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Kiel Working Papers

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**Agricultural Finance in Central and
Eastern European Countries (CEEC)**

– The case of Poland –

by

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Introduction

The financing of the agricultural sector has traditionally been a major topic of economic analysis. The capital availability in general and the credit costs for farmers in particular being in the centre of research. Since the agricultural sector initially has a major role in the economic development of countries, inefficiencies in the supply of capital could not only have major repercussions on agricultural production and food supply but on the growth of the economy as a whole. High credit costs for farmers compared to other debtors could result from reasons which

- are specific to agricultural production in general,
- in addition depend on – country specific – institutional regulations, or
- have their origin in some form of market failure on credit markets which again could result from factors which are specific to agriculture and/or country specific institutional regulations.

In the former socialist countries, markets were – if at all – of limited relevance and existed only for some commodities. Financial markets did not exist. Interest rates were fixed at arbitrary levels, and the banking system was monopolized. Credits had been allocated to large state or collective farms following centrally planned decisions. Whereas after the political turn the CEEC's agricultural commodity markets were exposed to international competition within a very short period of time – and by that primary production and processing firms – the liberalization and (re)structuring process of financial markets and institutions started only slowly. By now, missing or insufficient financial intermediation is frequently considered a major bottleneck in the restoration of the real sector of the economy.

Besides macro-economic stabilization deficits in the fiscal and monetary sector, the main and partially interlinked obstacles towards a more efficient intermediation are

- the lacking solution of the old (bad) debts problem and with increasing relevance, new bad debts,
- the lacking privatization and restructuring of the old banking system towards a competitive structure, in particular as regards agricultural banks,
- low savings particularly in rural areas,
- high risks for banks giving loans to farms or agricultural processing enterprises. These risks have their origin not only in the restructuring of the agricultural sector, including downstream industries and related shifts or confusions about property rights but in

addition result from agricultural policy interventions in commodity and factor markets, which are hardly predictable.

When analyzing deficiencies in financial intermediation with respect to agriculture in CEEC's one has to look at developments on both sides of the credit market, borrowers and lenders.

The paper is organized as follows: In the first part some hypotheses about the principal disadvantages of agriculture in getting adequate finance will be discussed. Since most of the theoretical reasoning and empirical evidence in the literature is based on experiences in developing countries or – to a lesser extent – in Western Industrial Countries the validity of these hypotheses should be inquired on the economic, institutional and political background of the countries under transformation. These rather principal considerations will be followed by an empirical description of the state of transformation in general in CEE countries and in more detail for Poland. Particularly important are the evolving farm structure, organizational forms of farm management and farm (land) ownership as well as the development of production and agricultural policies pursued. The third chapter will address the transformation of that part of the banking system which is of particular importance for rural areas and therefore for the financing of agriculture. Major points of interest are the evolving structure and regional distribution of banks, the handling of the "old debt problem", the state of privatization and – as far as available – empirical information on the volume, structure and interest rates of credits. Finally, criteria with respect to the economic performance of the agricultural sector shall be discussed in comparison to international standards and prevailing agricultural policies, in particular credit policies, should be confronted with economic efficiency criteria.

I Principal imperfections in agricultural financial markets

1.1 Theoretical and empirical evidence for market failure

Asked for economic advice in an environment of dissolving governmental, social and economic institutions – like in most CEEC's after the political turn at the end of the eighties – for an economist with some knowledge about the functioning of western market economies, the answer is straightforward: let markets do it. And this statement not only has its roots in empirical evidence but in some fundamental pieces of economic theory as well.

Theory suggests that markets are an institutional setting, which – in a Pareto efficient way – coordinates the plans of all the different economic agents such as households and producers. However, the proof of this statement, which includes the proof of the existence of a market

equilibrium and the first and second welfare theorem rests on the validity of certain assumptions which are conventionally summarized as the Arrow-Debreu world.¹ This is a world without money, but with full information and the existence of a complete set of contingent markets. These latter two assumptions might often be questionable for commodity markets but – as pointed out by a large number of authors – they are particularly so for financial markets (Stiglitz, 1993 and 1994; Calomiris, 1993; Calomiris, Himmelreich, 1994). Because information is not exogenous and asymmetric information is a common feature on credit markets capital might not be allocated in the socially most profitable way. Sharing and transferring risk is a major function of financial markets. But many risks remain uninsured if financial (risk) markets remain incomplete. Under these conditions the economy is not constrained Pareto optimal and at least theoretically government interventions are conceivable that take into account the cost of information and of establishing markets that can make all individuals better off (Stiglitz, 1994, p. 29). Market failures are considered to be notorious on agricultural financial markets and particularly so in developing countries.

The arguments developed to support this thesis² center on the problem of asymmetric information in connection with a postulated peculiar vulnerability and fragility of agriculture:

- (1) The access to credit and by that the level of investment depends on the wealth of borrowers. With a wealth (land) distribution between farmers which in some regions is extremely skewed, small farmers and particularly small landless farmers in developing countries have – if at all – limited access to credit because of this lack of collaterals.
- (2) Credit scarcity in rural areas on the other hand is caused by a presumed failure of financial intermediaries to form. The reasons could be seen in high fixed costs for setting up a bank compared to a small credit volume in sparsely populated areas and larger fixed costs per loan because of small average size of loans. Moreover local rural banks are supposed to be forced to specialize in undiversified portfolios of (agricultural) loans, which make them vulnerable to adverse price and weather disturbances. However, branch banking could substantially alleviate these problems. Prohibition of branch banking – as observed in several countries – restricts the entry of banks, hampers competition and the efficient allocation of capital.
- (3) Maintaining credit worthiness is supposed to be particularly difficult for farmers. This is due to a long delay in repayment of credits because of long production periods, lacking diversification and a resulting high sensitivity to price and income shocks. The non- or

¹ For an excellent overview over the assumptions, results, interpretations and limitations of the Arrow-Debreu model see Geanakoplos (1987).

² For a detailed analysis see Stiglitz (1994) and Calomiris (1993) and the theoretical and empirical literature quoted therein.

insufficient diversification is again related to asymmetric information problems mentioned above which give strong incentives to farm operators to own their land. However this increases the vulnerability of farms since product price depressions not only affect farm incomes negatively but in addition affect their major form of wealth, the land value.

The various problems listed above are certainly not equally relevant for the financing of agriculture in CEE countries in transition in general. Their relevance differs among the different countries. The ownership of land frequently specified and qualified by the legal form of newly built agricultural firms is important in principle because land is the most important collateral for loans. The approaches to land privatization or reprivatization differ widely. Whereas, broadly analyzed, typical structural problems of many developing countries – wealthy large landowners and landless tenants with extremely small plots – and resulting financing problems seem to be of minor relevance for the CEE countries, there is a structural problem in some countries because of a relatively high share of very small operator owned farms. This together with a still missing or insufficient rural banking sector could lead to comparable difficulties in the financing of investment urgently needed to increase productivity and to stimulate growth.

1.2 The role of government

There is a long tradition of government intervention in agriculture for a broad variety of reasons and – compared to an unspoiled allocation of resources – with basically two outcomes: protecting agriculture or taxing agriculture. Whereas the latter is true for many developing countries trying to increase government revenue and/or protecting consumers, governments in industrial countries subsidize agricultural producers to increase farm income and food self-sufficiency or – more recently – for conserving the country side. It is for this widespread intervention in agricultural product and factor markets that it is difficult (1) to find empirical support for "underinvestment" in agriculture which would be the consequence of the theoretically discussed market failure in agricultural financial markets and (2) to separate instruments targeted on failures of financial markets from other interventions which are theoretically not well founded.

One rather undisputed task for governments is to overcome market failures which are associated with public goods, externalities and monopoly power. However the informational deficiencies discussed above go beyond these more conventional problems, where economists have ample experience in suggesting remedies. Since governments have no superior information in general, the kind and intensity of state intervention which could be suggested is

not straightforward. What seems to be particular urgent for CEEC's is the implementation of institutions which allow markets to work such as contractual arrangements and legal enforcement. Points in case are:

- (1) Basic regulations for a functioning land market. This includes above all well defined private property rights on land and a set up of legal institutions, which keep low the transaction costs of land trading as well as land renting.
- (2) The implementation of rules for a viable system of financial intermediaries. This includes macro-economic stability, i.e. positive real interest rates, the absence of soft budget constraints – which otherwise would make the government the lender of the last resort – as well as prudential regulations on banking activities which make bankruptcies less likely and promote competition.
- (3) The compensation of frequently postulated special disadvantages of farmers in the competition for scarce capital, such as
 - particular high market risks;
 - infant industry problems in connection with high information costs for lenders, which could be particular important for countries in transition.

1.2.1 Basic regulations for a functioning land market

After the political turn most CEEC's were in the unique position to decide relatively free about the distribution of land. During the communist period land was either socialized (state owned) or collectively used, where private ownership had not formally ended but was economically hardly of any relevance. One exception was Poland, where 80 per cent of the land was owned and managed privately. By now, privatization laws passed the parliaments of all states and most agricultural land is now owned privately. The dominant rule was restitution to former owners. However, legal procedures and final results differ widely between countries. From a theoretical economic perspective the privatization of agricultural land is a necessary but not a sufficient condition for an efficient land use. What is asked for in addition is that (a) farmers own the land they manage (b) land should be equally distributed among farmers, (c) land is fully tradable and (d) that contracts, in particular loan contracts, are effectively and quickly enforceable, i.e. such as soft budget constraints should be excluded (Stiglitz, 1993). The first requirement is founded on one aspect of asymmetric information problems which arise if the borrower has inadequate incentives to avoid a credit failure. The problem is attenuated if there is land which could be used as collateral, since this is the major or even only source of wealth they are likely to own. The other reason for the demanded owner-manager identity has again to be seen in principal agent problems, resulting from wage contracts, which have poor worker

incentives and require expensive monitoring. A way in between are rental contracts. On the one hand they provide strong incentives but on the other hand they raise information problems with consequences for access to credits, since farmers on rent have to bear the risk and often are lacking capital to finance machinery, buildings and needed inputs in advance. Monitoring might also be a problem with respect to soil conservation. Share cropping arrangements, which are a widespread contractual form of farming in developing countries have – compared to renting contracts – reduced incentives – depending on the "share" that is passed to the landowner – and similar informational problems with respect to the credit market.

The second requirement listed above (b) rests much on the same reasoning: an unequal distribution is equivalent to more dependent farm workers and increases the principal agent problems mentioned. However, if land is fully tradable (demand c), an equal land (wealth) distribution could be seen only as a starting point,³ from which the more efficient farms (farmers) grow faster, leading to a more or less skewed land distribution. Since trust in property rights is another important institutional ingredient for an efficiently functioning economy in general and for lender-borrower relations in particular because of the role of land as a collateral, these respective costs of a land reform have to be taken into account. They might be relatively low right after the political turn in some of the CEEC's. But there is a fundamental conflict between efficiency and farm size if the latter falls seriously short of the technically efficient farm size. This can result from the historical land distribution (Poland), the restitution of land on the background of a historically highly fragmented land ownership and – more general – if the number of applicants for land ownership is high, a situation which seems to be quite common after the turn in CEEC's. The underlying reasons are to be seen in a still high share of agricultural employment in total employment, combined with a high level of unemployment and, therefore, low opportunity costs and low incentives for a professional change.

On the background of conflicting demands with respect to land ownership (wealth distribution) and efficiency goals related to farm size it seems to be particularly important that fungible contracts (demand d) are invented and their enforceability is guaranteed by the state providing a legal system as a specific form of a public good. This is valid for the land market (transfer of ownership) as well as for the transfer of some limited property rights in the form of rental contracts. If, thereby, transaction costs could be kept low, there is a good chance for structural

³ The original distribution of assets (land) may have important consequences for an economies ability to achieve via (mutually beneficiary, voluntary) exchange an efficient final distribution of assets (Cramton et al.; 1987). Under certain assumptions an equal distribution maximizes the probability that efficiency can be achieved. An auction could be a good alternative under the assumption that the auctioneer is not partisan with respect to the resulting distribution.

change leading to an improvement of efficiency. This seems to be important since professional shift and alteration in land ownership are no longer tied, a requirement particular relevant for those farmers leaving the sector but considering land as a safe asset in the long term. The conflict between a possible technical improvement in productivity and reduced access to credit markets because of a missing collateral and related informational problems is thereby internalized. This is relevant not only for the pattern of structural change observed in industrialized countries, where some private farm-firms grow and others are closed or the owner shifts to part-time farming. In many CEEC's former communist cooperatives are reorganized, and the land is privatized. If the exit for members, including their privately owned land, is relatively free, the role of land as a collateral is seriously limited and – for the reasons discussed above – the access to credits could be reduced substantially.⁴ This could be overcome not only by measures related to credit markets but also by respective contractual relationships between the cooperative and their members or – more general – by an institutional/legal framework, which allows firms to adopt their organizational structure to the problems described.

1.2.2 Implementation of rules for a viable system of financial intermediaries

Theoretical analysis of financial markets as well as empirical evidence in countries around the world suggests the importance of some regulatory government intervention in financial markets to improve efficiency. Among advanced capitalist economics several substantially differing regulatory approaches can be distinguished which are the result of respective evolutionary processes.⁵ However, there is the common objective to reduce the costs of financial transactions of private agents. Because of the timely incongruence of quid and quo in financial transactions trust is an important presupposition. Fostering the development of trust in financial institutions and the deterrence of fraud is thus the most important task of financial regulation. Points in case are adequate net worth requirements and the prohibition of insider loans to align incentives of bank managers with those of regulators.⁶ Another regulation refers to bank ownership. The owner should not be a person who has a record in abusing trust but should have experience in banking. Insolvencies of banks seem to be different from bankrupts of commodity producing firms, since there is not just a transfer of assets to new owners but a

⁴ This argument – on the other hand – might be overstated in countries and an economic environment, where agricultural markets are completely liberalized, other forms of agricultural support do not exist and a shortage of know-how and qualified farm managers prevail. If in addition foreign direct investment is formally excluded or factually absent, land values are low because of lacking demand and its role as collateral might be rather insignificant.

⁵ For an overview see Walter 1993.

⁶ For a detailed analysis of the role of government in financial markets see Stiglitz 1994, p. 72.

net loss (social loss) because of lost information, which must be considered as a main asset of banks. In that context monitoring of the solvency and insider rules for banks is a public good. An additional safety line should not be seen in a government insurance system but – as e.g. institutionalized in Germany – in an insurance system for deposits voluntarily organized by banks.

Another field of government intervention is competition policy. Regulations as discussed above which lead to higher profits and strengthen financial institutions in effect – even if not intended – reduce competition.⁷ This might not only increase the interest rate to be paid by borrowers but makes it more difficult for firms to find a bank willing to lend. This is of particular relevance in sparsely populated areas, i.e. in rural areas. To foster competition therefore seems to be an important task for governments but it is not quite clear how this could be brought about. In the United States e.g. strong restrictions on interstate banking had been established to hinder concentration in the banking sector and to support the survival of small local banks.⁸ This is supposed to make actual (local) competition more effective, and to limit the outflow of capital to metropolitan areas. The latter would be the consequence of the activities of large banks, because they have better information at lower costs about investment opportunities in metropolitan areas (Stiglitz, 1994, p. 48). On the other hand, as discussed above, branch banking could be an important way to reduce the fix costs of banks thereby increase the number of competitors and promote diversification particularly in rural areas.

Another realm in which government interventions are discussed controversially is the competition from foreign banks. Many policies even if not designed for that purpose, reduce competition by limiting the market entry for foreign banks. There are mainly three arguments presented in favour of some restrictions with respect to developing countries which might have some relevance for CEE countries too (Stiglitz, 1994, p.49).

1. Because there is considerable learning by doing in the financial sector and this takes time newly founded domestic banks are at a marked disadvantage compared to well established international banks, not the least with respect to the security of deposits.
2. Foreign banks may prefer lending to subsidiaries of foreign firms because of better information.

⁷ A special example is the Glass-Steagall Act in the United States, which establishes a division between investment banks and commercial banks and should lessen the likelihood of abuse in the fiduciary relationship (Stiglitz 1994, op. 47). This reduces competition and might be in this respect inferior to a system with universal banks as e.g. in Germany.

⁸ For a description of changes in regulations and its effects on the rural banking structure see Milkovc, Sullivan, 1990.

3. International banks may be less sensitive to indirect pressure from national governments, i.e. local banks can not compete on a level playing field.

However, recalling the main problem in the light of this discussion, the scarcity of capital and a non existing or underdeveloped financial market, particularly in rural areas, limiting the entry of foreign banks seems not to be the most obvious approach to solve the problem. To overcome the lack of know-how and experience in banking rather the accumulation of respective human capital should be accelerated, by practicing of domestic bank managers in foreign countries or by a, temporary, import of foreign managers. One plausible and frequently chosen approach is the founding of joint ventures between foreign and domestic banks.

One important task, specific to CEE countries, which has to be solved as a prerequisite for a competitive domestic banking structure is the problem of (old) Bad Debt. Banks should be recapitalized for the stock of non-performing loans inherited from the old system and this should be closely tight to the privatization of banks. In the more advanced reform states this problem has already been tackled as far as old bad debt is concerned (Buch, 1994). However, to exclude future bail-outs, which would entail severe moral hazard problems, and to develop trust with respect to depositors the implementation of tight prudential regulations through a functioning banking supervision becomes key.

Nevertheless, serious imperfections on agricultural financial markets in these countries are considered prevalent.⁹ The main informational problem for lenders is that of screening either a new generation of farm managers without historical record in managerial abilities or former and actual managers without experience in a completely new economic environment with market risk and competition, unknown elements in a planned socialist economy. Although the dimension of these problems will decrease over time the question arises, which remedies could be suggested. The respective literature is focussed on theoretical reasoning and empirical evidence in developing countries, where agriculture still has a very high share in GNP and the production structure is characterized by extremely small farms, often on rental or share cropping basis. To overcome rural poverty and to stimulate economic growth, governments try to mitigate capital shortage and resulting underinvestment by the supply of government funds and interest subsidies. To ensure prudence in the use of funds and incentive compatibility different kinds of coinsurance schemes among borrowers have been implemented as e.g. in Thailand and Bangladesh.¹⁰ Although the economic and political situation of the farm sector

⁹ For a detailed analysis of the financial markets in transition see Buch (1996).

¹⁰ Examples in case are Thailand's Bank of Agriculture and Agricultural Cooperations (BAAC) and Bangladesh's Crameen Bank. For details see Calomiris (1993, p. 170), Calomiris and Himmelberg (1994, p. 119), Stiglitz (1990) and the literature quoted therein.

and farmers in CEEC differ widely in most respects from the actual situation in developing countries a similarity could be seen in the limited access to capital for very small farms such as those observed in Poland. A coinsurance scheme between borrowers might improve matters not only in the case of government loans but for loans from private intermediaries as well. Whether there is reason to assume "underinvestment" in agriculture and moreover to suggest direct government intervention in credit markets has to be analyzed in a general economic context taking into account all factors which might lead to a bias in the intersectoral allocation of capital.

Another approach to overcome a supposed capital shortage and resulting underinvestment could be seen in the support of foreign direct investment. This is an approach which has to be considered extremely relevant for the countries in transition which are characterized by an extreme shortage of capital and know-how whereas agriculture in neighbouring western countries is typically characterized by a surplus of manpower, overcapitalization in some countries and a relative shortage of land. However, a simple equalization of factor proportions is hindered by a number of reasons. The opportunities for potential investors in many CEEC are limited because the land market is not really free, at least to foreign buyers and frequently not even for land rental. This often has political historical reasons. On the other hand lacking economic and institutional stability and low capital productivity because of low protection for agriculture makes these countries less attractive for foreign direct investment.

A line which should not be followed is the subsidization of credits for agriculture. However, exactly this is common practice in most western market economies. The reason could hardly be seen in capital market imperfections as discussed above. It rather demonstrates that governments consider credit subsidies a convenient and "hidden" way to channel capital into the agricultural sector (Stiglitz, 1993, p.33). In several European countries special agricultural banks had even the monopoly in the supply of these credits (Balz et.al., 1993). This kind of government intervention not only reduces competition in the rural banking sector and efficiency but seriously hamper the efficient allocation of scarce capital between sectors of the economy between firms and between projects more general. Since there seems to be no superior knowledge of governments with respect to capital productivity in different investment opportunities and the involvement of government in credit allocation moreover increases the likelihood of some kind of soft budget constraints¹¹ in case of failure of borrowers to serve the credit, governments in the transformation countries should better avoid this kind of direct intervention in factor markets.

¹¹ In the US the banking crisis of the 1980s is considered to have its main cause in government subsidized credit programs of the 1970s which led to a speculative bubble of land prices (Calomiris/Himmelberg 1994, p. 117).

1.2.3 Postulated special disadvantages for farmers on credit markets

In most industrial countries there are comprehensive agricultural programs, which have been rationalized as interventions to correct market failure. Missing insurance markets to cover the risks of fluctuating prices and output have been the traditional initial reasons. The instruments were price stabilization schemes with guaranteed minimum prices, which usually were fixed above equilibrium level. Agricultural incomes supposed to lack behind non agricultural incomes during economic development and a high degree of food self sufficiency strived for during war times and thereafter were further reasons to increase support for agriculture. The instruments had been greatly diversified including various forms of direct payments to farms or farmers, subsidies for variable inputs, interest subsidies for investments, social security payments and more recently subsidies compensating for supposed positive externalities of agriculture with respect to conservation of the land scape.

These interventions are in general economically ill founded and/or the instruments applied are not efficient. With respect to market instability the government support of or the invention of "insurance" markets might be efficient but not insurance by governments. Appropriate instruments could be future markets on a strictly private basis or as suggested elsewhere a scheme which involves government but were the "insurance" price moves inversely with the output of the crop in the country (Stiglitz 1993, p. 41). Whereas, based on experience in the US, future markets seem to have some problems of asymmetric information, the latter scheme raises administrative problems with respect to geographical and intertemporal arbitrage. However, as theoretical reasoning as well as a long experience with administrative stabilization schemes suggest both alternatives seem to be superior to government price stabilization, which gives wrong incentives to producers and regularly ends up as a price support instrument. The consequences are not only massive government interventions, which are hardly predictable and rather create new risks for farmers but at the end immense social costs which CEE countries should avoid. If poverty is considered the dominating problem a general system to provide basic income should be implemented rather than support on a sectoral basis.

Another class of risks in CEE countries is directly related to the process of transition. It results from (a) a lacking or highly incomplete and malfunctioning infrastructure in transport, telecommunication and storage; (b) a lacking trust in governments commitment with respect to basic reforms after the political change i.e. particularly property rights; (c) risks resulting from the fundamental change in the economic environment, such as uncoordinated changes in institutions, law and market structures. Most of these risks differ basically from price and weather risks discussed before since they are relevant for all economic agents and not just for members of one sector. They are particularly relevant because they inhibit the emergence of

private firms. The role of government to overcome these risks has to be seen in a consequent and speedy implementation of institutions and rules and investment in infrastructure. However a special agricultural problem can be seen in the transformation of former socialist cooperatives and state farms to private firms. Beside the privatization of land the status of former members with respect to ownership of formerly cooperatively owned assets and particularly the handling of old debts should be clearly specified. Reorganized farm-firms which inherited old debts might not only be exposed to problems of liquidity and solvency but to the political risk, whether getting a relief from these old debts or not. Often a temporary relief of interest payments or a partial relief of debts is conditionally linked to a bad entrepreneurial performance thus representing a soft budget constraint by the government. These uncertainties and wrong incentives resulting from a confusion of distributional and allocative objectives as e.g. observed in Eastern Germany makes planning for firms extremely difficult and hampers the efficient allocation of resources.

2 The state of transformation in agriculture

The efficient allocation of resources needs both: an institutional framework for the reorganization of agriculture and adequate finance. The reorganization of agriculture goes beyond the privatization of land and a clear definition of property rights. What is equally important in a dynamic perspective is the restructuring of formerly large and often overspecialized production units and the establishment of competitive markets with low transaction costs for a shift in ownership or user rights of production factors.

2.1 Farm structure and privatization

The farm structure in CEE countries was dominated by large scale state or collective farms (Table 1). Small scale private farming prevailed only in Poland and former Yugoslavia. However, the share of private farming in total agricultural production in other CEEC was estimated to surpass the share in land use markedly and in Hungary and Bulgaria reached about 25-30 per cent. Private production there took the form of part-time farming, where the households usually did not own the land. In 1995 not only the legal framework has passed parliaments but the privatization of land collectively used is almost completed. However, the privatization of land of state farms, which accounts for 15 per cent in Hungary up to 30 per cent in Romania and Czechoslovakia has hardly begun (Csaki/Lerman, 1974). Between countries the privatization of land differed considerably with respect to eligibility for owning land (e.g. former owners, actual farmworkers), the actual allocation and the speed of the process and not the least with respect to its effects on the farm structure. Deviating from what

was generally expected the privatization of land and the new structure of economic

Table 1: Farm structure in selected CEEC 1985

	State Farms		Collective Farms		Land in private use ^a
	Number	Average area	Number	Average area	% of total land
Bulgaria ^b	536	9692	n.a.		10
Czechoslovakia	226	6204	1677	2605	9
Hungary	128	7598	1270	4195	19
Poland	1258	2665	2342	297	80
Romania	419	4895	4363	2093	15

^a 1960-1988 averages. - ^b Total number of agricultural units in 150 agro-industrial complexes.

Source: Csaki/Lerman, 1994, p. 556.

incentives did not lead to a general and speedy dismantling of large former collective farms. Rather the now private landowners with no experience in private entrepreneurship and confronted with mostly still monopolistic input and product markets and underdeveloped or non-existing financial markets often preferred to remain in the shelter of their former collective and now corporative or co-operative farm firms. The differentiated starting conditions, legal reforms the structural results and underlying causes will be discussed in more detail for Poland.

Poland

Among the CEEC agriculture in Poland is in a unique position: By far the largest share of agricultural resources is and has been in private use and ownership (Table 2). The private farms are extremely small on average (table 3). Within the collective share of agriculture state farms were largely dominating, i.e. the share of co-operative production was exceptionally low compared to other CEEC and cultivated just 2.8 per cent of the arable land.

Table 2: Relative size of private and collective agriculture in Poland (in per cent)

	Private Farms	Socialized ^a Farms
Land	76	24
Labour	80	20
Total production	77	23
Market production	73	27
Fertilizer purchases	64	36
Tractors	86	14

^a Co-operative plus state farm sector

Source: OECD, 1995, p. 42

Table 3: Size of farms in Poland 1989 and 1992

	Number of farms	Per cent of farms in area classes (hectar)				Average farm size (hectar)
		(thousand)	1-4.99	5-9.99	10-15	
Private farms						
1988	2168	53.4	29.3	11.2	6.0	6.2
1992	2144	53.1	29.6	11.3	6.0	6.3
State farms						
	(units)	< 100	100-599	600-999	> 1000	
1989	959	7.5	23.4	8.8	60.3	3490
1992	1752	7.8	24.1	20.4	47.7	1786
Agricultural co-operatives						
1989	2177	9.7	74.7	11.1	4.5	324
1992	2186	14.9	72.3	9.4	3.4	310

Source: OECD, 1995, p. 248.

About half of the co-operatives were operated by agricultural workers on land which mostly was state property. The other half was a union of farmers, who remained private owners of their land and produced only a minority of products collectively. All co-operatives developed several economic activities outside primary production like food processing, services, retail shops etc. (OECD, 1995, p. 86). Between 1988 and 1992 the number of members and employees declined from 177.000 to 87.000 and from 2.700 to 1.400, respectively. Already before a law on the privatization of co-operative assets is in place, most land is privately used and property divided between members while the co-operative use of processing and marketing facilities is mostly continued. The emerging situation resembles in many aspects the small scale agricultural structure in some parts of western Europe, particularly the Southwest of Germany, where the co-operative idea – mostly limited to processing and marketing – had its origin in the 19th century. What seems to be different is the low protection of agricultural production in Poland. This might force the co-operation of small scale family farms to exploit economies of scale. The legal form might take that of partnership (unincorporated firm).

The privatization and restructuring of state farms is regulated by the "Law on Administration of the State Treasury's Agricultural Real Estate" from October 1991. The law created an "Agricultural Property Agency of the State Treasury" and passed the property rights of the states agricultural real estate and the responsibility for the administration, restructuring and privatization to this agency.¹² Out of the 4.5 million hectares which the agency finally should have taken over in mid 1994, 4.045 million were transferred to the agency (GUS, 1994, vol. II, 2, p. 12). Out of the 1618 farms taken over 1735 state farms were established (mid 1994).

¹² For more details see OECD, 1995, p. 81 pp.

Related to the area taken over in April 1994 only about 2 per cent were sold but 33 per cent leased. 54 per cent were under short-term management contracts and 4 per cent under administrative contracts of usually more than 5 years (OECD, 1995, p. 83). By the end of 1995 the agency expects to have leased more than three quarters of all land taken over.

2.2 Rural banking sector

Before 1989 the rural credit system in Poland consisted of a network of more than 1600 agricultural credit cooperatives which were part of the Bank for Food Economy (BGZ). The BGZ controlled the credit cooperatives and was in a position to allocate local excess funds interregionally. Whereas the BGZ primarily served large state and cooperative farms, but the latter were of minor importance in Poland, and processing firms, the credit cooperatives served the private farms (Alinska et al., 1994). The banks channelled credits for agriculture and food industries according to the Central Plan. The negative margin between interest rates on deposits and preferential loans was covered by budget outlays. State and cooperative farms had privileged access to the preferential credit system. Whereas these farms received credits to finance annual production operations up to nearly half of their production costs and beyond that subsidies covering half of their investment costs, private farmers received preferential credits mainly for investment (OECD, 1995, p. 119).

In 1989 the banking system in Poland was basically reformed¹³ to adapt to evolving conditions of a market economy. However, privatization has begun slowly and lags behind the real sector. Already before 1989 and the more because of near hyper-inflation in late 1989/90 Poland is characterized by a low level of monetization and intermediation compared to other CEEC (OECD, 1994, p. 99). The restructuring of the rural banking sector began at the end of 1990. The interest rates were liberalized and the restrictions on branching abolished. The about 1600 cooperative banks gained full legal independence and became universal banks. This included the independent operation, i.e. the right to reorganize and to affiliate with different banks. About 390 cooperative banks in better financial condition affiliated and helped found three new private regional banks to serve agriculture as joint stock companies. Several went bankrupt and the remaining cooperative banks affiliated with the BGZ, of which 56 per cent were owned by the state (minister of finance) and the remaining 44 per cent by the cooperative banks.

The ownership of cooperative banks is dominated by farmers who hold a share of nearly 60 per cent, followed by small business firms with only 6 and retired people with about 9 per cent.

¹³ For an overview on changing institutional rules, on structures and remaining problems see World Bank (1994, p. 77 pp.); OECD (1994a, p. 99 pp.).

The share of farmers in savings amounts to 45 and that of small firms to about 12 per cent. Most of these banks are small and do not have branches (44 per cent). The qualification of the bank management is often inferior (Alinska, Kulawik, 1994, p. 33 pp.).

A major threat to the whole banking system was and partly still is the high level of non-performing loans which mainly arose during the transition in 1990/91. The reasons were manifold: major causes could be seen in an unfavourable fiscal system, a lack of bank supervision combined with an inadequate lending policy by the banks and not the least in the transitional problems of the real sector. The government reacted with tightening prudential regulations in 1992, including capital adequacy requirements controlled by the National Bank of Poland (NBP) and a recapitalization program for the state-owned banks (Enterprise Bank Restructuring Program, EBRP).

The crisis was and still is particularly severe in the rural banking sector. Here the BGZ at the end of 1993 held bad debt of 7 trillion Zloty¹⁴ (about 350 million US-\$) out of an overall loan portfolio of 46 trillion Zloty (OECD, 1994a, p. 114). The audits of the 1993 accounts pointed to an estimated negative net worth of perhaps 1.6 billion US-\$ whereas the recapitalization needs under the EBRP of the seven commercial banks were limited to 650 million US-\$ (World Bank, 1994, p. 84).

For the cooperative sector as a whole the share of non-performing loans is estimated at 20 per cent.¹⁵ The greatest loss of the BGZ arises from loans to bankrupt state farms. The debt has now been consolidated on to the account of the agricultural property agency, which is in charge for the administration and privatization of state-owned land. But this mission has not improved the servicing of BGZ claims which have reportedly deteriorated in most cases. The financial problems of cooperative banks on the other hand result to a large extent from a small number of very large loans made during the years 1900-92 and from loan guarantees to other banks for foreign transactions. This happened during a period where the BGZ had ceased supervision and the branches of the NBP had not yet assumed regulatory power over these banks.

¹⁴ According to other sources total irregular loans of BGZ amount to more than 21 trillion Zloty (31.12.1993), equivalent to about 45 per cent of total loans. This share was only 18 per cent at the end of 1991 (Gazeta Bankowa, Ranking Bankow Polskich '92, 21.6.-27.6.1992 and 4.6.1994, Ranking Bankow '94, Warszawa 1994). An explanation for the rather low OECD figures has possibly to be seen in the fact that the OECD subsumes only „lost“ credits under bad debts whereas other institutions subsume under „irregular credits“ the three categories *below standard*, *doubtful* and *lost*.

¹⁵ As explained in the above footnote, this seems to reflect only the worst category of irregular credits.

To avoid bankruptcy the BGZ in December 1993 was partially recapitalized under EBRP law with an amount of 200 million US-\$ in the form of treasury bonds. Since this is well short of the amount needed to restore solvency the issue of a further 12 trillion Zloty (about 600 million US-\$) was proposed for 1994 and meanwhile is realized under the condition that the BGZ becomes incorporated. This change of legal form is one part of the law for restructuring which came into force in summer 1994. The shareholders will be the state treasury (56 p.c.) and nine regionally based cooperative banks (with a combined stake of 44 per cent). The regional banks will be formed by their affiliated local cooperative banks. Beside this three level structure the already existing three regional banks will not be required to affiliate with the BGZ. Much later than for other banks the state treasury and the NBP will institute regulatory controls and supervision over the banks on all three levels. Budget support will be provided for BGZ and the cooperative banks and will be used for the restructuring of credit portfolios with a focus on the weakest debts – those owned by state-owned enterprises in farming and processing (Alinska et al., p. 27).

However, their restructuring will be a time consuming and painful process since many enterprises will not be suitable for restructuring according to the rules for arbitration, to mention just one possibility. The resulting risks for the BGZ have to be considered enormous. Together with the rather vague plans of the government for the reorganization of the BGZ itself this raises the more principal question, of whether the regional and local cooperative banks, which themselves promise to represent a potentially sound and competitive banking system should not be insulated from these risks. Respective suggestions by the World Bank comprise the separation of BGZ's assets, liabilities and ongoing activities into three distinct sections¹⁶ and explicitly include the possibility of placing the BGZ in bankruptcy in case of a failure of the reorganization and/or recapitalization. Otherwise the agricultural banking system will remain in a desolate stadium where a repeated recapitalization will de facto make the treasury and NBP to the lender of the last resort. In case of an orderly liquidation depositors should be protected and the branch structure as well as the personnel should be made available both to the newly established regional cooperative banking system and selectively to any commercial banks that purchase pieces of it. The latter aspect – privatization and market entrance for new competitors – seems to be of particular relevance with respect to the principal requirements for efficiency on financial markets (chapter 1). The pure reorganization of the rural cooperative banking system outlined in the law cannot solve the problem of monopolistic bank structures in rural areas, where the local cooperative banks frequently are the only suppliers of financial intermediation. This could result in credit costs which are well above the

¹⁶ These might be a „bad loans“ company; a regional bank holding company that would provide support services for the six regional banks and a downsized „residual“ BGZ agricultural bank. For details see World Bank (1994), p. 85.

level in a competitive environment. However, besides the BGZ and the local cooperative banks there are some other private banks¹⁷ (incorporated companies) with no or insignificant state ownership which are active in the food sector. At the end of 1993 their share in the credit volume was less than 10 per cent but with an increasing tendency (Kulawik, Tkaczyk, 1994, p. 23 pp.). The number of branches is rather small, so an increase in competition in the more remote rural areas seems to be unlikely in the near future.

Another important change which has to be brought about is a change in the attitude of bank managers. They should no longer follow "social obligations" but engage in professional bank management. Since this seems to be particularly demanding in the difficult economic environment of the agricultural sector as described above, an efficient supervision by the authorities in charge is of foremost importance. Major deficits partly in the institutional area which have to be eliminated are a formal deposit insurance, credit insurance and the banks ability to effectively screen applicants for loans. To establish prudential credit rules and an efficient banking system in Poland is the more difficult since the government uses the banking system as a convenient channel to subsidize the agricultural sector via credit subsidies.

3. Agricultural economic performance and policy

Agriculture in CEEC still has a significant – however mostly declining – share in GDP (table 4). The only exception seems to be Romania where the share increased from 14 to 21 per cent between 1989 and 1993. In Hungary and Poland 1993 the share fell to about 9 and 7 per cent respectively. Whereas in the Czech and Slovak Republic the share of agriculture was traditionally small and declined by only 1 per cent point to about 5 per cent. Compared to agricultural output shares the shares of the agricultural labour force in total employment are generally higher and the development parallels that of the output share. Nevertheless, there are remarkable differences between countries. Beside all vagaries resulting from insufficient statistics, which are particularly prevalent during the first years of the transition, higher shares in the labour force than in GDP seem to point to a below average productivity in agriculture. This „income gap“ is a phenomenon also observed in developing and industrialized countries and discussed in length in the literature. Since a permanent „income gap“ resulting e.g. from lacking productivity in agriculture is not very reasonable with given intersectoral factor mobility a growing number of authors doubt this gap and point to inadequate methods of income measurement.

¹⁷ Agrobank SA, Bank Unic Gospodarczej, Gospodarczy Bank Poluniovo-Zachodni, Bank Rolno Przenyslowy.

Table 4: Share of agriculture in national GDP and total employment (per cent)

	Share in GDP		Share in total employment	
	1989	1993 ¹	1989	1993
Bulgaria ²	11.0	10.4 ³	18.1	17.4 ³
Czech Republic	6.3	4.5	9.4	6.5
Slovak Republic	6.6	5.5	12.2	10.3
Hungary	15.5	8.93	17.2	8.1
Poland	11.8	6.5	26.4	26.9
Romania	14.2	21.0	28.2	32.2

¹ Provisional. ² Including forestry. ³ 1992.

Source: OECD (c), 1994, p. 226.

However, in the transitional phase of the CEEC economies with massive structural change and high unemployment rates, in some countries agriculture seems to function as a buffer on the labour market, absorbing many unemployed people mostly on part time working basis. This increases the agricultural labour force and statistically reduces the sectoral „productivity“ discussed above. Whether this pattern is of quantitative importance for a country depends above all on the farm structure. Not surprisingly the gaps between the share in GDP and in employment are extremely large in Poland and Romania. Since in both countries small scale farming has the major share in agricultural production and – during an economic crisis – similars in many aspects a subsistence agriculture. Whereas in Poland small scale peasant farming is traditionally dominating, in Romania small scale farming is the deliberate result of the destruction of large scale socialist farms after the political turn in 1990. In those countries where the large farms basically survived as e.g. in Hungary, the Czech Republic and in Eastern Germany the new economic and political environment forced the farms to increase productivity. One important way was to rationalize on labour, i.e. to reduce the number of employees (table 4).

In the long run the size and productivity of the agricultural sector in the different countries will be determined by the factor endowment, i.e. in particular the land-man ratio, the agricultural policy and directly intertwined with the latter, the farm size structure. The land-man ratio in the CEEC ranged between 0.7 hectares per head in Bulgaria and 0.4 in the former Czechoslovakia. The degree of capacity use¹⁸ in 1989 was lowest in Poland and rather high – even compared to the EU – in Czechoslovakia. Since rising productivity – linked in particular to increasing yields in plant production – capacity use increases.

¹⁸ Total capacity defined by soil quality and agro-meteorological data. For details see Schrader (1993, p. 492). Not the least the degree of capacity use depends on the level of world market prices and the degree of national protection.

The approach in agricultural policies after the political turn in the different countries reveals differences as well as similarities. The basic differences have to be seen in the restructuring of farms with respect to privatization and size structure. Similarities on the other hand are dominating with respect to market and price policies. Soon after the political turn markets in all countries had been invented and liberalized. Massive consumer subsidies for food as well as producer subsidies in particular for fertilizer and machinery were abolished; restrictive foreign trade regimes were substituted by liberal trade rules. As a consequence within a very short period of time internal prices for basic food products often equalled world market prices or sometimes were even lower, whereas input prices surpassed international prices or were even not available. Since productivity of all producers, large scale farmer cooperatives or state farms as well as small peasant farms was still low for different reasons, profitability fell to very low levels. In a new democratic environment this created strong demand for economic support which was given way by one or the other support measure, increasingly similar to instruments of the common Agricultural Policy (CAP) of the EU, increasing producer subsidy equivalents from near zero in 1990 to 15 per cent in 1993 as an order of magnitude. Beyond traditional political economic arguing for agricultural support, well known from industrial countries, governments of several CEE countries try to adapt these policies to CAP rules. This – in their view and for some time applauded by EU authorities – is to facilitate the planned membership in the EU. However, more recently, the EU Commission seems to realize a bundle of problems resulting from the approach simply applying the CAP and the other financial rules of the EU in CEE countries in case of entry. First of all it could be very costly to the EU budget because of the large production capacity in agriculture and the low income level in CEE countries compared to the EU. Secondly, a CAP like policy with high protection for agriculture would be very costly to the CEEC as well because of a distorted allocation of resources with reduced growth rates and it would lead to conflicts with the shortly signed GATT agreement (Tangermann, Josling, 1994). What follows is that not only CEECs have to fulfill pre-entry requirements in many institutional areas but – according to the EU Commission – that in addition the EU itself should better liberalize and simplify its agricultural policy (Europäische Kommission, December 1995).

Poland

Economic Performance

After sharp declines in 1990 and 1991 the Polish economy is growing again. Gross Domestic Product (GDP) in 1993 and 1994 increased by about 4 per cent. The agricultural production fell only slightly during the first years of transition and only as a result of a decreasing animal production. This decrease accelerated after 1991 and in 1992 because of a drought and the resulting short fall in plant production, lead to a sharp decline in total agricultural production.

Whereas plant production recovered greatly within one year and in 1994 nearly approached levels of 1989-1990, animal production declined further. Yields in plant production are generally back to levels of 1989/90. One exception were grain yields, which in 1994 were still about 10 per cent below former levels. However, according to preliminary information from Polish official sources, plant production and animal production (particularly pig meat) increased in 1995 compared to 1994 by 14 and 4 per cent respectively. Grain yields increased by about 20 per cent and surpassed pre 1989 levels (Agra Europe, January 1996, p. 13).

The observed developments are the mixed outcome of several factors which can basically be subsumed under two causes: Firstly there was a fundamental change in prices and price relations not only between input and output prices but also within these categories. Although input-output price relations developed in general to the disadvantage of producers the consequences were particularly severe for animal production. There the abolishment of consumer subsidies and the sharp drop in personal income lead to a sharp decline in internal demand for meat, milk and eggs. Secondly, overall productivity was low before the political turn. Among the more important reasons were the inadequate incentive structure for producers, a lack in the availability of modern technologies and in entrepreneurial abilities. With the establishment and liberalization of markets and the privatization of farms and land ownership the first two of the obstacles mentioned quickly lost relevance. The obstacles with respect to private incentives were, in any way, not too important for the traditionally relative large share of small private farms in Poland. On the other hand the improvement of entrepreneurial abilities in an economic as well as in a technological sense is a slow process. This is valid for small scale farms, with farmers being often part time farmers as well as for farm managers of large farms whose professional abilities were concentrated on plan fulfillment rather than on modern management and marketing problems.

However, there are other reasons which support the widely accepted diagnosis of lacking productivity and profitability of farms in Poland and the prospects of an only slow improvement:

1. an insufficient rural infrastructure,
2. a food and input industry and respective markets, which still lack efficiency,
3. a dichotomous regional structure of farm size,
4. a narrowly limited availability of capital.

The insufficient infrastructure (road, railways) is of particular relevance in rural areas, where transport distances are large. This, together with often still missing markets for agricultural outputs and inputs, the mostly overly fragmented farm supply because of extremely small farm

units and an only partially restructured and privatized food and input industry lead to disadvantageous input-output price relations at the farm gate. The economic situation seems to be particularly unsatisfactory in the potatoe and fruit and vegetable industry which in 1993 experienced negative profit rates. More than 88 per cent of non-performing loans to the food industry, given by the BGZ and cooperative banks, were concentrated on five industries: milling, fruit and vegetable, dairy, meat and freezing (Kulawik et al., 1993, p. 19 pp.)

The dichotomous distribution of farm size with very small farms in most regions and badly managed state farms in others is a further obstacle for improving sectoral efficiency. Whereas growth of farms, to exploit to a larger extent economies of scale would be a straight forward cure for the small farms, privatization seems to be the adequate answer with respect to the others. However, a quick solution is seriously hampered by several obstacles. Firstly there is the regional mismatch between land supply (state land to be privatized in the northern and western parts) and land demand in the other regions where the extremely small farms are dominating. Secondly the restructuring to improve efficiency in any case would displace agricultural labour. This is a process difficult to realize during times with extremely high rates of unemployment and resulting low opportunity costs and in times in which numerous displaced industrial workers and at the same time part-time farmers became unvoluntarily full time farmers again. Thirdly growth of small farms as well as the restructuring of former state farms to smaller units needs capital. Capital in agriculture is extremely scarce since profitability and capital accumulation is low because of the inefficiencies mentioned above and unfavourable input-output price relations. One consequence being that land of former state farms remains idle.

Though the need for capital seems to be not debatable, empirical evidence for the existence of market failure and the deduction of arguments for political economic intervention is another matter. This would require the proof or at least convincing indicators for an inefficient allocation of capital in the economy. This presupposes not only reliable empirical indicators for the factor inputs in all the different usages but knowledge of the respective marginal productivities as well. However, these are requirements which could hardly be met in western industrial countries, which have available long term and detailed statistical data in particular for agriculture. In Poland as in other CEEC respective data – except some punctual data on mechanization as e.g. the number of tractors or milking machines (OECD, 1995(b), p. 43) – are not available and the least for the time after the political turn in 1989.

A potential – secondary – source of some indirect information on capital availability and capital need are data on agricultural income and liabilities. Closely related to deteriorating agricultural terms of trade, real income of farms fell drastically right after the political turn in 1989. The

slump was larger than for non-agricultural wages and salaries. The relation of the two fell from about 120 in 1986/87 to about 80 in 1993 (OECD, 1995(b), p. 49). However, since private farms – the more the smaller – often are part-time farms, they have income from other sources, such as wages, pensions allowances, subsidies and insurance payments. Between 1985 and 1992 the share of the non-agricultural income in total income increased from about 27 to 52 per cent.

Bank debts of farms at the end of 1993 amounted to 19,3 trillion Zloty (1.1 billion US-\$). Compared to 1992 this was an increase of about 11 per cent in nominal terms and a decrease of about 27 per cent in real terms. At the end of the third quarter 1994 total debts were about 24 trillion Zloty (1.06 billion US-\$) of which 22 trillion were credits from the BGZ and cooperative banks (table 5). Whereas debts of state farm decreased in real terms,¹⁹ that of the private farms increased, in particular from 1993 to 1994. More important with respect to the creditability is the sharp increase of overdue credits of state farms and – to a lesser extent – of cooperative farms. In contrast the share of overdue credits for private farms is relatively low,

Table 5: Bank debts of farms

		1991 (31.12.)	1992 (31.12.)	1993 (31.12.)	1994 (30.09.)
Private farms total¹	billion Zloty	5501	7405	7902	11712
of which					
< 1 year	per cent	61	66	53	47
1-5 years	per cent	28	23	31	30
> 5 years	per cent	11	8	8	15
overdue credits	per cent	-	3	8	8
		1st quarter 1992	4th quarter	4th quarter	3rd quarter
State farms³ total²	billion Zloty	-	7533	8004	8488
of which					
working credits	per cent	-	57	55	35
investment credits	per cent	-	17	5	3
overdue credits	per cent	-	26	39	63
Cooperative farms total²	billion Zloty	1247	1579	1786	1969
of which					
working credits	per cent	55	54	39	46
Investment credits	per cent	29	23	20	12
overdue credits	per cent	16	23	42	42

¹ Including bill of exchange credits. - ² From BGZ and cooperative banks only. That refers to roughly 90 per cent of all credits for state farms and to about 80 per cent for cooperative farms. - ³ Most of the state farm debts (3/1994: 92 p.c.) are passed to the „Agricultural Property Agency of the State Treasury“ (see 2.1).

Source: Kulavik, Tkaczyk, 1994 and personal communication; own calculations.

¹⁹ The GDP deflator for the years 1990-1995 was 480, 55, 34, 31, 29 and 26 respectively.

though, it more than doubled between 1992 and 1993. For private farms the term structure of credits shifted from repayment periods less than one year to longer term credits. In 1994 the share of long term investment credits nearly doubled compared to 1993 (table 5). However, these developments were not the pure result of market forces, but also the result of political intervention on credit markets and product markets.

Policies

On the background of low incomes and high (hidden) unemployment in agriculture there is a serious temptation for the government to overcome the lack in profitability of farms by increasing sectoral protection. That is exactly what can be observed for Poland. The instruments are interventions not only in commodity markets but also in input markets and – in particular – in agricultural credit markets. But there are – in addition – other reasons for this development. The most important being that the government, in striving for membership in the EU and in an attitude of obedience in advance to EU authorities, tries to adopt its agricultural policy to principles and methods of the Common Agricultural Policy (CAP) of the EU.

An aggregate measure of sectoral support – producer subsidy equivalents (PSE) – has been regularly calculated for OECD countries for many years. By now respective figures are available for Poland for the years 1986-1993 (Table 6). The producer support declined sharply after the political turn and became even negative for most products and on average. Since 1991 support increases again but – compared to OECD average (42 per cent) – is on a still relatively low level. PSE in absolute value, expressed in US-Dollars to take into account the high rates of inflation, followed roughly the same pattern. The differentiation of net total PSE with respect to different components yields the following shares:

	share in total (per cent)
– market price support	73
– direct payments	0
– reduction of input costs	7
– interest concessions	5
– general services	20

Market price support with a share of 73 per cent (1992-93) is by far the most important component and is still increasing. The reason could be seen in a basic shift in market policy. After the complete liberalization in 1984, in 1990 the „Agency for Agricultural Markets“ had been established with the task of „stabilizing farm product markets and protecting farm incomes“. Objectives and instruments applied show marked similarities to the Common

Agricultural Policy (CAP) of the EU. The other major component of PSE is „general services“ of which the spending for research and training are the major tasks (OECD, 1995, p. 284).

Table 6: Producer subsidy equivalents in Poland – Selected commodities and total

Commodities	Units ¹	Average 1986-1988	1989	1990	1991	1992	1993
Wheat	Gross percentage PSE	43	-18	-49	-48	8	24
Oilseeds	“	42	-52	-35	-17	21	4
Sugar	“	38	72	20	41	31	19
Milk	Net percentage PSE	19	-19	-64	-20	7	-5
Beef and veal	“	10	1	-54	-22	-37	7
Pigmeat	“	32	4	29	10	27	10
Poultry	“	47	43	22	53	62	75
Eggs	“	42	31	-6	40	19	15
All products ²	“	28	2	-18	-3	15	16

¹ Producer Subsidy Equivalents (PSE) are monetary transfers to producers from consumers and taxpayers that arise as a result of agricultural policies in a certain period of time. Net percentage PSE is the share of PSE in the total value of production at domestic prices in per cent. For details see OECD (1995), p. 101. ² The calculations cover only about 64 per cent of total value of production. Not included moreover are social expenditures and costs of government administration.

Source: OECD (1995), p. 276.

Of particular interest in the context of agriculture and finance are the interest concessions which in 1992-93 reached 1,5 trillion Zloty and had a share of 5 per cent in the agricultural budget. They were channelled through the banks and – in addition – since 1992 through the „Agricultural Restructuring and the Debt Rescheduling Fund – FRIOR“. In the second half of 1993 the Fund was suspended because of irregularities in its administration. Its activities have been taken over by the „Agency for Restructuring and Modernization of Agriculture“, created in January 1994 (OECD, 1995, p. 120). However, the distribution of preferential credits and the evaluation of investment projects will be conducted by the banks. Up to the end of 1993 the Fund had allocated 4 trillion Zloty (about 220 million US-\$) of which 54 per cent were used for debt rescheduling, 24 per cent for modernization and about 22 per cent for drought credits. Banks channelling the preferential credits earned a margin of 4.2 per cent. In 1993 the preferential rate for short term credits was 70 per cent of the 35 per cent refinance rate of banks, i.e. farmers paid 24.5 per cent. Market rates at the same time were about 40 per cent and the rate of inflation (GDP deflator) at 30.5 per cent. Despite the low interest rate farmers have to pay they often are discouraged by banks from requesting preferential credits since banks consider farmers as high risk clients. This seems to be the consequence of a lack of collaterals, because land prices are low and the value of mostly old farm buildings is questionable, in particular in the perspective of farm growth which is urgently needed.

4 Problems and possible cures

The transformation of formerly centrally planned economies to a market economy not only needs a new institutional framework but in addition high investments in new production facilities for new commodities and in human capital. The channelling of capital to the investment opportunity with the highest return needs efficient financial markets. So the establishment of efficient financial markets should be a task of high priority for governments in transformation countries. The progress differs between countries and the different components of this task. Focussing on Poland the transformation of the banking sector as an important part of the financial system is under way (Buch, 1996). However, the transformation of the rural banking sector is lagging behind. Major remaining problems after the reform of 1994 are (1) the undercapitalization of the BGZ, and the resulting risks for the whole agricultural banking system (chapter 2.2); (2) the establishment of the cooperative banking system with cooperative banks being almost the only institutions offering financial intermediation in rural areas. This implies a bad risk distribution and raises the suspicion of a lack in competition. Both circumstances could lead to increased interest rates and/or credit rationing for borrowers. Whereas these problems have to be subsumed under deficiencies in political regulation which – only to a minor extent – could be explained by transitional difficulties, there are other additional reasons which could cause increased interest rates or credit rationing and originate from market failure. These are in particular asymmetric information problems (chapter 1), which are aggravated in the absence of collaterals and in periods of transition, where the evaluation of entrepreneurial abilities is particularly difficult.

However, the quantitative relevance of the problems discussed above is difficult to assess. Possible remedies therefore have to be derived with caution. What is theoretically asked for is the equalization of the marginal value product and factor price over all sectors and investment opportunities. Respective data are obviously not available, not only in transformation countries. While a general wedge reflecting capital scarcity and market incompleteness in transition countries seems to be plausible, intersectoral differences in this wedge are much less so. But even if there are specific problems in agricultural financial markets²⁰ and as a result, a larger wedge between marginal value product and factor price, in an open economy with national and international prices being equal, there is hardly a case for political intervention.

To a certain extent, and in a sectoral perspective, foreign direct investment could be seen as a substitute for credits. If foreign direct investment is seriously hindered by sector specific

²⁰ Beside regulation problems in the banking sector mentioned above, which should be tackled directly.

regulations – a point in case is the nearly total prohibition of land purchases by foreigners in Poland – an inefficiency in capital allocation could be postulated. However, this is valid only if the intersectoral capital allocation is seriously hampered. Again, this cannot be completely excluded but does not seem to be plausible.

The government program on interest subsidies and credit guaranties for the agricultural sector in Poland rests on the hypothesis of above average capital need in the transition process on the one hand and on specific problems with respect to capital accumulation and credit availability on the other hand. Although a massive capital need for the restructuring of the agricultural sector could not be denied, compared to other sectors, agriculture seems to be in a rather good position. First of all the commodities produced do not differ principally from that before 1989. Therefore, major parts of the capital stock (machinery, buildings) had not to be written off all at once. And – most importantly – the major production factor, land, had not to be depreciated at all. Even more, market price support had been increased in recent years (table 6).

More principally, an efficient discretionary subsidization of capital presupposes knowledge of the government about the marginal return in different needs. This knowledge is not available. The subsidization of capital distorts factor price relations. On the margin this causes a substitution of labour by capital. Given the obvious hidden unemployment in agriculture this seems to be particularly distorting. Another negative development could result in so far as capital is invested in buildings and machinery which might be adequate for the dominating small farms but would soon be outdated if the needed structural change to larger production units gets momentum.

For these reasons the polish government should rather abstain from capital subsidies. The first priority should be given to measures improving the efficiency of rural financial markets (chapter 2.2). General support should be directed according to social criteria and not according to membership to a specific production sector. This would be less distortive and avoids negative incentives hindering agricultural labour to move to more productive employment opportunities.

To reduce capital needs and capital costs in agricultural production, in particular with respect to the above stated dynamic perspective, the government rather should foster the cooperation of small farms. A promising first step could be the cooperation in the use of larger machines as e.g. successfully practiced in Germany for about thirty years.²¹ This in addition is likely to

²¹ Machines are bought and owned by single members of the „Maschinenringe“ and the owners deliver well defined machine work on a contractual basis, where the price is fixed in advance by the members.

alleviate the access to credit since not only the efficiency in capital use would be improved but bank credits could be repaid faster because of a shorter depreciation period.

In the medium and longer perspective Poland, becoming a member of the EU, has to open its land market to foreigners. An earlier decision on this matter would greatly alleviate foreign direct investment in farming activities and by that would approximate diverging factor price proportions between Poland and Industrialized Countries and reduce capital scarcity in particular in that regions of Poland, where large former state farms have to be restructured.

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