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Functioning of the Rural Credit Market in Poland: Case Studies of Farmers and Banks

Abstract

This paper presents case studies of four banks and seven private farmers carried out in Poland in May 2003. The objective was to give an insight into the banks' lending behaviour to agriculture, and into farmers' borrowing and investment behaviour. The farmers interviewed did not report large investments and were not highly indebted. Farmers' and banks' interviews suggested that the presence of imperfections on the credit market were at the core of the issue. Farmers faced high costs during the loan process, and some were discouraged from applying. In addition, the case studies highlighted that it was not rare that applicants were totally or partially rationed. However, if functioning of the credit market seems to be a key issue for Polish farming sector's structural change, it is not the sole concern, as the studies showed that the lack of investment opportunities were also a major reason for low investment levels. Policy measures should therefore aim both at improving access to credit and developing investment opportunities for farmers.

Introduction

Throughout the transition, Poland's farming sector has experienced slow restructuring, showing a persistence of small-scale farming and low technological progress. With an average size of 7 hectares Polish farms are still small in comparison to market economies. Studies report that their performance is low and their equipment is obsolete (e.g. Latruffe et al., 2005).

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In 1998 the average age of a tractor was 18 years (Ministry of Agriculture and Rural Development in Poland, 1998). One major impediment to restructuring is believed to be the low level of investment in agriculture, reported by several studies (e.g. Christensen and Lacroix, 1997; Petrick et al., 2002). Whether this is due to the shortage of financing or to the farmers' passive behaviour implied by the lack of sales prospect remains unclear. However, the claims of the low use of credit by Polish farms are widespread (e.g. SAEPR/FAPA, 2000; Khitarishvili, 2000). This suggests that some farmers may in fact suffer from a shortage of financing caused by imperfections on the rural credit market.

This paper reports some case studies undertaken in Poland in May 2003. The objective of the study was to provide an insight into the functioning of the rural credit market in Poland, by investigating banks' lending behaviour and farmers' borrowing and investment behaviour. Therefore, the case studies were undertaken on both the demand and on the supply side of rural credit. They consisted of interviews of four banks' staff and seven private farmers, in two distinct areas of Poland. One area is located around Rzeszów in the Podkarpackie voivodship in south-eastern Poland, and the other area is located around Wrocław in the Dolnośląskie voivodship in the western part of the country. Both areas were selected for their difference in terms of farm structure. Farms in the Rzeszów area are generally small, with an average size of under 5 hectares, while in the Wrocław area farms are larger, their average size being over 10 hectares (GUS, 2002). In this paper, detailed information is reported about the types of loans offered in 2003 by the banks interviewed, and about investments and loans taken by the farms in the three years preceding the interviews (2000, 2001 and 2002). The studies additionally provided an interesting insight into the treatment of farmers by banks and into farmers' opinions about credit.

The next section provides some background about credit market imperfections and about the rural credit market in Poland. Sections 3 and 4 are devoted to the case studies of banks and farms respectively. The last section is a conclusion.

Background to the Case Studies

CREDIT MARKET IMPERFECTIONS

Market imperfections on a credit market usually arise when the assumptions of perfect information and costless transactions are violated. Information is crucial for the functioning of a credit market because a loan's price must include the risk that borrowers may be unable or unwilling to repay the loan. Hence the interest rate is determined by the probability of default, which depends on borrowers' characteristics reflecting their

creditworthiness and on actions undertaken by the borrowers once the loan has been granted. However, information may be asymmetrically distributed, with borrowers having private information about their *ex ante* quality (adverse selection) or about their *ex post* actions (moral hazard). Lenders therefore need to screen applicants and to monitor borrowers' actions, and high interest rates may therefore reflect the high costs of these activities (Hoff and Stiglitz, 1990). However, increasing the interest rate might have an opposite effect, as it might induce a self-selection of risky borrowers. Safe borrowers might indeed be discouraged from applying as they might not consider that their (low) probability of failure would justify such a high interest rate (Stiglitz and Weiss, 1981). As a consequence, safe applicants would drop from the market and the risk of the lenders' portfolio increases. For this reason lenders may simply prefer to deny loans, i.e. apply non-price rationing. Another common feature of credit markets is that transactions are typically not costless. Transaction costs might include banks' screening and monitoring costs, implied by asymmetric information explained above. Additionally, although securing loans by requiring collateral helps mitigate the enforcement problem, enforcing costs might still arise for lenders if legal institutions are weak. To cover all these costs, lenders may add a premium in the interest rate or require additional fees, that is to say they may transfer their transaction costs to borrowers.

If the credit market were perfect, internal and external finance would be equivalent alternatives. However, imperfections on the credit market would mean that for some farms external finance might not be an option, as these farms might be non-price credit rationed or their internal finance might be less costly than debts. These farms would therefore have to resort to internal resources. This may in turn financially constrain farms' investment decisions and result in underinvestment in the farming sector, as farms' self-financing might not be sufficient to cover investment expenditures. Hence the functioning of the credit market might be essential for the farming sector's structural change.

THE RURAL CREDIT MARKET IN POLAND

During the communist years, the banking system in Poland was centrally-controlled and consisted of the central bank, the National Bank of Poland (NBP) and four banks, two of them specialised in savings, one in foreign trade financing and one in rural credit (Rutkowska, 1998). The bank in charge of rural credit, the Food Economy Bank (Bank Gospodarki Żywnościowej, BGŻ), was responsible for more than 1200 co-operative banks, created more than 100 years ago to assist the poorest rural inhabitants (Klank, 1999). Under the communist regime co-operatives provided credit to private farms, while the BGŻ channelled funds to the few state and

collective farms (Schrader, 1996). The end of the communist period in 1989 saw the reform of the banking sector, including the creation of private banks and a market-based allocation of loans. The co-operative system experienced a major liquidity crisis in 1992–1994, with hundreds of banks going bankrupt. A law passed in June 1994 aimed at restructuring the rural financial system, now based on the three-level model of the French *Crédit Agricole* (Klank, 1999). Co-operative banks are now organised in nine regional banks, the latter being under BGŻ control. Besides this three-tiered BGŻ structure, there exist several independent co-operative banks, and newly-created commercial banks, mostly foreign.

As in the other former communist countries, the recent emergence of a market-based allocation of credit in Poland raised questions about the functioning of the rural credit market. Imperfections on this market have in fact been detected by several recent studies. The World Bank carried out an extensive survey of more than 2,800 rural households in four regions in Poland in 1999, which highlighted the fact that Polish rural households made little use of debts (World Bank, 2001). The survey additionally reported that a non-negligible share of respondents was denied credit, partially or totally. Non-applicants declared that the main reasons for not applying for loans were the high costs of credit and their lack of collateral. Petrick and Latruffe (2003) used data provided by a survey carried out by the Institute of Agricultural Development in Central and Eastern Europe (IAMO) in three regions of Poland, about the borrowing history of 464 farms between 1997 and 2000. They calculated total borrowing costs as interest rate plus transaction costs (including fees, travel costs, and opportunity costs of time) and found that on average transaction costs increased the interest rate by one third. Finally, two papers provided evidence of imperfectly functioning credit market using econometric estimations. Petrick (2004) used a household model and the above-mentioned IAMO database and Latruffe (2005) used an inter-temporal investment model and the Polish Institute of Agricultural and Food Economics (IERiGZ) database from 1996 to 2000. Hence, imperfections on the rural credit market in Poland seem to persist even late in the transition. The case studies of banks and farmers presented in the next sections will add to this discussion, and will give more insight into the reality faced by lenders and borrowers.

Case Studies of Banks

TYPES OF CREDIT OFFERED BY THE BANKS INTERVIEWED

One commercial bank was interviewed in the Rzeszów area, while one co-operative bank and one BGŻ branch were interviewed in the Wrocław area. Both commercial banks had foreign banks as their main shareholders.

PREFERENTIAL CREDIT

At the time of the interviews preferential credit took two forms in Poland, subsidised loans and loan guarantees. Under subsidised loans the government supports a share of the interest rate, and thus the effective interest rate that farmers pay is below the market rate. This type of credit had been provided in Poland long before the 1989 events, but the beneficiaries were mostly state and co-operative farms (OECD, 1995). Although subsidised credit is in theory extended by all banks, the volume per bank is based on its agricultural lending activity in the past year (Christensen and Lacroix, 1997). Therefore, about 80 per cent of the subsidised loans are provided by co-operative banks and the BGŻ (Karcz, 1998). The public Agency for Restructuring and Modernisation of Agriculture (ARMA) is responsible for this scheme, in that it pays the differential between the commercial interest rate and the rate paid by farmers. Several credit lines are proposed in this scheme, including farm investment loans, non-agricultural loans and loans to the municipalities. Under the loan guarantees programme which was launched in the 1990's, the government provides a share of the collateral pledged in case of default, and thus farmers can contract a loan with a collateral requirement greater than the asset they own. Loan guarantees are offered under three programmes. Under the ARMA programme banks extend loan guarantees to private farmers, while under the Agricultural Property Agency (APA) programme they extend them to former state farms and co-operative farms. The largest part of loan guarantees (90 per cent) is however extended under the Agricultural Market Agency (AMA) programme to enterprises involved in grain intervention purchases in a price stabilisation objective (Christensen and Lacroix, 1997).

As indicated in Table 1, preferential credit was provided by two of the banks interviewed. The BGŻ branch offered several preferential credit lines and the co-operative bank offered preferential credit for working capital only. Neither of the commercial banks interviewed offered any preferential credit. No banks reported providing loan guarantee credit, confirming that this intervention form was not very frequent for private farmers. Table 2 presents the preferential loans offered by the banks interviewed in more detail. Five lines of subsidised credit were provided at the time of the interviews, four for investment and one for working capital. Under the subsidised credit for productive investment any farmer could buy equipment for farm production, with a 3.90 per cent p.a. interest rate for the farmer. If the investment objective was to increase the farm specialisation, the interest rate was 1.95 per cent p.a. If the investment was undertaken by under 40-year-old farmers, the interest rate was even lower, i.e. 1.56 per cent p.a. This very low interest rate also held for land purchase by any

farmer, clearly showing the willingness of the government to encourage farm enlargement. The last subsidised credit line reported was offered for working capital, that is to say to purchase intermediate consumption such as seeds, fertilisers, pesticides. The interest rate was 4.00 per cent p.a. and the repayment period was usually only one year. By contrast, it was several years for investment loans. The total (commercial) interest rate amounted to 7.81 per cent p.a. for investment and 6.88 per cent p.a. for working capital, the differential between the rates paid by the farmers being supported by the ARMA. Loans provided under the working capital scheme could not exceed a volume of 334.50 zlotys¹ per hectare of land owned by the farmer. For land purchase, the upper limit was 5400 zlotys per hectare of land purchased. There was no upward limit for other preferential investment credits. However, farmers needed to be able to contribute personally up to 20 or 30 per cent of the total investment costs. Farmers could take several preferential credits simultaneously providing that the total loan volume was less than 2 million zlotys, which was a comfortable limit.

SAPARD BRIDGE CREDIT

Table 2 also displays information about a specific loan type created not long before the interviews. Called 'bridge credit,' it is designed for farmers benefiting from the EU structural programme SAPARD. This programme was implemented in July 2002 and aims at improving the agri-food sector competitiveness, meeting EU sanitary standards in view of accession, and increasing the multi-functional rural development. Under the specific measures to farmers (investment in agricultural holdings and in rural diversification), farmers can get 50 per cent of their investment costs back, but up to a maximum ranging from 40,000 to 170,000 zlotys depending on investment type (Ministry of Agriculture and Rural Development in Poland, 2003). Numerous conditions must be fulfilled in order to be entitled to the refund, relating to the farmer's age and education, the farm's characteristics and its compliance with EU standards. The main requirement however, is that farmers have to contribute totally to the investment costs before receiving 50 per cent of the costs back. However, they are not allowed to contract preferential credit to help them bring this initial contribution. Hence, other options were to entirely self-finance their investment, or to take a high interest commercial loan.

Therefore, in order to help farmers with their initial 100 per cent contribution, some banks propose a special commercial credit, called 'bridge credit.' In this frame, farmers are charged a lower interest rate than the usual commercial rate. Such credit was offered by two of the banks interviewed. The co-operative bank in the Wrocław area required a personal

¹ 1 euro is about 4.2 zlotys.

contribution of 10 per cent and charged a fixed interest rate of 7.90 per cent p.a. The commercial bank in the Rzeszów area required a contribution of 20–30 per cent depending on the loan volume. It charged a variable rate, depending on the loan volume as well as the repayment length and whether the applicant had a good reputation in this bank, i.e. whether the applicant had an account in the bank and had never defaulted a loan. This bank reported interest rates varying between 2 and 5 per cent p.a., lower than the ones charged by the co-operative.

COMMERCIAL CREDIT

Commercial loans are generally used for investment rather than working capital. According to the banks interviewed, farmers turn to these loans when they cannot fulfil the personal contribution required for preferential or bridge credits, or when the nearest banks they know do not offer the latter credits. Only the two commercial banks interviewed reported in fact providing commercial credit. It was impossible to get figures on the interest rates (range or average) from the commercial bank in the Wrocław area. The reason invoked was that the rates were always negotiated on a personal basis. Interest rates were indicated to be lower for farmers with accounts in this bank or with a large farm turnover. Interest rates in the commercial bank in the Rzeszów area were never negotiated, and depended only on the repayment period and the loan volume, with lower rates for larger volumes. The average interest rate was reported to be around 8 per cent. Banks set no maximum limit on the volume lent but the commercial bank in the Wrocław area set a minimum volume of 10,000 zlotys.

The Loan Process in the Banks Interviewed

COLLATERAL AND OTHER REQUIREMENTS

In both commercial banks it was stressed that barren land was never accepted as a collateral because it was generally too low in value. In the commercial bank in the Rzeszów area, the collateral requirement was 200 per cent of the loan volume, while in the commercial bank in the Wrocław area it was 100 per cent, except for small investments such as PCs for which it was 70 per cent. Such high requirements are in line with other studies, such as the World Bank's 1999 survey which reports an average loan-to-value ratio from private banks that amounts to an average collateral requirement of about 100 per cent (World Bank, 2001). The commercial bank in the Wrocław area always required a bill of exchange in addition to the collateral, and farmers had to prove that they had a large turnover. The commercial bank in the Rzeszów area sometimes required a co-signer in addition to the collateral. The BGŻ branch and the co-operative bank in the

Wrocław area agreed to accept land as a collateral, the value per hectare given by a specific scale accounting for land quality. But they admitted that they usually tried to have other collaterals, such as buildings and machinery. In the BGŻ branch collaterals were preferred for investment loans, while co-signers were sufficient for working capital loans. The co-operative bank set the collateral requirement at 200 per cent and additionally required a bill of exchange.

Each person interviewed in both commercial banks and in the BGŻ branch indicated that their bank supported zero of the costs of the collateral assessment. Farmers were asked to hire an expert to have their assets valued, and therefore supported the full costs. In the commercial bank in the Rzeszów area the costs were said to vary according to the asset value, but an average figure of 700–1000 zlotys per application was mentioned. In contrast to these banks, the co-operative bank officer reported sending their own staff to evaluate the collateral, and therefore fully supporting the costs. The person interviewed however did not deplore it, as the cost would be far less than the cost of defaulting. In all the interviewed banks a business plan was always required for investment loans, the costs being supported by farmers. For preferential credit for investment, farmers were required to have their applications positively assessed by the extension services (ODR).

MONITORING AND DEFAULT

All the banks interviewed stressed that farmers never received the whole loan volume at once, in order to avoid non-productive use of loan and defaulting. Farmers would firstly receive 70 per cent of the loan volume, and the remaining share would be granted after showing the bills proving that the purchase occurred. Sometimes banks directly paid the company implementing or selling the investment. In the commercial bank in the Rzeszów area and the co-operative bank in the Wrocław area one officer was sent to visit and monitor farmers once in the repayment period in the case of an investment loan.

Only in the commercial bank in the Wrocław area some defaults in repayment were reported. The persons interviewed in the all banks shared the same feeling that repayment was more important than the collateral appropriation. In the commercial bank in the Rzeszów area it was added that in case of defaulting, the bank would only get one third of the loan volume back, because of the poor trial institutions. Therefore, officers in all banks closely monitored farmers, and always tried to find a solution in case of repayment difficulty, usually by rescheduling the loan. This behaviour contributes to explain the low official rate of default experienced by Polish farmers, that was estimated to be 2 per cent earlier in the transition (Karcz, 1998).

APPLICATIONS AND RATIONING

In the commercial bank in the Rzeszów area applicants were said to be mainly farmers with 2–3 hectares and off-farm jobs. Applications for investment purposes were primarily for agro-tourism and very rarely for land. In the commercial bank in the Wrocław area few farmers were reported to apply and the applicants were all relatively large farmers, which is not surprising considering the minimum loan volume mentioned previously. In the BGŻ branch it was indicated that small farmers preferred to apply in co-operative banks, while large farmers usually applied in BGŻ because they knew that they could receive large loan volumes there.

Applicants were required to go to the bank two or three times, once to discuss the loan possibilities and modalities, then to sort out formalities, and the last time to sign the contract. Often however the first stage was skipped since farmers already knew about the loans and requirements via their ODR or they had phoned to get information. But the person interviewed at the BGŻ branch added that in general farmers had to come an additional time due to missing documents.

In both commercial banks it was claimed that a farmer was never granted less than desired (see Table 1). In the cases where the volume applied for was large, it was granted for a long period. However, it was admitted that a couple of farmers per year were denied commercial credit because their collateral and turnover were insufficient. As for preferential credit, farmers were reported to be aware of the conditions and therefore did not apply if they knew that they would not fulfil them. In the co-operative bank the person interviewed however confessed that the ARMA had a frequent shortage of funds to support preferential credits. Therefore, some farmers were rationed, partially or totally, according to the 'first come first served' rule.

OPINION OF FARMERS

The difference in opinion about farmers is interesting. The opposition is between the commercial banks on the one hand and the co-operative and BGŻ branch on the other. In both commercial banks other clients were preferred to farmers, because the risk of defaulting was said to be too high for the latter. In the commercial bank in the Rzeszów area it was added that the main reason for defaulting was that farmers applying were too small and would therefore be unable to make their investment profitable. However, in the BGŻ branch and the co-operative bank farmers were considered very good clients because they were considered as seeing it essential to honour their debts, and they therefore made a great effort to repay their loans.

Case Studies of Farms

THE FARMS INTERVIEWED

Four farms were interviewed in the Rzeszów area (thereafter named 1, 2, 3, 4) and three farms in the Wrocław area (thereafter named 5, 6, 7). Their main characteristics are displayed in Table 3. They had all been family farms for generations. Except for farmer 5 in the Wrocław area, who was under 30 years old and currently doing a Ph.D. the farmers were over 40 and not highly educated. The general difference between both regions in terms of farm size mentioned previously was well reflected. Farms in the Rzeszów area were smaller than their counterparts in the Wrocław area, and smaller than the national average of 7 hectares. Farms in the Wrocław area were larger than the national average, but generally much smaller than Western farms. Farms owned most of their land, except for one large farm in the Wrocław area which rented 47 hectares, more than half of its area. The farms interviewed in the Rzeszów area were mixed, whereas the farms interviewed in the Wrocław area were crop specialised. In the Rzeszów area the farms' choice of output mix reflected most of the family needs, as more than 80 per cent of the production (except for one farm in Rzeszów for which it was 20 per cent) was for private consumption. The remaining output was mainly sold at open markets or local shops. In the Wrocław area, however, farms produced only for sales, mostly to private buyers and to the government via the ARR, where the price of cereals was topped by a deficiency payment of 110 zlotys/tonne. Only three farms had bookkeeping and four farms had a current bank account, three of them also had a savings account. Farmer 1 in Rzeszów pointed out that his savings account was a condition to receive credit.

Only two farms (in the Rzeszów area) had another on-farm activity, namely agro-tourism. They offered guest rooms at home and provided outdoor activities, such as bikes and waymarked footpaths. Off-farm jobs seemed to be a great necessity for the farmers interviewed. Only one farmer in the Rzeszów area and one farmer in the Wrocław area had no off-farm employment, but the former was looking for some. Only for the largest farm interviewed (in the Wrocław area) the gross revenue stemmed entirely from the output sales. For the other farms off-farm employment accounted for a major part of the gross revenue, up to 90 per cent for two farms. And two farms had a large share of their gross revenue originating from the agricultural pension (KRUS), received by the ageing mother still present on the farm. These findings confirm that a non-negligible share of Polish agricultural households' income comes from KRUS, particularly for small farms. The World Bank's survey in 1999 found for example that for farms between 1 and 7 hectares KRUS accounted for 15.6 per cent of the surveyed house-

holds' income, while the share was only 8.6 per cent for farms larger than 15 hectares (World Bank, 2001). Besides price (and credit) support, farms did not report any other government support, except for fuel subsidies. Farmers with registered tractors were entitled fuel coupons of 20 litres per hectare of land owned. Such coupons were received by two farms in the Wrocław area (6 and 7).

Investment and Borrowing Behaviour of the Farms Interviewed

BORROWING BEHAVIOUR

Four of the farmers interviewed did not consider credit as indispensable (3, 4, 5, 7). Among them, the two farmers located in the Rzeszów area (3, 4) argued that they did not intend to invest and that their small needs in working capital could be covered by self-financing. Whereas the two farmers in the Wrocław area (5, 7) were interested in investing but claimed that they could rely on their off-farm revenues for finance. The other three farmers interviewed regarded credit as necessary, for financing their investments in agro-tourism (1, 2) or in production (6). In general farmers believed that it was difficult to contract credit due to the very high interest rates. Farmers in the Rzeszów area also stressed that they could not fulfil collateral requirements. Two of them (2, 4) confessed their fear of losing their assets provided as collateral. Farmer 5 in the Wrocław area added that it was not worth applying for credit because of the upward limit in the loan volume. Whereas the other farmers in the Wrocław area (6, 7) estimated that it was easy to receive preferential credit. Informal source of credit did not appear to be frequent among the farms interviewed as only two of them reported very little borrowing from colleagues or relatives.

Four farmers reported no credit in the past three years (2, 3, 4, 5). In fact they had not applied at all. One reason invoked by the three non-applicant farmers in the Rzeszów area was high interest rates. The interview later revealed that these farmers seemed to be unaware of preferential credits. Another important reason related to collateral. Farmers in the Rzeszów area were afraid of losing their home and land in case of defaulting. Farmer 2 moreover explained that his off-farm income was not accepted for collateral as it was seasonal. Finally, farmer 5 was put off by the upward limits in loan volumes. This farmer explained that he wanted to purchase land with preferential credit but that land prices in the region were clearly higher than the loans' upward limit. Interestingly, no farmers invoked the high costs incurring during the application process. Although these transaction costs existed for the farmers (particularly for visiting the bank and valuing the collateral), they were not considered as a discouragement.

CHARACTERISTICS OF THE LOANS RECEIVED

Three farms had received bank loans in the three years preceding the interviews (2000, 2001, 2002). Table 4 describes the loans for these farms (1, 6, 7). Farmer 1 in the Rzeszów area received a commercial loan of 4000 zlotys for his agro-tourism activity. The farmer pointed out that his intention had been to apply for a SAPARD loan, where he would have got 50 per cent of his investment costs back, but that he could not fulfil the initial 100 per cent contribution requirement. The farmer thus resorted to a commercial loan with a high interest rate of about 16 per cent p.a. adjusted by inflation during the two years of repayment. This rate is in line with the national average rate of 13 per cent p.a. for loans to farmers reported by the NBP (NBP, 2002). Farmer 6 received a loan of 150,000 zlotys for machinery investment under the young farmer scheme. Farmers 6 and 7 in the Wrocław area both twice received a preferential loan for working capital, respectively twice 24,000 zlotys and twice 5000 zlotys. The 3.6 per cent p.a. interest rate supported by farmer 6 at that time is similar to the one in 2003 mentioned by the banks interviewed. On the other hand, farmer 7 was charged a much higher rate of 10 per cent p.a. for the same repayment period. This discrepancy in the interest rates suggests that even for preferential credit banks charged variable rates according to the farmers. None of these three farmers had received investment credit in the years prior to 2000, but farmers 6 and 7 attested taking preferential credit for working capital almost every year. Other studies also report that credit for working capital was more widespread than credit for investment. 95 per cent of agricultural loans in Poland were used for working capital in 1995 (Józwiak, 2001), while the figure is 70 per cent in The World Bank's 1999 survey (World Bank, 2001).

For these three farmers credit had been channelled by a co-operative bank, the choice of the bank being motivated by the proximity. But farmers also acknowledged that they were well known in those banks because they had colleagues who were members. Farmers had been required to go to the bank two or three times. There is a difference between the farm in the Rzeszów area and both farms in the Wrocław area in terms of collateral requirements. Only co-signers and proof of sufficient turnover were required for both Wrocław farmers, while the Rzeszów farmer was required monthly off-farm income as collateral in addition to one co-signer. Although this difference might be due to the loan type (preferential *versus* commercial), it might also reflect the disparity in farm characteristics, as the farm in the Rzeszów area is smaller and less commercialised than the two farms in the Wrocław area. As for monitoring, the farmer in the Rzeszów area indicated that bank officers would be visiting the farm at least twice during the repayment period. Both farmers in the Wrocław area reported that only

purchase bills were required as proof of the use of credit, which added to their number of visits to the bank. Regarding the potential existence of rationing, only the farmer in the Rzeszów area was satisfied with the loan volume received, while the other two claimed that they had been partially rationed. For the loan for working capital the reason invoked was the upper limit per hectare, and for the young farmer credit the reason cited was the 20 per cent personal contribution. Farmer 7 claimed to have been rationed for 50 per cent of his needs. These findings are not surprising, as it is intuitive that farmers would want to borrow much at the low subsidised interest rate. This is consistent with the banks' interviews mentioning common shortage of funds for preferential credit. It also supports the World Bank's survey findings that most of the rationed-in-amount farmers had received their loans from banks channelling preferential credit (World Bank, 2001).

INVESTMENT WITHOUT CREDIT

Two farmers (3 and 4) reported no investment at all during the whole transition period. These farmers admitted not to be interested in productive investment because they regarded any kind of production as unprofitable. Moreover, they did not intend to start agro-tourism activities as they felt that tourists were too rare in their isolated location. The other farmers carried out some investments without credit in the past three years. Farmers 1 and 2 in the Rzeszów area made small investments for their agro-tourism activity, while the three farmers in the Wrocław area invested in machinery and other productive equipment. The investment expenditure ranged from 1500 zlotys (for farm 5) to 30,000 zlotys (for farm 6). Investments were mainly financed by off-farm income and a small part by loans from relatives. Only the largest farmer interviewed (6) could cover the investment costs by farm profit.

Conclusion

A shortage of financing is frequently invoked to explain the slow restructuring of the Polish farming sector. Previous research gave evidence of obstacles faced by Polish farmers on the rural credit market, in terms of high costs of credit or non-price rationing. This paper contributed to this discussion, with a report of case studies of four banks and seven private farmers undertaken in Poland in May 2003. The case studies of banks provided valuable information about the loan modalities faced by farmers, in particular their treatment by banks and the types of loans available. The case studies of farmers investigated their borrowing and investment behaviour as well as their opinion towards credit.

Except for one very large (87 hectares) and very commercially oriented farm, the farmers interviewed did not report large investments. This is in line with the general claim that investment in Polish agriculture is low (e.g. Petrick et al., 2002). It is tempting to claim that the reason for these low investment levels are the farms' insufficient internal resources due to low profitability. However, in a perfect capital market this reason would not be valid, as internal and external sources of funds are perfect substitutes. This would therefore suggest that the rural credit market in Poland is affected by imperfections. In fact, only three of the seven farms interviewed were indebted, and their indebtedness level was low. The present case studies hence confirm the general situation in Poland, that despite preferential loans little credit is contracted. For example, in 1996, 98 per cent of individual farmers' financing was covered by internal resources, and 60 per cent of the small farmers had never resorted to a bank (Khitarishvili, 2000). The interviews with farmers and bank officers confirmed the presence of imperfections on the credit market. Farmers faced high costs during the loan process, in terms of application, screening and monitoring costs. Knowledge of the existence of these borrowing costs frequently discouraged farmers from applying. In addition, the case studies underlined that it was not rare that applicants were totally or partially rationed. Although the 'first come first served' rule was mentioned by one of the bank officers interviewed, it clearly appeared from the case studies that small farms faced more obstacles than large farms, due to the personal contribution condition or large turnover requirement. Józwiak (2001) also indicated that in 1995 even preferential credits were granted to those farms with large production potential, in order to avoid default.

However, the studies also revealed that Polish farmers presented a low borrowing demand due to the deficiency of investment opportunities, such as constraints on land market and lack of sale prospects. During the interviews most of the farmers acknowledged that their farming activity was unprofitable and that they would not be able to survive without their non-agricultural activities. Farmers disclosed the wish to enlarge but reported obstacles on the land market (low availability or high prices) and the difficulty to find selling opportunities. This confirms that among both hypotheses proposed by the World Bank in its 1999 survey to explain low farm indebtedness level, the 'credit market hypothesis,' that is to say the presence of imperfections on the credit market, is not the sole explanation for the low investment in agriculture, but that the 'uncertainty hypothesis,' i.e. uncertain profitability of projects implemented, cannot be ruled out (World Bank, 2001).

Hence, although the functioning of the credit market seems to be a key issue for the Polish farming sector's structural change, it is not the sole concern. In light of these case studies it can be suggested that policies

could concentrate on measures that would improve farmers' access to credit, and in particular that would remove the access bias favouring large farms. But other crucial policy measures should deal with improving the farming sector's environment, so as to develop investment opportunities. In this view, the accession to the European Union that took place in 2004 should be favourable as it will firstly provide a more stable macroeconomic environment. The Common Agricultural Policy direct payments, which are now delivered to farms without the obligation to produce, might also be beneficial as they might facilitate the exit of unprofitable farmers from the farming sector while preserving their decent living standard, and give space for the development of more profitable farms.

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Table 1

Characteristics of the banks surveyed

Area	Rzeszów			Wrocław		
	Commercial bank	Commercial bank	Co-operative bank	Commercial bank	Co-operative bank	BGŻ branch
<i>Types of credit offered</i>						
Preferential credit	No	No	Yes (working capital)	No	Yes (working capital)	Yes (working capital, investment)
SAPARD bridge credit	Yes	No	Yes	No	Yes	No
Commercial credit	Yes	Yes	No	Yes	No	No
<i>Collateral requirement</i>						
Value (% of the loan volume)	200%	100%	200%	100%	200%	No answer
Land accepted?	No	No	Yes	No	Yes	Yes
Co-signers	sometimes	always	for working capital loans only	always	for working capital loans only	sometimes
<i>Existence of rationing</i>						
Total rationing	sometimes	sometimes	sometimes	sometimes	sometimes	No answer
Partial rationing	No	No	sometimes	No	sometimes	No answer

Table 2

Characteristics of preferential (subsidised) credit and SAPARD bridge credit offered in 2003 by the banks surveyed

Credit line	Preferential (subsidised)						SAPARD bridge
	Investment for production	Investment for specialisation	Investment for production from young farmers less than 40 year old	Investment in land	Working capital	Investment for production or diversification	
Conditions	-	-	-	-	-	numerous conditions	
Personal contribution	20-30%	20-30%	20-30%	None	None	10% (20-30%) ^a	
Upper limit in loan volume	None	None	None	5,400 zł/ha	334.50 zł/ha	None	
Interest rate total p.a.	7.81%	7.81%	7.81%	7.81%	6.88%	7.90% (2-5%) ^a	
Interest rate for farmer p.a.	3.90%	1.95%	1.56%	1.56%	4.00%	7.90% (2-5%) ^a	

^a Without brackets: as indicated by the co-operative bank in the Wrocław area. Between brackets: as indicated by the commercial bank in Rzeszów area.

Table 3

Characteristics of the farms surveyed

Farm	Rzeszów 1	Rzeszów 2	Rzeszów 3	Rzeszów 4	Wrocław 5	Wrocław 6	Wrocław 7
Head of farm gender	Male	Male	Female	Female	Male	Male	Male
age	40	43	45	40	27	44	54
education	primary school + courses in agriculture	technical school of agriculture	secondary diploma in agriculture	primary school	PhD student in agriculture	secondary diploma in energy	primary school + courses in agriculture
Total land area (ha)	6.50	2.30	8	5	16.95	87	10
Owned land area (ha)	2.40	2.30	8	5	15.55	47	10
Specialisation	mixed	mixed	mixed	mixed	crop	crop	crop
Share of self-consumption in total output	20%	100%	80%	95%	0%	0%	0%
Other activities	on farm agro-tourism; off-farm job	on farm agro-tourism; seasonal off-farm job	off-farm job	none (but seeking off-farm job)	off-farm job (PhD)	none (and not seeking)	off-farm job
Share in gross revenue: sales	30%	-	20%	5%	60%	100%	10%
other on farm activity	40%	10%	-	-	-	-	-
off-farm job	30%	90%	20%	-	40%	-	90%
social benefits	-	-	60%	95%	-	-	-
Bookkeeping	Yes	No	No	No	Yes	Yes	No
Bank account	current, savings	none	none	none	current	current, savings	current, savings

Table 4

Characteristics of the loans received between 2000 and 2002 by the farmers interviewed

Farm	Rzeszów 1	Wrocław 6 ^a	Wrocław 6	Wrocław 7 ^a
Date of loan	2002	2002 and 2000	2001	2001 and 2000
Bank type	co-operative	co-operative	co-operative	co-operative
Purpose	investment	working capital	investment	working capital
Loan volume	4,000 zł	24,000 zł	150,000 zł	5,000 zł
Type of credit	commercial	subsidised	young farmer	subsidised
Interest rate p.a.	about 16%	3.6%	1.8%	10%
Collateral requirement	3 months wage	None	None	None
Co-signers	1	2	3	2
Business plan required	Yes	No	Yes	No
Repayment period	2 years	1 year	10 years	1 year
Number of visits to the bank	2	3	3	2
Waiting time before acceptance	3 days	2 weeks	4 months	1 week
Bank monitoring	at least 2 visits	bills	bills	bills
Rationed in amount	No	Yes	Yes	Yes

^a For these farms both loans received had the same characteristics.