply and procurement, state-controlled foreign trade and price control. However, Ukrainian political institutions, such as the Presidential Administration, the Cabinet of Ministers, the Supreme Soviet and local administrations continue to be committed to a policy of control of agriculture through large farms and they pursue this policy through frequent interventions. In the period 1992-2000, these government institutions were committed to ensuring a supply of inputs for agricultural production, and they did their utmost to ensure that the financial state of agricultural producers did not interfere with fulfillment of this goal. This commitment led the government to utilize such policies as protecting farms from bankruptcy, financing their input purchases and forgiving debt. Obviously, such policies undermined incentives for sound financial performance.

Specific government policies relevant to rural finance concern four main topics. The first is distribution of farm credit in the government's role as lender of soft credits. This topic was covered in the previous section on sources of farm finance. The second is efforts to nullify markets in order to control the consequences of the sizeable farm debt problem that arose in the soft budget environment. Three important policies protected Ukrainian large farms from their creditors and effectively prevented their breakup due to financial pressures: the absence of effective bankruptcy legislation, the absence of effective land markets and unconditional debt relief. The third topic is the formulation of policies aimed at enforcement of farm tax and other payments to the government. Though the government was interested in ensuring that farms survived in order to produce, it was also interested in collecting taxes and fees. Moreover, it strove to make certain that payments to the state enjoyed priority over other creditors. In grain markets this policy was tantamount to enforcement of state procurement in the years 1998 and 1999.

Policies to Nullify Markets to Control the Consequences of Bad Debt

Absence of bankruptcy. Ukraine does not have effective bankruptcy legislation for agricultural enterprises. The 1992 Ukrainian law on bankruptcy in principle provided a way for creditors to collect on debt through initiating bankruptcy proceedings. However, the procedure outlined was so complex and oriented against creditor interests that it was seldom used. Creditors preferred to deal directly with farms, lobby the government or work through the Gore-Kuchma Commission. A new law on bankruptcy was adopted in June 1999, but included a 5 year moratorium on bankruptcy of farms.

Actual bankruptcy of Ukrainian farms for which there are significant overdue claims is neither feasible nor desirable. Court adjudication of overdue claims on farms in 1999 would have meant subjecting the majority of Ukrainian farms to a process that would most certainly require many years. The key issue is the transfer of assets of farms to institutional structures that can utilize them efficiently. This task can be accomplished through meaningful farm privatization and restructuring, followed by government policies supportive of small and medium farms, such as enforceable property rights, a working court system, extension services, etc.

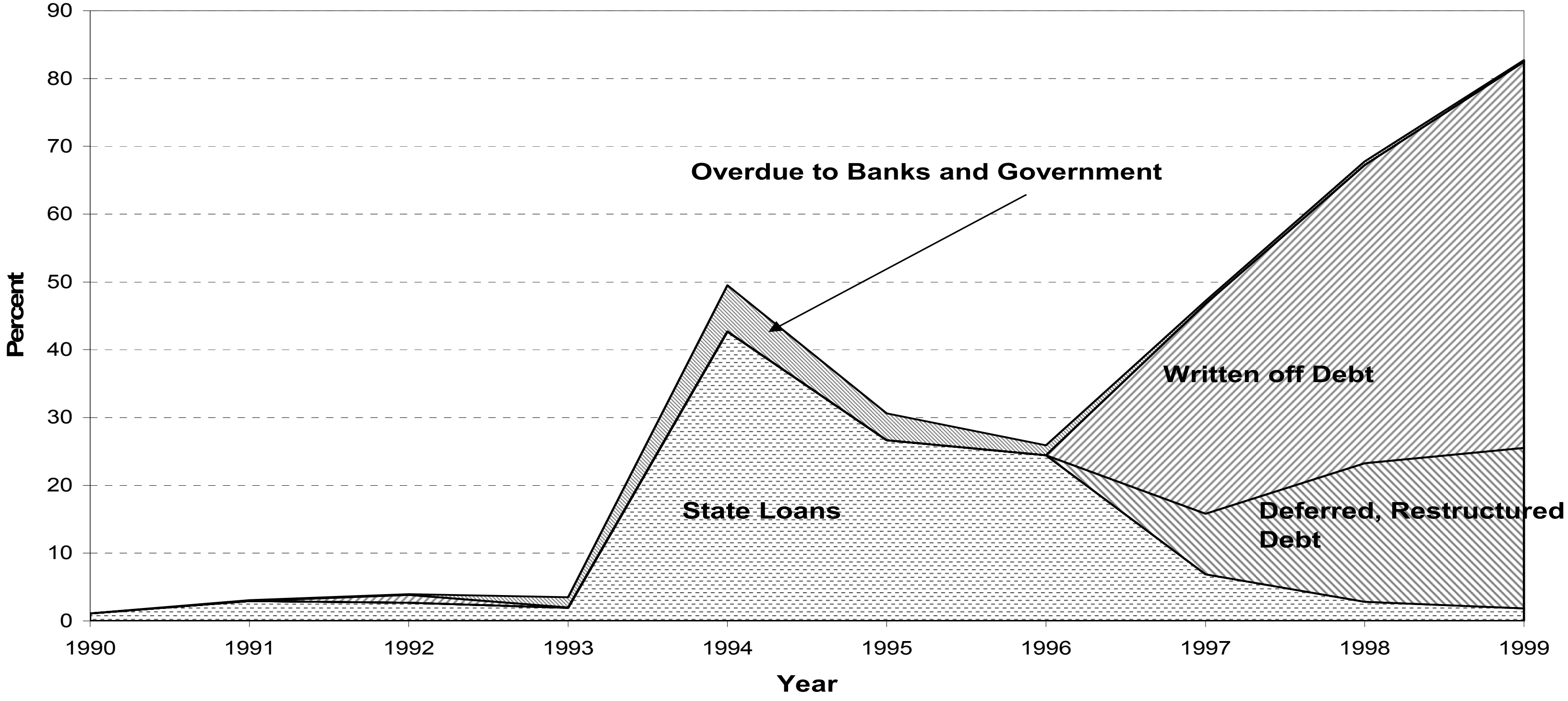
Absence of land markets. Robust land markets have not developed in Ukraine, largely because of the type of farm privatization strategy pursued. Large agricultural enterprises continue to hold the overwhelming majority of agricultural land in Ukraine. On January 1, 1999 agricultural enterprises held 75 percent of agricultural and 78 percent of arable land in Ukraine. Remaining land was held by individual households (private plots) and private farms. The government bureaucracy (or at least parts of it) seems to be interested in preserving large farms. Farm management is interested in the status quo as a way of prolonging its economic and political power. Likewise, former collective farm members, the majority of which are elderly, also seem to prefer to preserve large farms, rather than become independent proprietors. The usual reason cited is that most of them prefer to work their private plots (primarily for subsistence) and be employed, even for low wages, rather than risk going it alone.

Unconditional debt relief for farms. Debt relief policies aimed at controlling the market consequences of bad debt by addressing symptoms rather than causes. These included routine debt write-offs (in 1992, 1993, 1997, 1998, 1999 and 2000), tax deferments and debt restructuring.[22]

The incentive effects of debt relief may depend on the portion of total debt subject to such relief. Figure 3 illustrates that this portion was substantial and growing through 1999. Ukrainian farms were indebted to the government (for taxes and off budget fund payments), to banks, to other enterprises and to their own employees. By 1999, more than 80 percent of outstanding (plus written off) debt fell into this category. In the figure, "state loans" represent restructured tax debt. Debt statistics do not allow us to document precisely how much of debt to other enterprises is overdue, though the portion is thought to be substantial. Moreover, nearly all debt to employees is overdue.

[22] Relevant legislation can be found in Sedik, et al. (2000), pp. 24-30.

Figure 3 Cumulative Percent of Farm Debt (plus write-offs) to Banks and Government that is Overdue, Deferred, Restructured of Forgiven, 1990-1999



Source: Ukrainian farm annual financial reports

Policies to Ensure Government Payment Priority

Payment enforcement. When farms are unable to meet all their debt service payments in the absence of court-adjudicated bankruptcy it is necessary to designate the order of debt payment. In Ukraine, as in many countries, the state insisted that it be paid before other creditors. But without addressing the underlying reasons for unprofitability efforts to seize farm bank accounts only drove the financial accounts of Ukrainian farms underground. The fundamental legal document from 1993 to 1996 regulating the collection of late tax and other payments was Cabinet of Ministers Decree no. 8-93, "On Collection of Overdue Tax and Non Tax Payments" of January 21, 1993. This document regulated the rules of settling debts to the government for enterprises, granting various government organs the right to confiscate bank account balances (freezing enterprise bank accounts) at will for payment of tax debts. In addition to the lien on bank accounts, a whole series of Presidential Decrees was passed with the goal of establishing the priority of tax and other payments to the government for enterprises that could not pay their bills. These policies placed debtor enterprises in a fairly difficult situation. They could not meet their current payments, as all money coming into accounts was directed toward paying tax debts. Faced with confiscation of all money flowing into their bank accounts, agricultural enterprises stopped using them and continued doing business predominantly by barter.

In November 1999 the central government changed its policy toward farm debt to the budget, by placing responsibility for collection on the shoulders of oblast administrations. Cabinet of Ministers Resolutions 2147 and 2256 transferred the right to claim debts of agricultural goods producers to oblast administrations for commodity and cash credits received by farms from the government in 1994-99. The law also directed local administrations to keep a record of debts between all government organs and farms for subsequent “reregistration.” Resolution 2147 changed the legal status of part of agricultural producer debts to the central government. The portion of agricultural producer debts to which regional authorities claim rights was reregistered as subsidies granted by the state budget to oblast budgets. As compensation, the state increased the amount of funds local budgets were supposed to transfer to the central budget. The resolution instructed regional administrations, the State Reserve and Khlib Ukrainy to confiscate "available grain" (that is, grain stored by agricultural producers to grain elevators) for the State Reserve as settlement of debts to it. Cabinet of Ministers Resolutions 2147 and 2256 were rescinded in June 2000 by Cabinet of Ministers Resolution 891. After June 2, 2000 local administrations were no longer responsible for collecting farm debt.

Though responsibility of local officials for debt collection was formally removed, this does not mean that local officials could afford to be unresponsive to the wishes of the presidential administration or the Cabinet of Ministers. In the Ukrainian unified state oblast governors are appointed and removed at the president’s discretion. Thus, there is ample incentive for enforcement of policies, whether they are communicated by law, decree, sublegal act or telephone.

State barter settlement. When the state was unable to seize cash from farms, it began to encourage barter settlement in order to obtain debt payments. The main manner in which the state intervened to encourage and facilitate barter settlements was by so-called “mutual settlements.” These deals between farms, input suppliers, commodity purchasers and tax authorities frequently involved complex, untransparent deals between the State Reserve Fund, Khlib Ukrainy the pension fund, the budget and electricity suppliers.

The government often used mutual settlements between enterprises as a means of settling debts to the budget or pension fund. Such schemes worked as follows. Suppose enterprise A has tax arrears to the government, enterprise B is owed money by the budget and enterprise B owes money to enterprise A. In this case the government reserves the right to simultaneously cancel its debt to enterprise B by the amount of B's debt to enterprise A and cancel the tax arrears of enterprise A by the same amount. This process is called "mutual settlements." In the case of agriculture, the government has used this scheme in a number of cases when agricultural input suppliers owed taxes to the government, the government owed loan advances, subsidies or payment to farms and farms were simultaneously in debt to input suppliers.

Cabinet of Ministers Resolution 526 of 16 May 1996 and Cabinet of Ministers Resolution 537 of 17 May 1996 allowed this method of clearing accounts. Further legislation in September 1996 stated that though such schemes could be utilized to settle debts and credits to the budget, debt between enterprises themselves could be done only through a court settlement. Mutual settlements were implemented under this legislation until 31 December 1996, when the September decree was repealed. In subsequent years additional legislation directed toward mutual settlement of debts were applied. According to Cabinet Resolution no. 2140, large farms received tax credits in 1999 for social sphere (schools, roads, medical clinics, hospitals, consumer services, water and sewer systems and equipment) construction and other social sphere expenditures in 1998.

The government allowed barter payments to the Pension Fund and defined the procedure for these payments in a number of Cabinet of Ministers resolutions. According to Cabinet of Ministers Resolution no. 890 of 2 August 1996, agricultural enterprises lacking cash funds were authorized to settle debt to the Pension Fund through the transfer of their own production and property. Cabinet of Ministers and National Bank of Ukraine Resolution no. 187 of 18 February 1998 authorized any cash funds incoming to settlement accounts to be firstly directed to district Pension Fund accounts.

Frustrated by Pension Fund arrears, the Cabinet of Ministers passed resolution no. 569 of 9 April 1999, which recommended that oblast administrations make plans in 1999 to transfer no less than 10 percent of the grain harvest to the Pension Fund. This grain was to be subsequently directed to processors according to the procedures defined in Cabinet of Ministers Resolution no. 698 of 20 August 1998. This resolution defined the procedure for handling food grain received by Khlib Ukrainy enterprises and other storage organizations as payment to the Pension Fund. Cabinet of Ministers Resolution no. 1395 of 7 July 1999 stated that oblast administrations should complete the conclusion of contracts with agricultural producers on transfer to the Pension Fund of no less than 10 percent of grain from the current year's harvest by August 20, 1999.

The government also defined a form of mutual settlement for electricity debts. Cabinet of Ministers Resolution no. 717 of 4 July 1996 defined the procedure for payment by farms of electricity debt based on mutual settlements. The government owed large sums to farms for the construction of kindergartens, social clubs and other "social objects" which the farms had funded and for which they were to be reimbursed. Resolution 717 authorized the government to cancel the payment of these debts to farms in exchange for a simultaneous cancellation of farm debts to electricity providers as of June 1, 1996. The Cabinet of Ministers authorized mutual settlement for payment of electricity debt again in October 1996.

The government also authorized farms to settle electricity debt by barter. Cabinet of Ministers Resolution no. 1024 of 18 September 1997 authorized enterprises of all forms of ownership with debts for electricity and heat (as of September 1, 1997) to settle these debts by December 31, 1997 through transfer of agricultural and processed production to AgroHosResursy, a department of the Ministry of Agrarian Policy. Agrohosresursy would then deliver the commodities to the State Reserve, for subsequent settlement between farms, MinEnergo and the State Committee on Material Reserves. Subsequent Cabinet of Ministers Resolutions further defined the terms of allowable barter settlements for electricity debts.

A Farm Debt Crisis and More Reform

Rather than creating sustainable financial markets in Ukraine, the combination of lack of farm restructuring, passive lending to farms and poor public policies led to a debt “crisis” that gained political resonance in 1999 and 2000. Compared to US farms of similar economic size, debt levels per ha or per employee on Ukrainian farms were not large (Table 4). But the fundamental lack of profitability of Ukrainian farms implied that any debt level would be unserviceable. The percent of loss-making farms in Ukraine increased from 6 percent in 1994 to 69 percent in 1996 and 93 percent in 1998. In 1998 an average agricultural enterprise had a net cash loss of nearly $50,000. Continued lending to farms regardless of their financial state only led to an accumulation of bad debt. Partly as a response to this problem, the Government of Ukraine privatized agricultural enterprises in a four month period in 2000 and wrote off or rescheduled much of the farm debt. The government also subsequently changed its main form of financing agricultural input markets from direct state involvement to substantial credit subsidies along with adequate economic incentives. These policy changes adhere to the well established legacy of addressing the symptoms of financial problems without altering the fundamental causes.

Ratios of outstanding debt to land area or number of employees (including owners) are measures of the “burden” of debt on factors of production (Table 4, lines 1 and 2).[23] In 1998 US farms carried 35 more times debt per employee and nearly twice as much debt per hectare. This indicates that debt levels on Ukrainian farms were quite manageable, if only factors were used more efficiently. To sell a similar value of products, Ukrainian farms used 8 times more land and 147 times more labor than US farms. With such low value of output per factor, it is not surprising that these farms ran losses.

The level of farm net cash income is a measure of net cash profits, i.e., receipts from farm sales, farm related income and government payments minus cash outlays for current production. There is a very substantial difference between Ukrainian and US farms in the level of farm net cash income (Table 4, line 4) and in the behavior of this indicator over time. For Ukrainian farms this statistic turned negative (losses) in 1997, indicating that an average Ukrainian farm was unable to service any level of debt. This indicates that Ukrainian farms actually subtracted nearly 600 million US dollars in value from the economy in 1998, rather than added. For US farms this indicator remained positive throughout these years. Moreover, in Ukrainian farms this indicator fell rather dramatically over the five years covered in the table. In US farms net income remained relatively stable over the entire period.

On December 3, 1999 Presidential Decree 1529 was issued partly as a reaction to the mounting debt difficulties of agricultural enterprises. According to this decree, nearly all Ukrainian former collective farms changed their legal form of organization from “collective agricultural enterprises” to any one of a number of private forms, e.g., joint stock companies, private farms, partnerships or cooperatives. The decree requested, while ensuring the right of shareholder to exit the farm, that the land and non-land property of the farm remain intact. Tax and other government debts (to the pension fund and social insurance fund) for newly registered successor farms were written off in accordance with Law of Ukraine no. 1565-III of March 16, 2000.

In 2001 the Government of Ukraine altered the means of financing input purchases by farms. The government laid greater emphasis on interest rate subsidies and other methods of

[23] The absence of many markets in Ukrainian agriculture creates many difficulties in interpreting the data in Table 4. They must therefore be interpreted with great care. There are no absolute norms against which to judge debt burden or financial healthiness. However, sizeable deviations from ratios of financially healthy farms, if supported by other evidence, can indicate areas of difficulty and financial stress, as well as areas without significant problems

encouraging commercial banks to lend to agricultural enterprises, rather than direct budget funding. Law of Ukraine no. 2238-III (January 18, 2001) and Law of Ukraine no. 2120-III (December 7, 2000) budgeted 150 million UAH for interest rate subsidies to farms. Cabinet of Ministers Resolution no. 59 (January 27, 2001) defined interest rate compensation for agricultural producers at 70 percent of the discount rate set by the National Bank of Ukraine and for other enterprises of the agro-industrial sector at 50 percent. As a result, the number of commercial banks advancing credit to farms and enterprises in the agro-industrial sector rose from 56 in 2000 to 88. Agricultural producers borrowed 77 percent of these funds.[24]

The Government of Ukraine also began to repeal some of the most problematic legislation for development of financial markets. Law of Ukraine 2238-III (January 18, 2001) lifted the moratorium on instituting bankruptcy procedures against agricultural enterprises. Though this was a step in the right direction in increasing the level of responsibility of farms for debt, the effectiveness of bankruptcy procedures against farms in Ukraine has yet to be proven. Moreover, there has been no major changes (though there have certainly been efforts) in land reform and farm restructuring in 2001.[25] Though these are gradual movements in the right direction, they do not decisively address the fundamental impediments to establishing genuine financial markets in rural areas of Ukraine.

[24] Artiushin, et al. (2001), p. 45.
[25] Artiushin, et al. (2001), p. 10.

Table 4 Comparable Performance Indicators for US and Ukrainian Farms, 1994-1998

	1994	1995	1996	1997	1998
All Ukrainian large farms					
Physical indicators					
Current liabilities per hectare (USD)	56	73	125	177	140
Current liabilities per employee (USD)	563	772	1,440	2,151	1,809
Financial indicators					
Gross revenue per farm (USD)	293,020	383,716	445,448	454,350	313,544
Net cash income per farm (USD)	94,607	64,119	24,387	-23,695	-49,053
Unprofitable farms (percent)	6	30	69	75	93
US farms in Heartland region with gross sales from $250,000 to $500,000					
Physical indicators					
Current liabilities per hectare (USD)	315	252	248	254	264
Current liabilities per employee (USD)	71,895	57,922	59,429	61,499	64,185
Financial indicators					
Gross revenue per farm (USD)	320,321	312,931	293,686	305,835	336,414
Net cash income per farm (USD)	77,105	82,943	81,585	86,282	98,729

Notes: For Ukrainian farms, net cash income to sales ratio is balance profit plus amortization divided by total sales.
For US Heartland farms, land per farm is for farms with sales over $100,000.
For US Heartland farms current liabilities to sales ratio is current liabilities divided by gross cash income.
Ukrainian currency values are converted to US dollars at the auction exchange rate.

Sources:
Ukrainian large farms: Ukrainian farm annual financial reports.
US Heartland farms: USDA, Agricultural Resource Management Study. Labor and land are estimates based on BEA Agricultural Census and USDA NASS figures.

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