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Loan Repayment Performance in Community Development Finance Institutions in the UK

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ABSTRACT. This paper identifies the key institutional factors that influence loan loss rates in Community Development Finance Institutions in the UK. Traditional bank credit assessment puts the blame of poor loan performance largely on the borrower. This is the first study of its kind to examine institutional characteristics of 16 CDFIs in the UK and assess their influence on the loan loss rates. The results show that 8 out of the 13 institutional characteristics examined significantly influence loan repayment performance. Although a vast body of literature supports the view that borrower characteristics are highly influential, our results provide strong evidence to show that institutional characteristics are equally important and both factors need to be taken into account if loan repayment performance is to be improved.

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1. Introduction

The importance of micro businesses in the UK economy has received attention both from Government and researchers (Parkhouse and Drury, 1994; Bank of England, 2000; Collin et al., 2001). Small, micro and social businesses especially in deprived areas in particular, potentially face more difficulty in obtaining credit from the traditional banks than larger businesses (Bank of England, 2000) despite the fact that they have been identified as key to the Government's regeneration and neighbourhood renewal agenda (Social Exclusion Unit, 2000).

The financial gap between what small, micro and social businesses in deprived areas need and what the banks provide is worsened by a 29% reduction in bank branches in the UK between 1989 and 1999 (BBA, 2000). These businesses provide income, security, a way out of poverty and help support the local economies in which they operate. In response to these concerns, the Labour government in 1998 set up Policy Action Teams (PATs).[2] The PAT 3 report (1999), which focused on enterprise promotion in deprived areas, identified high-perceived risks of borrowers not repaying the loan either on time or at all as one of the key factors that make it difficult for small and micro businesses to raise finance generally and particularly influence the banks' unwillingness or inability to lend to deprived businesses. Another important related factor is high transaction costs. We however, concentrate on the former.

In recent years, increasing attention has been given to alternative ways of providing financial services, particularly loans, to micro businesses in deprived areas that cannot receive bank finance. One of the alternatives supported by

the Government and the Bank of England (Bank of England, 2000) is the promotion of Community Development Finance Institutions (CDFIs). CDFIs are sustainable, independent financial institutions that provide capital and support to enable individuals or organisations to develop and create wealth in disadvantaged communities or under-served markets. CDFIs provide financial services with the aim of generating both social and financial returns, which is known as the double bottom line. The achievement of the double bottom line is a key feature distinguishing CDFIs from other profit oriented lenders, such as banks, money lenders and pawn brokers. The individual entrepreneurs and small businesses that CDFIs target tend to have credible business plans, yet for various reasons are unable to obtain some or all of the business finance they require from conventional sources (www.sbs.gov.uk).

CDFIs in the UK owe their origins to money lenders, the cooperative movement and mutual societies of the eighteenth and nineteenth centuries. However more recent developments have been greatly influenced by the success of micro finance in low income countries and the community development finance (CDF) sector in the USA. The CDF sector in Europe and particularly in the UK, is not as developed as in the USA, however the immense interest it receives from the various Governments puts CDFIs at the centre of the fight against financial and social exclusion. The Community Development Finance Association (CDFA), the trade association for UK CDFIs, was established in April 2002 to strengthen the CDFI sector and become a centre for excellence for CDFI issues (www.CDFA.org.uk, 2003). The establishment of the CDFA and the Phoenix Fund of £30 million donated by the Government in April 2001 has fostered the growth of the sector in recent years (CDFA Briefing paper 1–July 2003).

In the UK, CDFIs provide services to the financially excluded through a variety of models. The models include credit unions, community loan funds, micro credit funds, community development venture capital funds, mutual societies, social banks and community reinvestment trusts. This study concentrates on community loan funds and micro credit funds because they tend to focus on small, micro and social businesses rather than on personal loans.

Many researchers have emphasized the importance of loan repayment performance, especially in lending to the poor (Stearns, 1995; Hulme and Mosely, 1996). In the UK, various attempts to provide loans to micro businesses led to high write-off rates partly because they were soft loans schemes and were perceived as grants in disguise (Collin et al., 2001). Poor loan repayment performance can waste valuable funds and destroy a valuable service for the disadvantaged and the community as a whole. As a result, the issue of how to get money lent out back has become a priority for the CDFI sector. Stearns (1995) rightly points out that ''banks appear justified with a policy of not lending to small and micro entrepreneurs if specialised agencies (such as CDFIs) set up for that purpose cannot collect their loans''. This statement makes it imperative that lenders such as CDFIs examine what factors affect their loan losses, especially the institutional factors, because it is in this area that their innovation can have the greatest impact.

In this paper, we address two important issues; what are the key institutional factors and how do they influence loan loss rates in CDFIs. These are important because an institution with high loan losses will not be able to survive or be financially sustainable in the long run. The authors argue that lenders characteristics can also be blamed when loans are not repaid, rather than putting the blame solely on the borrower, as the banks tend to do. The authors' hypothesise that to reduce the risks of loan loss; CDFIs need to look at both their own institutional design and the borrowers characteristics in order to ensure that their products are suitable to the borrower. We hypothesise that the lender in addition to the borrower may be responsible for non-repayment of loans in credit programmes targeting the poor. This paper aims to provide the first evidence for the UK on the relationship between institutional characteristics and loan loss rates in CDFIs.

The paper proceeds as follows: we begin by providing some theoretical background on factors that affect the ability and willingness to repay a loan and provide a literature review on factors that influence loan repayments. We then identify some institutional characteristics of

CDFIs and determine which of these characteristics affect the loan loss rate in the UK using ordinary least squares regression analysis. The paper concludes with a summary of the main results and offers recommendations for the direction of future policy. This research is of prime importance as knowledge of the factors associated with high loan loss rates will allow greater control and ultimately determine the future of the industry. Further development of this research will investigate borrower characteristics.

2. Non-repayment of loans: who is to blame?

Several authors (Greenbaum, et al., 1991; Hoque 2000) suggest that when a loan is not repaid it may be a result of the borrowers' unwillingness and/or inability to repay. This premise underlines the policies that traditional lenders have used in their credit assessments procedures, which in turn decides who is granted a loan. The traditional lenders such as the banks would not lend, as has been mentioned earlier, if the transaction costs are too high and or if they perceive that the lender is too risky and would not repay the loan. This paper focuses on the risk aspect and the inability to repay the loan. To a lender, this type of risk is termed credit risk. Credit risk is thus the potential loss from the refusal or inability of credit customers to pay what is owed in full or in time (Coyle, 2000).

There is a lot of literature on how to manage credit risk (Coleshaw, 1989) and on the theories and models of credit risk (Phelan and Alexander, 1999). For example, the Merton Models on which some credit risk models are based are calculated on the basis of a firm's capital structure and asset volatility (Phelan and Alexander, 1999). All these theories assume that the sources of risk are from the borrowers' side. This means that if a loan is not repaid, the blame can be put on the borrower. For example, Colye (2000), describes the sources of and two-way nature of risk on a business loan as the non-repayment of suppliers to the borrower and also the risk of non-repayment from the customers of the borrower. This clearly puts the blame of non-repayment on the borrower. In the theory of credit rationing by Stiglitz and Weiss (1981), they explain that the reason why a bank would lend to a group and not another at high interest rates is because high interest rates may increase adverse selection and moral hazard problems, ultimately reducing the profitability of the banks. The solution recommended is to screen the borrowers and select the 'good' borrowers from the 'bad' borrowers and monitor the borrowers to make sure that they use the loans for the intended purpose.

These methods have been widely put to use in the banking sector in the form of credit analysis. Credit analysis by the banks, according to Greenbaum and Thakor (1995), looks at a borrower's past record and economic prospects to determine whether the borrower is likely to repay or not. Relevant areas covered during credit analysis include the character of the person, capital needed, collateral requirements, capacity or ability to repay and condition of the market. Various studies (Doran and Hoyle, 1986; Deakins and Hussain, 1993; Fletcher, 1996) have shown that the selection criteria employed by banks, is often biased towards financial information provided by the borrower. Credit scoring techniques, now widely used in banks, measure the statistical probability that credit will be satisfactorily repaid. It has been suggested that credit analysis (Rouse, 1991) and credit scoring, which predominantly use the characteristics of the borrower, might discriminate against micro businesses and people living in deprived areas (Bank of England, 2000). This is because the poor and disadvantaged are less likely to pass the screening tests by the banks as a result of them not possessing the 'right' characteristics. Mondar et al. (2002), however note that credit scoring reduces subjectivity in lending and is intended to support localised decision making. Their report, which concentrated on ethnic minority businesses, stated that some bankers had advocated credit scoring as it leads to the recommendation of projects that would otherwise be rejected if credit-scoring techniques were not used.

All these theories point to the fact that when a loan is not repaid it is the fault of the borrower. Though this may be the general perception of traditional lenders as mentioned above, increasingly research, especially from the field of micro finance, suggests otherwise.

Stearns (1995) argued that, 'it is the lender, not the borrower, who causes or prevents high

levels of delinquency in credit programmes'. She also notes the importance of 'uncontrollable' factors such as natural disasters and personal crises in affecting the ability to repay a loan. Copisarow (2000) further observes that, 'defaults generally arise from poor programme design or implementation, not from any essential problems with the borrowers'. Hulme and Mosely (1996) described design features for ensuring high repayment rates on loans. They include individual lending, self-selecting group lending, market interest rates, intensive supervision, peer group monitoring, borrower and staff incentives, progressive lending in addition to character referencing. For example, micro businesses run by and operating in deprived areas often require very small loans. Aspire in Belfast and Street UK in Birmingham, two micro lenders in the UK with repayment rates of over 90%, provide loans of on average £2500 for up to a year. Banks often provide larger loans and for longer periods. If a borrower needs a small loan for a short period and can only get larger ones for longer periods, he/she is more likely to default on the loan, because he/she cannot really afford or manage the loan. Banks may argue that such a person should be screened out at the credit assessment stage, however, the reason why the person is being refused the loan is not because he/she is a bad risk, but rather because the banks are not able to adjust their systems to accommodate the borrower. Another example is the insistence on security. According to a study by Deakins and Hussain (1993), most banks will not lend to businesses without security. Most micro businesses run by disadvantaged people, do not have security, hence are excluded from taking loans. Microfinance institutions have shown that other substitutes can be used instead of collateral such as group lending and peer pressure. They use guarantees from community leaders and bill receipts as evidence of repayment performance. Microfinance institutions lend without security and still achieve repayment rates of 90%. Again, lending and achieving high repayment rates has been possible partly due to the ability of the lender to design its services to suit the borrower.

The causes of non-repayment could arise from a variety of factors. These could be grouped into three main areas:

- the inherent characteristics of borrowers and their businesses that make it unlikely that the loan would be repaid;
- the characteristics of the lending institution and suitability of the loan product to the borrower which make it unlikely that the loan would be repaid;
- systematic risk, in the form of external factors, such as the economic, political and business environment in which the borrower operates.

The first point forms the basis of the view held traditionally by the banks. The second point forms the basis of this paper whilst the third factor affects all borrowers irrespective of whether they are unwilling or unable to repay the loan and hence need not concern us here. Though we will not dwell much on the systematic risk factors, they are complex and have implications for both borrowers and lenders. They both need to be aware of such risks and allow for them in the form of some kind of insurance that would be acceptable to both lenders and borrowers.

The second factor relates to the lending institution. This view asserts that the ability and willingness to repay is associated with unfavourable lending terms and conditions faced by the borrower. If this is the case, the likelihood of loan loss will be high, even though the borrower has a viable proposal, and the fault lies with the lending institutions. Banks may not appreciate the special needs of micro businesses in deprived areas and hence may not be able to respond appropriately to the needs of the businesses (Copisarow, 2000). Alternative financial institutions such as CDFIs are supposed to be designed to meet the special needs of small and micro businesses in deprived areas and lend to those with viable business plans but cannot receive loans from the banks.

The situation where the blame of the loan loss is placed more heavily on the characteristics of the lender is an under researched area. It is our view that more research into the policies and practices of the institutions is required. This may ultimately lead to greater Government regulation and the provision of more training for bank staff on the special issues and conditions faced by micro businesses in deprived areas.

Table I provides a conceptual framework of causes of non-repayment of loans. We focus on option A, which looks at the institutional characteristics that influence loan repayment performance. Option B will be investigated in future research.

3. Factors influencing loan repayment performance in CDFIs

The literature on factors influencing loan repayment performance among financial institutions targeting the poor is very sparse and limited mainly to microfinance experience in low-income countries, (LICs). The few studies which exist focus primarily on the borrower characteristics relating to loan repayment performance, although they also identify some institutional characteristics that influence repayment rates. See for example Sharma and Zeller (1997), Avery et al., (2000), the study by the Association of Social Advancement, (ASA, 1997) and more recently Bhatt and Tang (2002). One of the few relevant studies on characteristics of the lender is Hulme and Mosely (1996).

According to Hulme and Mosely (1996), of particular importance to the loan repayment performance are the design features of the loan. They categorise the design features into three main groups. They are access methods, screening methods and incentives to repay. Access methods generally ensure that poor people access the loans rather than richer people. Features include maximum loan ceilings and high interest rates. Screening methods are used to screen out bad borrowers. The main design feature is peer lending. According to Ghatak (2000), less risky borrowers are more likely to select less risky borrowers into the group. The peer pressure effect encourages the repayment of loans. The third group of techniques provides incentives to both the borrowers and lending officers to encourage repayment and foster the collection of loans, respectively. For the borrowers, rebates on interest on loans repaid early and the provision of larger loans when earlier ones are repaid encourages borrowers to repay. On the lender side, financial bonuses can be used as incentives to lending officers to chase up loans. These characteristics outlined above help micro finance institutions lend to the poor and achieve considerable repayment rates.

TABLE I
Summary of causes and action to reduce non-repayment of loans

Problem Non repayment of loan		
Options	Causes	Action to improve loan repayment
A	Inappropriate institutional designs and products that do not suit the client group	Identification of institutional design features and services that are associated with high repayment performance
B	Inherent characteristics of the borrower, which are perceived as high risk.	Selection of prospective borrowers through credit assessment.

However not all the design features are applicable in the UK. For example, very few CDFIs use the peer lending technique in the UK. Ashe (2001) also mentions the dismal performance of peer lending in the USA. Incentives for staff are also not common as staff numbers in CDFIs are generally small. In designing suitable products, CDFIs need to recognise the specific needs of small and micro businesses. Copisarow (2000) outlines some of the needs of micro businesses in the UK. They include small loan amounts, minimal waiting time for the loan to be approved and market interest rates, which need not be below standard banking rates. Small, micro and social businesses also require opportunities to network and clearly pre-explained terms and conditions. She goes on to note that the banks fail on many of these points. If these needs are not met then borrowers may find it difficult to repay a loan. Thus, the cause of the loan not being repaid would be in part due to the lender.

The next section describes our data and variable selection and methodology in more detail.

4. Methodology and empirical analysis

4.1. *Data description*

This paper concentrates on non-bank loan/debt finance for small and micro-businesses but excludes the credit unions[4] and social banks[5] who predominantly provide personal credit and also mutual guarantee societies as they currently have

regulatory problems. In 1999, the New Economics Foundation (NEF) conducted a survey of all CDFIs in the UK and came out with 32 institutions. This result has also been used by the Bank of England (2000) and the British Bankers Association (2000) in their documentation and hence is adopted as the population in the current study.[6]

Questionnaires were posted to the entire population of 32 institutions by the current authors and 16 responses were received. Note the small size of this sample inevitably means that results emerging from the analysis should be interpreted with caution. The questionnaires were directed to the chief executives of the institutions. CDFIs are scattered over the UK and limited funds and time constraints did not allow the authors to visit the CDFIs. However, telephone calls and visits to a few did provide some qualitative information that was used to support the quantitative analysis. Our results provide vital new evidence on characteristics relating to loan loss rate. For the purposes of this study, our choice of factors to explain loan repayment performance is based on the work by Hulme and Mosely (1996) described in Section 4 above, the work by Copisarow (2000) and Avery et al. (2000) and also resulting from discussions with managers of CDFIs. Specifically, Hulme and Mosely recommend using information on interest rates charged and the size of the loan to help govern loan repayment performance. These factors are also recommended by Copisarow (2000), along with loan processing time and hence entered into our study as explanatory factors. Note a high probability of receiving the loan, opportunities to network and clearly preexplained terms and conditions are three factors outlined by Copisarow which we did not use because they did not relate directly to the repayment of loans. Our choice of the age variable was a direct consequence of the work by Avery et al. (2000). The remaining factors in our study, outlined here in Table II, were recommended to us by managers of CDFIs during our lengthy discussions. Table II presents the total number of variables considered in the research.

5. Presentation of results and discussion

The results will be presented in two parts. The first part presents the descriptive statistics of factors identified above. The averages, standard deviation, maximum, minimum and median figures are presented. The second part investigates how these factors influence the loan loss rate. Regression analysis is used for this purpose.

5.1. *Institutional characteristics of CDFIs in UK*

Table III presents some of the key institutional characteristics of CDFIs in the UK. The high standard deviations imply that there is very little conformity in the CDFI sector in the UK.

5.1.1. *Age of CDFIs*

The CDFI industry in the UK is young compared to that in the USA and low-income countries. The average age of CDFIs is about 8 years, with a median age of 7. There is a high standard deviation of 6.24 indicating the wide spread in age of the institutions which ranges from 2 to 22 years. Older CDFIs, through experience may have better loan repayment performances than younger ones.

5.1.2. *Number of borrowers and potential size of market for CDFIs*

The average number of clients per institutions is about 140[7] ranging from less than ten to over a thousand[8]. The standard deviation of 187.6 is again high indicating a wide variation

TABLE II
Factors influencing the loan loss rate

Lending terms	Abbreviation	Institutional features	Abbreviation
Interest rate	R	Age of institution	AGE
Loan size	LSIZE	Coverage of institution	COV
Term of loan	LTERM	Provision of training and advice	TA
Processing time for loan	LPROS	Focus on ethnic minority	TETHNIC
Type of loan	LTYPE	Focus on women	TWOMEN
Minimum amount of loan lent	LMIN	Number of borrowers	NOB
Maximum amount of loan lent	LMAX		

TABLE III
Descriptive statistics of institutional characteristics of CDFIs in the UK

Variable	Units	Mean	Minimum	Maximum	Standard deviation	Median
Age of Institution	Years	8 (2)	2	22	6.24	7
Average no. of days to process a loan from when applied for to when granted	Days	20 (21)	7	42	10.45	21
Average term of loans	Months	34 (36)	12	48	9.97	36
Loan loss rate	%	10.5385 (5)	0	26	7.58	10
Minimum loan size	£	1258.00 (5000)	0	5000	1722.93	500
Interest rate	%	8.6 (5)	1.25	25	6.358	7
Maximum loan size	£	15,566.67 (10,000)	2000	50,000	13,446.81	10,000
Average amount lent	£	6,809.40 (3,000)	1,487.00	25,000	6,524.22	5,600
Number of current borrowers		139	14	700	187.63	60

in the number of clients each CDFI has. CDFIs lend to less than 9000[9] people across the UK. This figure is much less than similar institutions in less developed countries where several hundred thousand borrowers per institution is common. For example, the Grameen Bank of Bangladesh, one of the most popular micro finance institutions, has had over two million borrowers since the 1970s (www.Grameen-info.org, August 2002). We note that CDFIs have barely scratched the surface of the potential market and one of their challenges over the next decade will be to turn the potential demand into effective demand to help fight financial exclusion.

5.1.3. *Services provided and cliente*

About fifty percent of the CDFIs surveyed provided loans only, thirty three percent provided both loans and business support and seventeen per cent provided loans, business support and grants. The Full Circle Fund in Norwich was the only CDFI in this survey that specifically targets women. While some like Black Business in Birmingham (3Bs) would specifically target ethinic majorities, though not exclusively, the majority of CDFIs tend not to specifically target ethnic minorities. The businesses they support are varied. Some CDFIs like Aston Reinvestment Trust typically lend to more established small businesses and as such the people themselves may not be socially excluded. Aspire in Belfast provides loans to microbusinesses, e.g. hairdressers, butchers, taxi drivers, window cleaners and green grocers. Other CDFIs lend to social enterprises which, generally speaking, are organisations which tend to reinvest their profits back into the community.

5.1.4. *Interest rates*

The level of interest rates charged to clients is a divisive issue among CDFIs in the UK. Whereas the majority (59% in the survey) charge below market interest rates largely to reflect the fact that the borrower is disadvantaged, 29% charge over fifteen percent to reflect the riskiness of the borrowers and 12% also charge a high interest rate to reflect the goal of the CDFI which is to be sustainable in the long term. The average interest rate is 8.6 percent and ranges from 1.25% to 25% resulting in a high standard deviation of 6.3. It is conventional wisdom among microfinance institutions in low income countries that interest rates should be at market rates or at least higher than the banks' rate (Harper, 1998; Copisarow, 2000). According to Stiglitz and Weiss (1981) higher interest rates will attract more risky borrowers due to the fact that information is held asymmetrically between lenders and borrowers. However, those who argue for higher interest rates stress the fact that it is not the cost of borrowing but the access to credit which is the problem for small and micro businesses operating in deprived areas. From our results, in practice, this is not the belief of the majority of CDFIs surveyed. The charging of low interest rates clearly indicates that cost is as important a problem as access.

5.1.5. *Average, maximum and minimum loan size*
The average loan size is £6809.40. However the majority of CDFIs lend about £3000 (the mode). The amount of the loan is a crucial feature as it may decide the target market. Large loans according to Copisarow (2000) are not suitable for micro businesses and could lead to high loan losses. The average loan size can be used to determine the difference between a micro loan and a small business loan, thereby distinguishing between micro credit institutions and community loan funds. Based on the average and modal values obtained, a figure of £5000 is chosen to be the cut off point. Any loan below £5000 is judged to be a micro loan. This was discussed with some leaders of CDFIs and was generally agreed. The maximum loan size that the CDFIs surveyed offered was on average £15566 and the minimum was £1258.

5.1.6. *Processing time for the loan and term of the loan*
The time it takes for a loan to be granted can influence the repayment of loans (Copisarow, 2000). The average time it takes from when the initial application was made to when it was granted was 20 days. However some institutions were offering loans in 7 days and aim to shorten this further. The maximum number of days is 42. In some cases, the length of time was heavily affected by legal requirements such as the Consumer Credit Act and also the inability of the borrower to supply all the necessary information on time and in full. The average term of the loan is 34 months whilst the maximum is 48 months.

5.1.7. *Loan loss rates*
The mean loan loss rate is 10.5%, with a mode of 5. The loan loss rate ranges from 0% for most of the younger institutions to 26% for the older institutions. Younger institutions have a loan loss rate of zero because their loans may not have reached maturity. This means a zero loan loss rate may not necessarily mean that the CDFI, if it is less than two years old, has a better loan repayment performance. The CDFI industry is still young and high loan losses may be expected as scale has yet to be achieved. What is important is that high loan loss rates do not become a growing trend as CDFIs develop, as this will kill the industry.

5.2. *Regression results of factors influencing loan loss rates*

5.2.1. *Econometric specification*
We identified the loan loss rate (LLR) as the crucial variable in need of investigation and therefore this is designated as the dependent variable in our study. Stearns (1995) notes that there are over 20 different formulae to measure portfolio quality. Though CFDIs in the UK do indeed use a variety of default measures, the loan loss rate was found to be the most popular. Respondents to our questionnaire most frequently calculated it as the amount written off as a percentage of the total amount lent. Hence, we adopted this as our own definition. Write-off policy is therefore linked to the loan loss rate, and tremendous variation in the former was found to exist among the responding institutions, making comparisons difficult.

Qualitative information provided to us by loan managers of six of the CDFIs we surveyed stated that a loan is usually written-off when the credit granting team, after careful evaluation, was of the opinion that there is no hope for the business to survive and thus no hope for the loan to be repaid. There was no fixed time period after which a loan would be written-off and the institutions dealt with each case individually. CDFIs take between 6–12 months on average to write-off a loan. This is considerably longer than a bank, reflecting their more social orientation, and may skew the loan loss rates in favour of younger institutions as found by Avery et al. (2000).

The loan loss function is defined as follows:

$$\mathrm{LLR} = f[\text{lending terms (LT)}, \text{institutional features (IF)}]. \quad (1)$$

The ordinary least squares (OLS) method is used to study the dependence of the loan loss rate on the explanatory variables and to estimate the loan loss rate for a given value of any of the explanatory variables. Owing to the nature of the data, it is clear that high levels of correlation may exist between the candidate variables for inclusion in the model. Hence, a correlation

matrix was first constructed to check for possible multicollinearity (Gujarati, 1995). Variables that were significantly related to the loan loss rate were selected using the backward elimination method[10] of the stepwise regression technique. This method removes the effect of any multicollinearity. Standard diagnostic tests were conducted to confirm the adequacy of the model.

5.2.2. *Regression results*

Table IV summarizes the factors that are significant in influencing the loan loss function defined in equation (1).

We first present the results of the lending terms. The most significant factor is the term of the loan (LTERM), i.e. how long the loan was taken out for. The term is usually arrived at through negotiations between the lender and the borrower. It was expected a priori that the longer the period of the loan, the higher the possibility of it being written off. This is because micro businesses in deprived areas are faced with more uncertain market conditions and usually operate in high-risk markets (Bank of England, 2000). As a result, the longer money is owed the less likely the client is able to repay.

Surprisingly, our results show a negative relationship between term of the loan and loan loss rates; this finding does not support the a priori hypothesis. A variety of explanations can be offered for our result. Firstly, the term of loan ranged from 10 to 36 months with an average of 34 months. Relating this to the modal age of the institutions, 2 years, it is possible that most loans had not yet reached maturity and cannot yet be classified as non-recoverable. Secondly, the term of the loan largely depends on the usage of the loan. Most loans are used for capital expenditure and hence most CDFIs provide a greater number of longer-term compared with shorter-term loans in the UK. Our result is justified if the increase in the term of the loan leads to a reduction in the monthly payments to a more affordable level. Alternatively, if repayments are more frequent, say weekly, as in the case of micro finance in the developing countries (Hulme and Mosely, 1996), and then loan loss rates will fall as monthly payments are again reduced to more affordable levels.

It must be noted that the term of the loan is influenced by the methodology and orientation that the CDFI operates. Those operating a more micro-credit methodology, which uses short-term incremental loans, may find that the results do not coincide with their experience. The term of the loan is also related to the size of the loan in that longer-term loans are usually larger. Though not significant, the results showed larger sized loans were associated with lower loan loss rates as expected.

LMIN represents the minimum amount that CDFIs would lend. The results indicate that there is a positive relationship between the minimum loan amount and the loan loss rate. The minimum loan amount is set to reflect an amount below which it would not be feasible to lend. Thus, lending very small loans could lead to high loan losses. This result supports the argument that loans are not always the best option for poor people and at some level of poverty and for very small amounts, grants may be more appropriate. What this analysis fails to determine is the critical lower limit that CDFIs should lend. From the findings, CDFIs need to have a lower limit which should be calculated carefully, so that it is not too high such that the people it set out to serve are excluded, yet not too low such that people who may not be able to repay and may need grants are attracted.

LPROS refers to the processing time for the loan. The shorter the processing time, the better

TABLE IV
Determinants of loan loss rates of CDFIs in the UK[11]

Factors	Coefficients	Standard error	T-ratio	Sig.
Lending terms				
LTERM	−0.703	0.165	−4.254	0.13
LMIN	3.086E−03	0.001	4.328	0.0121
LPROS	0.222	0.52	4.244	0.13
Institutional Features				
TA	14.756	3.663	4.029	0.013
COV	−14.609	2.869	−5.093	0.007
TETHNIC	19.368	3.063	6.324	0.003
TWOMEN	−15.098	4.318	−3.497	0.025
AGE	−0.550	0.190	−2.882	0.013

Dependent variable: DR R-square: .948 F-ratio: 9.194.

the chances of the business receiving the money it needs and hence resulting in a lower loan loss rate (Copisarow, 2000). One of the main criticisms of the banks is the long processing time and amount of paperwork that goes into granting a loan to small businesses. Our results indicate that a shorter loan processing time reduces loan losses. The average processing time is 24 days in CDFIs and according to the CDFA training manual produced by the New Economics Foundation (NEF), 2003 the optimum processing time is 12 days. This however hides a wide range from 7 to 90 days. The short processing time may increase the confidence of the borrower in the institution, thereby increasing the willingness to repay. It may also mean that a generally efficient institution is quick and gets loans repaid. CDFIs must therefore find effective ways of reducing the processing time to be able to achieve lower loan loss rates.

The average interest rate (R) was 8.8% and ranged from 1.25% to 25% but was not significant in explaining loan loss rates at the 5% level. This huge range of interest rate charges is readily explainable because the more commercially oriented institutions who believe access is a greater barrier to finance than the cost, charge interest at the higher end of the spectrum compared with the more socially oriented institutions who charge at the lower end. Thus most CDFIs charged 5% lending rates, significantly lower than those of the major banks, (14%), reflecting their more social orientation. Closer examination in the form of a scatter graph of the relationship between interest rate charged and default rate revealed that higher interest rates were clearly associated with higher loan loss rates, reflecting the higher risks involved in lending to micro businesses in deprived areas. This supports the adverse selection argument (Stiglitz and Weiss, 1981).

LTYPE refers to whether a loan is secured (1) or unsecured (0). Unsecured loans were associated with low loan loss rates. This result was not statistically significant at the 5% level of confidence, which is unsurprising because the securing of loans is not a major factor in the loan granting process of CDFI's.

The most significant institutional feature is (TETHNIC) which refers to whether the CDFI particularly targets ethnic minorities. This factor is a dummy variable taking the value of 1 in cases where targeting ethnic minorities is a major focus and 0 otherwise. 6 of the institutions stated that they particularly targeted ethnic minorities. As a result, they may have a higher percentage of ethnic minorities as clients. With a coefficient of $+19$ and an associated t-statistic of 6.34, our results suggest that this variable is the most significant factor amongst all factors considered in explaining loan loss rates. Clearly, a general intention of an institution to lend to ethnic minorities yields increases in loan loss rates. The ethnic minority group has the greatest need for finance but by the same coin, is the most unable to repay owing to greater exposure to social deprivation. Ethnic minority communities are over-represented in almost all areas of social exclusion and over 70% of the representatives of this group live in the most deprived communities (www. renewal.net, 2002). These factors make ethnic minorities potentially high risk to lenders, thus targeting this group, either collectively or as individuals, automatically means that the lender is not diversifying their portfolio as widely as possible to hedge risks. Martin and Carter Hill (2000) also showed that ethnic minority status leads to high default rates.

Further research is required to explore whether the credit needs of the micro businesses run by ethnic minorities, not social needs, are significantly different from that of other micro businesses in the UK, if financial services are to be directed towards them. A more objective credit granting procedure is required to treat all groups equally.

COV, the coverage of the CDFI refers to whether the CDFI offers its services locally, regionally or nationally. This factor is also a dummy variable with 1 for services provided locally and 0 otherwise. It is expected that a more locally oriented service would reduce loan losses, as it would have a greater understanding of the special needs of the particular community. Our results do indeed support the hypothesis that a more locally oriented CDFI will reduce its loan loss rate by being able to gather the information necessary to make effective loan assessments. This is also evident in micro finance in the developing countries where the community is the focus of attention even though there may be a regional

headquarters, see, for example the Grameen Bank of Bangladesh (www.Grameen-info.org).[12]

TA refers to the whether the CDFI also offers training and advice in addition to loans. TA consists of business advice, training and planning and technical skills training. We measure this with a dummy variable; 1 where TA is offered in addition to loans and 0 otherwise. Though offering training and advice is generally believed to be important to micro businesses, it need not be compulsory in order for a loan to be obtained, and should be provided at reasonable costs to the borrower. It is expected a priori that putting all of these varied functions into one organisation will lead to a conflict of interests in the loan assessment process and negatively affect the loan loss rate. Our results support this view and we recommend that CDFIs should ideally focus on their core function, the provision of loans. This result is also consistent with the finding by Evers et al. (1999 p. 14) where they also suggested that from a sustainability point of view, financial and non-financial services should not be mixed. Most of the CDFIs depend on referrals from enterprise agencies, accountants and banks. Further research is needed into how effective this arrangement is and whether it results in better quality proposals leading to lower loan losses.

TWOMEN is also a dummy variable referring to whether the institution particularly targets women, 1 or 0 otherwise. General evidence from micro finance, especially from the developing world, is that women make better borrowers (Hulme and Mosely, 1996). Large institutions like the Grameen Bank of Bangladesh lend primarily to women and they report a 98 per cent repayment rate. Our results support the view that targeting women leads to a lower loan loss rate. There are few institutions targeting women in the UK. In our own sample only one out of the sixteen respondents targeted women.

The age of the institution (AGE) refers to how long the institution has been established. It is expected that the younger the institution the lower the loan loss rate, see for example Avery et al., (2000). This is because younger institutions would have given out fewer loans, most of which would not have reached maturity. By contrast, our results show a negative relationship indicating that as CDFIs grow older the loan loss rate reduces. Though our result contradicts the work of Avery et al., (2000), we can justify our findings if the older institutions have been able to understand the market better and their greater experience has allowed them to adopt policies that have helped reduce their loan loss rate. Clearly there is a problem in the dissemination of best practice amongst CDFIs in the UK resulting in younger CDFIs not learning from the mistakes of the older institutions. The recent establishment in April 2002 of a trade body, the Community Development Finance Association, is a positive move to encourage best practice amongst CDFIs and to resolve this dissemination problem.

Another institutional feature we consider is the number of borrowers. Though not statistically significant at the 5% level, our results show that the larger the scale of the institution, the lower the loan loss rates. This result is in line with evidence from micro finance institutions in developing countries where borrower sizes in the hundreds of thousands are not uncommon and corresponding loan repayments are high. The Grameen Bank of Bangladesh has about 2.4 million borrowers (www.Grameen-info.org, August 2002) and a 98% repayment rate. An analysis of the means and median numbers of CDFIs in the UK, presented here in Appendix 2, however, reveals some interesting facts. The estimated number of CDFI clients is between 4,800 and 8,500. This relatively small number indicates that CDFIs are yet to make their presence felt in the small business community, particularly amongst businesses that cannot access finance from banks. We feel that by achieving a larger scale of business, CDFIs in the UK will benefit from higher repayment rates.

Finally, some of the reasons given by the respondents to explain why clients may not repay on time or at all include:

- business idea does not work out,
- health—physical/mental of the borrower,
- cash flow problems—trading results not in accordance with the projections contained in the initial business plan,
- difficulty or failure in the business. Occasionally as a result of fraud,
- lack of liquidity,
- inadequate sales and under capitalisation.

We do recognise the following limitations of our research:

- The small number of community finance institutions in the UK clearly yields a small population for the statistical analysis.
- The institutions in our study are relatively young so there is no long trading history upon which to base a robust analysis.
- The different operational strategies of the institutions surveyed affect the loan loss rates. This will affect our analysis as policies that have a negative effect on one institution may have a positive effect on another.

6. Conclusions and policy implications

Community Development Finance Institutions in the UK are a potential alternative to bank credit for micro businesses that cannot receive bank finance. CDFIs are essential to the Labour Government's social exclusion agenda and to the encouragement of an enterprise culture in the UK. Banks are not likely to lend directly to micro businesses in deprived areas, but usually collaborate with CDFIs to facilitate lending. The selection process used by banks adversely affects micro businesses because the basis of the selection is the borrowers' characteristics and the business proposal. Lending to micro businesses in deprived areas requires a specialised approach. This latter can be achieved if the lending institution carefully tailors the services they provide to the needs of the borrowers.

In order that CDFIs may achieve their objectives of supporting micro businesses and ultimately creating jobs, they need to be able to get back the loans they provide. We noted three factors that may affect the ability and willingness of a borrower repaying the loan and concluded that lender characteristics were as important as borrower characteristics.

Our results reveal the most significant lender characteristics that affect loan loss rates. CDFIs need to increase the terms of the loans, which should result in smaller loan instalments. They should not set too low a minimum loan size and should aim to reduce the time it takes to process a loan application. We recommend that training and advice should be obtained from a different provider other than the financial institution providing the loan. Our evidence suggests that the provider at local level gives the best chance of reducing the loan loss rate. We further recommend that CDFIs should not specifically target any ethnic minority group or individual, however more detailed research is needed to examine the issue of credit needs of ethnic minorities. The emphasis should be on the training and advice they receive before applying for loans from CDFIs. We therefore believe that a separate organisation specialising in enterprise training and advice, such as the enterprise agencies, can play a pivotal role. The current link between training and advice for entrepreneurs in the deprived communities and loan granting is under-utilised and should be strengthened. In addition, more priority should be given to female entrepreneurs as evidence suggests they are better borrowers. There is a need for older institutions to disseminate information to younger CDFIs and to identify benchmarks for the effective provision of CDFI services.

One of the key problems in the relationship between banks and micro businesses is that while micro businesses need to use the banks for services other than just credit, banks are not required to lend to them. How can micro businesses run successfully if they are refused some financial services? One of the main features in micro finance in the developing countries is the growing importance given to savings. In the UK, CDFIs are not allowed to collect deposits by law. Though this law is necessary to protect both borrowers and institutions, ways must be found to offer appropriate savings facilities to poorer customers who are refused bank accounts. Banks should lend to bankable businesses, but they may still have an interest in subsidising the finance and training needs of non-bankable micro businesses in deprived areas. This is because the bank will benefit from the future business generated from the CDFI's referring the now bankable business to the banks.

Finally, banks or CDFIs, must adapt their polices and be flexible in their methodologies to lend effectively to small businesses in deprived communities. One way of introducing flexibility is in the way credit assessments are conducted. Credit scoring is fast becoming an important

aspect of all credit assessments and CDFIs can benefit from it. It as been argued that credit scoring can be discriminatory, however it is objective and the extent to which it can be discriminatory depends on the factors that are included in the scoring model and the cut-off score. All borrowers are not homogenous. Small, micro and social businesses in deprived areas have different characteristics, so it stands to reason that a scoring model specifically designed for them, may be less discriminatory for them. A credit scoring model for CDFIs above all things needs to reflect the social benefits of the businesses being supported to the wider community. CDFIs through the CDFA, need to collect data on what factors, both lender and borrower related, influence the loan loss rates. This information can be used to build a generic score card, which the sector can use. The cut-off score can be adjusted to cater for the individual characteristics of any particular group. This is an area that needs further detailed research.

Focussing on the institutional characteristics as much as borrower characteristics can not only reduce loan loss rates, but also reduce financial exclusion. In the long-term this will help reduce the financial barriers to micro businesses in deprived areas in particular, and small businesses in general. Future research will examine the borrower characteristics that lenders deem important in their lending decisions.

Notes

[1] Defined as businesses employing less than nine people.

[2] In 1998, the Social Exclusion Unit published a report on the National Strategy for Neighbourhood Renewal. From the recommendations of the report 18 policy action teams (PATs) were established to bridge the gap between the most deprived neighbourhoods and the rest of England; and in all the poorest neighbourhoods, to achieve lower long-term worklessness; less crime; better health; and better qualifications. PAT 3's look at the promotion of enterprise in deprived areas with the goal to draw up an action plan with targets to encourage more successful business start-ups in poor neighbourhoods.

[3] See Making Small Business Lending Profitable, Proceedings from the Global Conference on Credit Scoring, April 2–3, 2001. Washington, D.C.

[4] There are some business credit unions but they operate under a different methodology and their analysis will better be studied separately.

[5] Social banks may provide business credit but they are excluded because they are banks

[6] The Small Business Service has recently compiled an updated list of CDFI's applying to the Phoenix fund. About 51 proposals were reviewed for the second round of bidding in 2001. The CDFA estimated the number of CDFIs in the UK to be about 60.

[7] This figure was calculated from a survey conducted by the authors in 2001 on 25 CDFIs in the UK.

[8] The maximum figure at the time of the survey was 700, however, discussions with some CDFIs have revealed some who have about 1000 clients.

[9] This figure was calculated as the average number of clients per CDFI $(140) \times 70$ CDFIs. A lot of the newer CDFIs from 2001 onwards do not have clients up to the average of 140. So the actual total number of clients that serve would be a lot less than 9000.

[10] Full details of this method can be found in the SPSS for Windows manual by Marija J Norusis and the SPSS inc, 1993

[11] The table presents indicators significant at the 5% level only.

[12] Most large micro finance institutions in the developing world, such as the Grameen Bank or Bancosol, have a large network of lending groups at community level where decisions are taken.

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