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Financial models for Community Development Finance Institutions in the UK

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Financial models for Community Development Finance Institutions in the UK

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Dissertation

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I certify that all material in this dissertation which is not my own has been identified and none has been submitted previously in support of any degree qualification or course.

Signed.....

Abstract

This dissertation highlights the financial models used by Community Development Finance Institutions (CDFIs) in the UK. These not-for-profit social finance organisations provide finance to under-served markets. Although a few of the larger ones are banks, the vast majority are loan funds, often with hybrid funding models involving a mixture of grants and loans for on-lending. The resilience of the financial models is examined, firstly with a survey of experts on funding and risk issues, followed by financial modelling of three risk scenarios that were considered likely by the experts. The modelling suggests that for a typical CDFI lending to businesses or civil society organisations, significant increases in bad debt write-off rates would have a larger impact than cuts in revenue funding or delays in capital funding. The dissertation concludes that funding should focus on the rationales for supporting CDFIs: cost-effective job creation and addressing market failure.

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A. Introduction

The financial crisis that began in 2007-8 has illustrated how problems in the financial sector can lead to downturns in the wider economy. If financial institutions are hampered in their ability to provide finance to businesses that create jobs, this can in turn hamper economic recovery. This applies to any kind of business requiring external capital. For example, lack of finance can hamper social and environmental initiatives such as social enterprise and the creation of "green jobs" via carbon-reducing technologies.

Excessively complex financial constructions have been widely blamed for the financial crisis, as noted by financial journalists such as Lanchester (2010) and Mason (2009). On the other hand, the Bank of England has stated that the root causes of the financial crisis, and indeed of previous systemic crises, were:

> excessive risk-taking in the upswing of the credit cycle and insufficient resilience in the subsequent downturn (Bank of England, 2009).

Most of my work in the area of finance involves Community Development Finance Institutions (CDFIs), not-for-profit social finance organisations that provide finance to under-served communities or sectors (for a glossary, see Appendix I). I take a great deal of personal interest in the future of CDFIs.

One aspect of CDFIs which I feel has suffered from a relative lack of emphasis in recent years is the issue of financial models for CDFIs. For example, two key papers reviewing the future of CDFIs (Brown and Nissan, 2007; Thiel and Nissan, 2008) failed to mention financial models at all. In writing this dissertation, I am hoping to help rectify this.

The issue was originally drawn to my attention by a request from a civil servant at HM Treasury (the UK Government's finance ministry) at the Co-operatives

Congress in Brighton in 2007. This civil servant asked me why CDFIs don't just collapse, and requested me to write a paper explaining the financial models used by CDFIs. I did not respond immediately as other work came up, but once the financial crisis affected major banks in 2008, I wrote a note comparing financial models of banks and CDFIs (see Appendix III). I intentionally left out references and comments from experts from my note, saying that I would add these to turn my note into a properly referenced briefing paper if paid for my work. Although I did not receive a response from HM Treasury, I showed the note to several others who were interested in what I had written. The idea to write this dissertation arose from this.

I. Community Development Finance Institutions (CDFIs) in the UK

1. Current situation

From my previous work as a manager in a CDFI and my current work assessing the performance of several different CDFIs, I have seen how the crisis has affected them so far. Typically this has involved an increase in demand for loans and an increase in the quality of loan propositions as banks have tightened their lending criteria. This, however, has often been accompanied by increased uncertainty of future funding for CDFIs to continue to make loans. CDFIs have had to work harder and harder to make the case for obtaining funding, in my experience, by demonstrating social impact and value for money.

As of 2011, there were 60 CDFIs in the UK (CDFA 2012c, p.10) with a total outstanding loan portfolio of £714 million (ibid., p.9). However, while this amount of loans was almost 4 times the 2005 amount of £181 million (ibid., p.11), the number of CDFIs fell by a quarter in the period, from 80 to 60 (ibid., p.10) Therefore, it is clear that between 2005 and 2011, some CDFIs must have expanded substantially while others ceased to operate. What is more, most of the expansion in loan portfolio and contraction in the number of CDFIs has taken place since the financial crisis began in 2007 (ibid., p.10-11).

This combination of expansion and consolidation suggests that the financial crisis has affected different CDFIs in different ways, ranging from expansion to closure. The question then arises as to what factors lie behind this difference; in other words, what are the keys to success of CDFIs? There are undoubtedly many different factors, and this question is discussed further below as it forms one of the questions included in the survey of experts.

In this dissertation I am focusing on financial models as a possible factor in determining the success of CDFIs.

2. Brief history of CDFIs in the UK

The term CDFI comes from the USA. There are organisations with similar functions in other countries, but they tend to be described by other names: microfinance, social finance, community finance, solidarity finance etc. Where other countries use the term CDFI, such as Australia (Australian Government, 2012), the ideas tend to be based on the US model.

In the UK, too, different terms were used in the past. These have included terms such as social investment (Affleck, 2011, p. 45). The term CDFI came into use when the US model was looked at with a view to replicating it in the UK. The nascent UK equivalents were originally described as “community finance initiatives” but this was changed to “community development finance institutions” once it was decided to build organisations that would be sustainable in the long term (Affleck, 2011, p.46).

The history of CDFIs in the UK could be divided into two parts: before and after what has been called the 'British New Wave' (Affleck, 2011, p. 83). Before 2000, there were just a handful of CDFIs in the UK, although as pointed out above, other terms were used to describe them at that time. Following the recommendations of the Social Investment Task Force (Social Investment Task

Force, 2000), over 50 new CDFIs sprang up, supported by the Phoenix Fund and the new trade association set up to support them: the Community Development Finance Association (CDFA). These new CDFIs are what Affleck calls the “British New Wave”.

An example of an earlier CDFI is Co-operative and Community Finance. The oldest CDFI in the UK, its original name, which is still its official name, is “Industrial Common Ownership Finance”, or ICOF for short. It began in the 1970s as a UK-wide loan fund for worker co-operatives, which at the time experienced particular difficulty in obtaining finance from conventional sources. From this it progressed to managing several local authority loan funds for worker co-operatives. In 1987 it set up ICO Fund plc to raise additional funds from social investors for lending to worker co-operatives.

In the 1990s ICOF diversified into lending to social enterprises, for which it set up an additional vehicle, ICOF Community Capital, again funded by social investors. In 2005 the organisation changed its trading name to Co-operative and Community Finance to reflect its new focus (GHK, 2010a, p. 188). Further initiatives continue, such as a partnership with the Plunkett Foundation to help community groups buy and run village stores (GHK, 2010a, p. 189).

In summary, the history of ICOF is one of specialism, adaptation, innovation and diversification, launching new services, loan funds and partnerships in response to changing needs and circumstances.

By comparison, in my experience the most common type of “British New Wave” CDFI concentrates on lending to businesses in one or more local authority areas that are rejected by banks. “British New Wave” CDFIs tended to start as a project of an existing organisation such as an enterprise agency, and are often still linked to the organisation that founded them. While there has been some diversification over the years, as of 2010, 43% of CDFIs are still purely business lenders (CDFA, 2010, p.11).

As well as business lending and social enterprise lending (also called civil society lending), there are some CDFIs that carry out personal lending. Here the background is different. Personal lending CDFIs were set up in response to the number of people without bank accounts in deprived areas and the withdrawal of banking facilities in these areas. What financial services that remained in these areas often included doorstep lenders charging annual equivalent rates of interest over 100% (Murphy, 2003) or illegal loan sharks charging even more. An earlier response to this situation had been to set up credit unions, but as these traditionally only made loans to those who had saved with them for a certain time, some people were still stuck in debt to doorstep lenders or loan sharks. Personal lending CDFIs were designed to be more flexible than credit unions by not requiring a prior history of saving, though some credit unions removed this requirement for loans funded by the DWP Growth Fund (Hope, 2010).

Government funding was provided to CDFIs in different forms depending on the type of CDFI. As noted above, business lenders were initially funded by the Phoenix Fund, but this was not open to personal lenders, and was of limited use to social enterprise lenders (GHK, 2004). There were three rounds of Phoenix funding from 2000 to 2006, totalling £42 million (GHK, 2010a, p.13). After this, funding for business lenders tended to be from Regional Development Agency (RDA) funds, typically matching European Regional Development Fund (EDRF) monies (GHK, 2010a). With the abolition of RDAs and their replacement with Local Enterprise Partnerships (LEPs), part of the funding of business lenders is moving to LEPs.

The political rationale for funding enterprise-lending CDFIs was based on tackling social exclusion by enterprise-led regeneration of deprived areas (Brown and Nissan, 2008).

Meanwhile, from 2006 until March 2011, personal lenders had access to the DWP Growth Fund alongside credit unions (Collard et al., 2010), so personal lenders have generally used different funding mechanisms from other CDFIs. The Growth Fund provided £98.75 million in funding (Financial Inclusion Taskforce, 2011, p.4) which enabled £104 million of loans to be made by CDFIs and credit unions combined in the period 2006-2010 (HM Treasury, 2010, p.46). The rationale for this funding was to help third-sector lenders serve financially excluded households (Financial Inclusion Taskforce, 2011, p.4).

As for social enterprise lenders, these comprise two types with very different financial models: banks and loan funds. There are three banks specialising in social lending in the UK: Triodos Bank, Unity Trust Bank and Charity Bank. Triodos is an international bank with a UK branch whose headquarters are in the Netherlands, while Unity Trust Bank and Charity Bank operate only in the UK. All are funded by shares and deposits as with conventional banks. As well as these, there are various local and national social enterprise loan funds with a variety of funding sources.

3. My involvement in the CDFI sector

I first became involved in the CDFI sector in 1992 when I worked for a small social bank in Sussex. Although my role there mainly involved computer programming, I got to learn about how a small bank operates. When the social bank was taken over and the office moved away from Sussex, I left.

At around the same time as this, I was involved in a network of co-operatives, which had a small loan fund for co-operatives that are members of the network. I used expertise learned from my work at the bank to help the network put its loan fund on a firm footing. What I learned at the bank was used to help raise investment, improve the security on loans and design the financial model used at that time by the network's loan fund. I continued working for the network, first as a volunteer and then as a part-time finance worker until 1999. At the same

time I also continued to do a small amount of computer contract work. One of my customers was a CDFI, where again I used expertise learned from my work at the bank.

In 1999 I moved to the Netherlands, where initially I worked for an equivalent Dutch co-operative network, which at the time was in the process of restructuring, including setting up a separate loan fund. I worked there for about a year, then I found another job outside finance, but remained involved in social finance as a volunteer.

In 2004 I moved back to the UK, working first at an organisation advising local charities, and then at a business lending CDFI, making loans and managing the finances (Field, 2007). After that I began working as an assessor of the performance of CDFIs; at the time of writing I had assessed approximately 20% of the UK's CDFIs.

II. Financial models

1. Financial models in general

There are many definitions of a financial model. One example is the definition in BusinessDictionary.com (2012): 'Mathematical representation of key financial and operational relationships'. Another example is the definition of financial modelling in Investopedia.com:

> The process by which a firm constructs a financial representation of some, or all, aspects of the firm or given security. (Investopedia.com, 2012)

I consider this definition too restrictive, as it is possible for someone outside a firm to construct a model of the firm. It is also possble to construct “average” or “generic” financial models for specific types of organisation, as GHK have done in the case of various types of CDFI (GHK, 2010a, p.115). However, I do not wish to detract from the crucial point made by Investopedia.com in the explanation of its definition:

> What's most important, however, is not the kind of user interface used, but the underlying logic that encompasses the model. (Investopedia.com, 2012)

In this dissertation, I intend to concentrate on discussing the underlying logic behind the 'key financial and operational relationships' (BusinessDictionary .com, 2012) of CDFIs and related organisations.

2. Financial models of financial institutions

Analysing the figures of financial institutions requires care and attention, as money is both the product (e.g. loans, deposits) and the means of paying for that product (e.g. interest, loan arrangement fees). For this reason, the financial model of a financial institution can look very different from that of, say, a manufacturing or service industry firm.

For a manufacturing firm, money is invested in fixed assets such as machinery that are used to produce the product. In normal circumstances, relatively simple calculations can provide a useful indication of how efficiently the firm uses its assets. For a financial institution, however, its key assets are financial products such as loans, whose total amount keeps changing as new loans are made and older loans are repaid or written off.

Unexpected fluctuation in loan values can lead to sudden changes in a financial institution's performance. It may appear to be performing well, only for its performance to turn disastrous when a large number of write-offs are made. This was illustrated by the financial crisis from 2008 onwards, where previously profitable financial institutions suddenly had to be bailed out or taken over by other institutions or governments. Therefore, it is particularly important to capture the risks faced by financial institutions in adverse conditions, as well as the underlying financial logic behind how they function in normal conditions.

III. Aims of the research

With my research, I am aiming to look at the financial models used by CDFIs to see if they shed any light on why some CDFIs survive while others do not. As noted above, from 2005 to 2011 the total UK CDFI loan portfolio has increased nearly fourfold, yet the number of CDFIs in the UK has shrunk by a quarter, indicating that some CDFIs have grown substantially while others have ceased trading.

The issue of which CDFIs survive and which fail is not simply a matter of size, as illustrated by the 2010 bankruptcy of ShoreBank, which was one of the largest CDFIs in the USA with a balance sheet of $2.16 billion of assets before it collapsed (Campbell and Sterngold, 2010).

The failure of ShoreBank was particularly poignant to some of my colleagues in the CDFI sector, because it was a key pioneer which many in the sector looked up to, both in the USA and in the UK. Indeed, ShoreBank advised the Social Investment Task Force, whose report (Social Investment Task Force, 2000) and recommendations led to the emergence of most of the UK's current CDFIs.

I have only found three studies of UK CDFIs where the authors carried out financial modelling: GHK (2004), Dayson et al (2008) and GHK (2010a).

With this research, I am hoping to help counter this relative lack of emphasis on financial models used by CDFIs, while looking at these models in the context of the current relatively difficult funding and economic environment.

1. Research question

Given the recent failures of some CDFIs while others have expanded substantially, my main research question is “How resilient are financial models

for CDFIs in the UK?" For this, it is clearly important to define "resilient" and place it in an appropriate context.

For financial models, the appropriate context is how resilient a CDFI is likely to be to changes in financial circumstances. This in turn raises the question of how to model changes in a CDFI's financial circumstances.

My initial thoughts in this area were to start by looking at the "stress tests" carried out on European banks in 2010 (European Banking Authority, 2010). My aim in this was to identify adverse circumstances which would be expected to impose similar levels of stress on CDFIs as the adverse circumstances used by the European Banking Authority in their stress-testing of major EU banks.

However, the significance of stress tests were questioned in the media, for example by Treanor (2011), pointing out that Franco-Belgian bank Dexia passed the European Banking Authority's stress tests in July 2011 but was in deep financial trouble by October 2011, with a similar phenomenon happening to major Irish banks the previous year. This indicates that the stress tests were flawed in one or more ways: the data used could have been incorrect, the wrong risk scenarios chosen and/or the modelling methodology was flawed.

As a result, I started by consulting experts in the UK CDFI sector on risk scenarios, and used financial projections based on standard accounting practice rather than specially-designed models.

2. Possible use of results

My hope is that the results of my work will help in several ways. First of all, it may help CDFIs plan for the future. Within the performance assessment framework which I have been involved in, it is considered best practice for a CDFI to maintain a "risk register" comprising a list of risks to which the CDFI is exposed, estimates of their likelihood and severity, and possible risk mitigation

measures. Indeed, a risk register is required as part of applications for some types of grant funding. The results of stress testing and questionnaires could improve a risk register by helping to identify some of the risks and produce better estimates of their severity. In this way, the methods I plan to employ could have a direct practical benefit to CDFIs.

Secondly, it may help focus plans for future support for the CDFI sector. Financial support currently comes from a mixture of local and national government agencies, financial institutions and grant-making trusts. Particularly in the case of financial institutions, whose support has increased in importance recently as government funding has been cut, it is hoped that stress-testing of CDFI models could be useful; after all, major financial institutions are well aware of stress-testing, having themselves been subjected to it, as noted above. This, too, is an argument in favour of the methodology I plan to employ.

Finally, I also intend to use my results to improve my own ongoing professional practice with CDFIs and related organisations.

IV. Outline of my research

1. Basic approach taken

Here is an outline of the basic approach I have taken in my research. More details on the methods used are discussed below in Methodologies.

In order to answer my main research question “How resilient are financial models for CDFIs in the UK?”, the first step was to identify the models used. This involved descriptive analysis based partly on a literature survey and partly on applying the results of my own professional experience. The description starts with the basic models, such as the banking model and the revolving loan fund model, which form the component parts of more recent hybrid models.

The second step in my research involved consulting UK CDFI experts. I did this primarily by means of questionnaires, although I offered the alternative of interviews for those experts who had no time to complete questionnaires. As well as analysing the responses to the questionnaires and interviews, I also used the key findings to choose three risk scenarios for the next step: stress-testing.

The third step involved constructing 5-year financial projections for “average” CDFIs of two types, and applying in turn each of the three risk scenarios identified by the experts to see how each type of CDFI's projected financial performance would be affected.

2. Ethics protocol

The ethics protocol for my research is included in Appendix IV. As noted in the protocol, the key ethical issue in this research is commercial confidentiality. My day-to-day work as an assessor of CDFIs is subject to strict confidentiality, and it is vital that this is not in any way compromised by my studies. As a result, I chose to exclude people involved in organisations that I had assessed, or was about to assess, from the lists of people receiving my questionnaires and interview requests. Confidentiality was not the only reason for excluding them; I also wanted to ensure that none of them had been influenced by my own prior assessment of their organisation.

I designed my questionnaire so as to avoid sensitive commercial issues as much as possible. For example, I talk about risks to the CDFI sector as a whole, rather than risks to the respondent's own CDFI. Again, commercial sensitivity was not the only reason for this; I wanted to concentrate on findings relevant to the entire UK CDFI sector rather than issues of local or regional relevance.

Because many experts are involved in more than one CDFI, I asked separately whether they were willing for their name and/or organisation to be mentioned in the context of each organisation they were involved in at the time.

The ethics protocol also describes other specific issues related to copyright and conflict of interest, together with descriptions of how I successfully resolved them.

In the end, I managed to construct financial models based solely on published data because the most recent annual survey of CDFIs by the CDFA (2012c) was more complete than earlier years' surveys. As the person who compiled the results of this survey is also the person I usually assess CDFIs with, I took care to avoid making use of privileged access to this researcher, instead stressing the importance of publishing as much data as possible in order to aid all researchers in the field.

Regarding the unpublished document I produced for a government department, I contacted the government department in question and clarified that they have no objection to the document being included as an appendix here (see Appendix VI).

B. Literature Review

I. Financial modelling

While there are plenty of textbooks covering financial modelling in general (e.g. Swan, 2005) there are far fewer that focus specifically on financial institutions. A few financial modelling textbooks have chapters or sections that cover banks, such as Chapter 5 of Benninga (2008). Even in cases such as this, however, the focus is on modelling industrial corporations rather than financial institutions.

Since the financial crisis in 2007, there has also been some focus on modelling the complex financial products such as collateralized debt obligations (CDOs) whose incorrect valuation was one cause of the crisis. While this issue is touched on in popular books such as Lanchester (2010), many publications covering this issue are highly technical and mathematical, such as Lipton and Rennie (2008). Such publications are of limited application to financial models for CDFIs and related organisations, as will be described below.

Specialist books on modelling financial institutions do exist, but they are far fewer than textbooks on financial modelling in general. One example is Kumar (1999), a book about the commercial banking sector in India, which focuses on a specific statistical method for categorising the performance of Indian banks.

II. Limitations of financial models

The limitations of financial models, for financial institutions as well as more conventional industrial corporations, were documented well before the financial crisis of 2007 onwards. One example of this is Chorafas (2002), a book that focuses on one method of financial modelling, the 'internal ratings-based' method, but also describes the limitations of financial models in general.

Since the financial crisis started in 2007, literature on the limitations of financial modelling has proliferated. There are popular accounts written by journalists which require little or no expert knowledge to understand. These typically criticise the mathematical models used to value complex financial instruments.

On the other hand, papers such as those in Lipton and Rennie (2008) propose different but equally complex mathematical models to take the place of those that had failed during the financial crisis. The mathematics used in these is more complex than anything I had to use during my Bachelor's degree in Natural Sciences at the University of Cambridge or my Master's degree in Knowledge Based Systems at the University of Sussex.

Yet there are also financial modelling professionals who criticise the complex mathematical models used, such as Derman and Wilmott:

> Financial theory has tried hard to emulate the style and elegance of physics in order to discover its own laws. But markets are made of people, who are influenced by events, by their ephemeral feelings about events and by their expectations of other people's feelings. The truth is that there are no fundamental laws in finance. And even if there were, there is no way to run repeatable experiments to verify them. (Derman and Wilmott, 2009).

The tensions between models and reality described by Derman and Wilmott can be seen, for example, in arguments about whether countries can afford to pay more than 7% interest on government bonds, as described by Cline (2012). Similar arguments can be made about key financial ratios for banks (Finance Watch, 2012). It is clear that millions of jobs can be lost when things go wrong, but can crisis really be prevented by imposing specific limits for a set of unintuitive financial ratios? If we follow Derman and Wilmott's argument, the answer would appear to be no.

I have avoided describing financial models using formulae, and have used a standard accounting format for my financial projections. However, I do need to use certain assumptions and approximations in my models, which I will explain in Methodologies below.

III. Literature covering UK CDFIs

A significant proportion of the specialist literature on CDFIs was covered in my previous work that was subsequently published as a paper (Field, 2010). However, that paper focused on regulatory issues, whereas here the focus is on financial models. As with the previous paper, the literature is presented in the historical context of the development of the UK CDFI sector.

1. Making the case for the sector in the 1990s

One of the earliest books to describe community finance initiatives in the UK and Ireland, *Short Circuit* (Douthwaite, 1996) described a key issue for the financial model of any small business: trying to survive in a globalised economy against multinational corporations using economies of scale and outsourcing work to low-wage countries. Small organisations, Douthwaite said, needed either to be super-efficient, bypassing intermediaries by selling direct to local customers, or cut their costs of labour and/or capital. Douthwaite proposed community finance initiatives as a way of cutting capital costs for small organisations. However, Douthwaite's arguments could also be applied to CDFIs themselves, especially the need for access to “cheap” or “free” capital for CDFIs.

Douthwaite's proposal was taken up by the New Economics Foundation, notably in the aptly-named “Small is Bankable” by Mayo et al (1998), which called for support for community finance in the UK; a call that was taken up by the Social Investment Task Force.

2. Reports in 2000 that launched the growth of CDFIs

In its report “Enterprising Communities”, the Social Investment Task Force (2000) proposed that CDFIs should be provided with funding from government sources and charitable foundations until they achieve sustainability. It also proposed tax relief on investments in CDFIs. However, there was no mention of the financial models used by CDFIs.

So, what was meant by “sustainability”? The Bank of England describes it as:

> the ability to cover their operational costs with revenue generated from their lending activities and fee-based services. This is commonly defined as operational sustainability and is different from financial sustainability, which would require programmes to meet their capital costs as well (Bank of England, 2000, p.68)

The Bank of England goes on to say that while operational sustainability is 'theoretically achievable for well-run programmes focusing on “near-bankable” enterprises', achieving financial sustainability 'is likely to be very difficult even for these programmes' (ibid.) Again, there was no description of the financial model for a CDFI on which these assertions were based.

3. Surveys of the growing CDFI sector

As most of the recommendations of the Social Investment Task Force were implemented, with the establishment of the CDFA, the setting up of many new CDFIs and the introduction of Community Investment Tax Relief, research tended to focus on surveys or case studies of the growing number of CDFIs.

One of the early surveys was carried out by the Bank of England (2002, pp.57-64). This report was more pessimistic about CDFIs achieving operational sustainability than the earlier Bank of England (2000) report, noting the high costs and low earned income from small, short-term loans.

Annual surveys of the UK CDFI sector have been conducted since 2003 by the CDFA (e.g. 2010, 2012c). These surveys have been a useful source of data for many subsequent studies of CDFIs, including mine.

4. Reconsidering the role of the sector

As public money was invested into CDFIs, evaluations were carried out to see how effective they were. Initial evaluations were often positive, such as GHK's evaluation of the Phoenix Fund (GHK, 2004). This evaluation was notable for including a 'financial “model” of a CDFI' (ibid., pp. 42-44). Two versions were presented, one for a 'large' CDFI and one for a 'small' CDFI. The models were 'based on a review of a small number of CDFIs who have provided relevant information' (ibid., p. 42). Both models, however, were flawed in that they only included interest earned on loans made during the year and omitted interest

earned on loans made in previous years. This omission partly explains the very low sustainability levels in the models. All the same, the remarkably low cost-per-job figures – £4,800, with a range £3,000 to £10,200 (ibid., p.44) – showed CDFIs in a positive light.

Later on, it was observed that the CDFI sector did not meet the ambitious original expectations of growth such as those made by Collin et al (2001a, pp.46-47). Some of the case studies focused on the lower than expected performance of individual CDFIs such as Street UK (New Economics Foundation, 2004) or Aspire (Forster et al., 2006).

These were followed by a study of the failure to meet expectations by the sector in general: “Reconsidering Community Development Finance” (Brown and Nissan, 2007). As the financial crisis started, this was followed by further recommendations of how CDFIs should address these issues (Thiel and Nissan, 2008). Again, financial models were not addressed in these reports.

5. Research focusing on personal-lending CDFIs

Research was often carried out separately on CDFIs involved in personal lending, as their main source of funding was the Department for Work and Pensions' (DWP) Growth Fund, which they shared with credit unions. The evaluations of this fund (Collard et al, 2010; Financial Inclusion Task Force, 2011) failed to mention a key issue I encountered repeatedly in the course of my work: the Growth Fund's structure fitted poorly with the financial models of CDFIs or credit unions as it required a portion of the interest earned to be converted into capital.

One substantial technical study of personal lenders stands out as it included detailed financial modelling of five CDFIs whose main business was personal lending (Dayson et al., 2008). Indeed, my approach is rather similar to Dayson et al.'s financial projections, as will be discussed below in Methodology. The

main differences are that Dayson modelled ways of improving personal lenders' performance, whereas I modelled risk scenarios that might damage the performance of business lenders and civil society lenders.

6. Recent substantial studies

Dayson et al.'s study of personal lenders was followed by an equally technical and even more substantial study of CDFIs lending to businesses and social enterprises carried out by consultants GHK for the UK Government's Department for Business, Innovation and Skills (BIS). As well as the full version of the report (GHK, 2010a), which runs to 250 pages, a shorter 'action-oriented summary for the sector' was produced (GHK, 2010b).

The report includes financial models for CDFIs, based on “small” and “large” variants of CDFIs operating in each of three lending sectors, so that there are six models in total (GHK, 2010a, p.115; GHK, 2010b, p.28). In these models, GHK corrected the omission of existing outstanding loans in their earlier models (GHK, 2004, pp. 42-44).

A major significance of the GHK models is that they were used to estimate the cost to the public sector of achieving key economic impacts: creating and safeguarding businesses, jobs, business turnover and gross value added. These were estimated separately at local community level (GHK, 2010a, p.135; GHK, 2010b, p.19) and at regional level (GHK, 2010a, p. 136).

The figures are significant because of the remarkably low costs of achieving some of these outcomes. For example, the average public sector cost per job created thanks to CDFI loans ranges from £4,010 to £16,858 (GHK, 2010a, p. 135) whereas the average cost for jobs created with support from Regional Development Agencies (RDAs) is £27,000 (England's Regional Development Agencies, 2012). It is perhaps worth noting that RDAs were a major funder of enterprise-lending CDFIs, so this average includes CDFIs' figures as well as

figures from other, less cost-effective programmes.

As well as the GHK report, a PhD thesis on UK CDFIs (Affleck, 2011) was published relatively recently. This includes an extensive literature survey which:

> aims to establish a wider context within which the development and role of CDFIs can be assessed (Affleck, 2011, p. 37).

Despite extensive research spanning many years, Affleck did not cover financial models for CDFIs in any detail.

7. The focus on failure in the literature

One issue with UK literature on CDFIs is what I would term a focus on failure. When a CDFI fails to perform as originally expected, this can result in reports such as those noted above on Aspire (Forster et al., 2006) or Street UK (New Economics Foundation, 2004). It is debatable whether these cases should really be portrayed as failures – Street UK, for example, has since expanded into home loans as well as personal finance (Street UK, 2012). It could be argued that its real problem was that early expectations to expand nationwide were unrealistic given the level of resources at its disposal. Nevertheless, by diversifying into providing back-office services for other CDFIs, Street UK has managed to keep providing loans at a smaller, more local scale.

My experience suggests that CDFIs sometimes struggle to get positive news published, but negative news such as the alleged fraud at Ethnic Mutual (discussed in Field, 2010) can receive wide coverage (e.g. Owen, 2008).

Most of the CDFIs that I or others have written performance framework reports on show generally positive progress. However, a report remains confidential unless a CDFI decides to publish it. Although a 'stakeholder report' on the progress of the performance assessment programme as a whole has been published (CDFA, 2011a), to date I have never come across a published

performance framework report for an individual CDFI.

C. Methodologies

I. Background to financial models

My description of the financial models is a narrative one, based largely on my professional experience. For example, my description of the financial model of a bank was based on the explanation of a director of a social bank where I once worked. In the same way, when I assess a CDFI, the chief executive will sometimes discuss its financial model with me; such discussions are strictly confidential. My narrative is mostly based on general statements about financial models rather than on individual cases.

Although narrative descriptions tend to be undervalued in technical communication, they play a vital underlying role, as pointed out by Barton and Barton (1988).

The lack of literature covering CDFI financial models means that few references to literature can be given. Whenever I have asked about an organisation's financial model, the response is always a narrative description of some sort; I have never been told to consult a book, report or paper for further information.

In the few pieces of literature that include financial modelling of CDFIs, the approach is again primarily a narrative one. The five case studies of Dayson et al. (2008) contain historical narratives of how each CDFI functions financially together with a range of future scenarios of the type that Barton and Barton (1988, p.41) described as “what-if” narratives. The other major CDFI studies including financial modelling, those of GHK (2004, 2010a), presented financial models as tables (GHK, 2004, pp.42-44; GHK, 2010a, pp. 115-116). Yet both of these included narrative case studies, stretching to over fifty pages in the more recent study (GHK, 2010a, pp. 181-233). This stands in great contrast to, for

example, Kumar's (1999) analysis of financial models of banks in India, which was based largely on mathematical analysis using statistical techniques.

The vital importance of narrative for CDFIs was stressed in recent changes to my professional work assessing CDFIs. Reports written by assessors have been replaced by a “self-assessment” which 'allows CDFIs to put the case for their lending purpose first' (CDFA, 2012d) in the form of a structured narrative, which I and other assessors comment on in a corporate assessment report.

The narrative is intended to set the background for my main research question. In order to investigate how resilient the financial models for CDFIs in the UK are, it is first necessary to describe these models. Even the most substantial contributions to recent literature do not contain a full description of the different financial models used by CDFIs, and my narrative is intended to help fill in this gap as well as providing background for understanding my questionnaires, interviews and stress tests.

II. Questionnaires

In order to address my main research question on the resilience of financial models for CDFIs, I decided to consult experts as a key part of my research. My consultation consisted of a mixture of questionnaires and telephone interviews.

The choice of whether to use questionnaires or interviews in small-scale research is 'not a hard and fast one', as Drever (2003, p.2) has pointed out. In addition, each choice has different options. A questionnaire can be filled in by e-mail, via a website or on paper. An interview can be held in person or by telephone. A combination of the two, where a questionnaire is answered over the telephone, is also possible.

1. Pre-consultation

In order to work out the most suitable method, what criteria I should use to choose people to consult, and how long and detailed the questionnaire or interview should be, I informally approached four people in the summer of 2011. This could be called a pilot study, but because it was quite different from the concept of a pilot study as described by Munn and Drever (2004, pp.33-35), I will call it the pre-consultation.

Two of the four people replied to say that they did not have the relevant expertise. This led me to sharpen up my selection of people for the main survey. One person in the pilot group said that whether or not I would receive a response to a survey would depend on how much time it took, as CDFI experts tend to be busy: a common problem with expert interviews according to Flick (2009, p.169). This led me to take the following steps:

Firstly, I decided to carry out the consultation in the form of a questionnaire, but offer an alternative of a telephone interview for those who preferred this. In this way, I intended to make the process accessible to those who were short of time or preferred giving verbal answers to written ones. In the telephone interview, I offered the options of asking the questions in the questionnaire over the phone, or different questions tailored for a particular expert, or a combination of both.

Secondly, I decided to ask less questions than I was originally planning to ask. I could have split the consultation up into multiple questionnaires, as Community Finance Solutions (2012) did when developing a European Code of Good Conduct for Microcredit Provision, but I did not consider this necessary for the relatively modest amount of information I intended to gather.

2. Designing the questionnaire

In designing the questionnaire, I wanted to ensure that responses came from people who understand CDFIs and the financial models they use.

I chose to make some of the questions quite complex, more so than any questions I have asked in questionnaires in previous assignments. The idea was that the answers to these questions would confirm the level of expertise of the respondents as well as providing useful data. At the same time, because of the pre-consultation response about experts being very busy, I tried to ensure that the questions did not take up too much time despite being difficult in parts.

I took care to exclude unproductive questions, as advised by Flick (2009, p.167) for questionnaires aimed at experts, rather than beginning with easy questions as recommended for general purpose questionnaires by Munn & Drever (2004, p.26).

The front page of the questionnaire contains organisational details plus questions on whether the respondents and organisations should be kept confidential or not, in line with the Ethical Protocol (see Appendix IV). As several experts are involved in more than one organisation, and each organisation may have different requirements when it comes to confidentiality, I allowed space for three possible organisations. To my knowledge it is very rare for anyone to be involved in more than three organisations related to the CDFI sector.

The next section contains background questions about the respondent's involvement in the sector. These questions were chosen to be simple and quick to answer, and so I avoided asking too many details in this section and kept the categories broad.

The main questions were grouped into two sections: one on funding and one on risk. Funding and risk are what I consider from my experience to be the two key issues affecting the resilience of CDFI financial models. Both issues can tend to be negative, particularly in the current financial climate, so to avoid the questionnaire as a whole appearing excessively negative, I ended with a positive question.

Most of the questions were multiple-choice, with some free text responses. After the background questions, I started each section (funding and risks) with a general free-text question, since I wanted to avoid nudging respondents in any particular direction, as recommended by Munn and Drever (2004, p.26).

The questions in the funding section started with a free-text one on the future funding situation for CDFIs, followed by a question on whether specific funding sources might increase, decrease or stay the same. For this, I listed the main existing or possible funding sources for CDFIs I identified at the time.

The last funding question asked experts to list four funding scenarios in order of preference. I designed all four funding scenarios to provide similar amounts of capital funding to make loans from, but with risk/reward variations. The first scenario was a basic 1-year revolving loan fund model. The second was similar but included a bonus for achieving targets and an equivalent penalty for missing them; this was to gauge willingness to take performance-related risks. I then presented two scenarios where the capital funding was for two years rather than one, but only covered half of the costs, to see how experts balanced longer-term funding against the need to risk a CDFI's reserves (case c) or take on a bank loan with limited guarantee cover (case d).

The questions in the risk section started with a general question on the most important risks facing CDFIs, followed by how CDFIs could be made resilient when dealing with these risks. Both were free-text questions.

The next question was intended to select scenarios for stress-testing. I suggested five possible risk scenarios and asked respondents to gauge their likelihood. My plan was to choose the most likely scenarios (according to the experts' opinion) for stress-testing to estimate the severity of their impacts on a model CDFI. I chose the scenarios from a range of concerns expressed to me over the years during my professional practice.

The positive question with which I ended the questionnaire was a free-text question about the keys to success of CDFIs. As a previous question had mentioned resilience in the defensive sense of dealing with risks, I countered this with a positive question on success; after all, a resilient CDFI is successful, avoiding failure even in tough economic times.

3. Consultation

Following the pre-consultation of 4 people in the summer of 2011, I began the full consultation in November 2011. I sent the questionnaire by e-mail to 34 people who I had selected based on my knowledge of the sector. When e-mailing multiple people, I used the e-mail function “BCC” (blind carbon copy) to avoid respondents finding out who else I had sent the questionnaire to.

I selected people who, from contacts during my work over the years, appeared to have expertise in the area of CDFI financial models. I did not include others whose level of expertise I did not know about, as I could not see an easy way to ascertain their level of expertise. I excluded people from CDFIs which I had already written a report on as part of my work, for two reasons. Firstly, I wanted to avoid conflicts of interest with my work, which is subject to strict confidentiality agreements. Secondly, each of my reports carries a list of recommendations and it is possible that people might be influenced by some of the recommendations I made in my past reports on their CDFIs.

This method could be termed convenience sampling, as my choice of respondents was based on experts that I could conveniently consult rather than a randomized sample. A possible alternative approach, described by Surowiecki (2004), would have been crowd-sourcing: asking large numbers of people of varying levels of expertise. While I am sympathetic to crowd-sourcing in general, I rejected it as unsuitable in this case for the following reasons. Not enough people work in CDFIs to make a crowd-sourced response work. A few

hundred people work in CDFIs in the UK, and given the technical nature of my questions, I would only have expected a small percentage to respond, resulting in too small a sample size. Also, a blanket consultation including matters which some people consider sensitive could have caused unwanted friction in the sector.

Even with my selection of respondents, the sensitivity of the survey was confirmed by a couple of the responses I received, asking who was paying for the research. My response to this was that when I sent out reminders, I emphasised that the research was independent (i.e. self-funded) and no respondent would be identified without his or her explicit permission.

For 3 of the 34 people selected, I received automated responses that the e-mail addresses were out of date and I was unable to find up-to-date addresses. For the 31 remaining people, two said they were too busy. These were in addition to the two who stated in the pre-consultation that they did not have the relevant expertise.

From the remaining 29 people, I received after several reminders a total of 12 responses, comprising 11 e-mail responses plus the questionnaire filled in over the telephone as noted above. The three further individual telephone interviews were in addition to this, so that 15 people in total responded to me, though the number of people involved was slightly higher than this because some people asked their colleagues to help draft their responses. As my aim was to consult on the issues facing organisations, not individuals, I was happy to accept joint responses.

While this is a good response rate overall, what was intriguing is how it varied amongst different stakeholder groups:

Respondents' involvement in the CDFI sector:		
I work for a CDFI as a:	Chief Executive	1
	Member of staff	6
	Board Member	0
I help fund CDFIs via:	Grants	0
	Loans for on-lending	2
	Equity (shares)	0
Other:	Researching the CDFI sector	3
	Miscellaneous	4
Information on respondents' organisations:		
Types of loans made by CDFI:	Personal	3
	Home Improvement	2
	Micro-Enterprise	6
	SME[1]	6
	Civil Society	11*
Additional CDFI services:	Financial literacy training	3
	Debt counselling	2
	Business advice	4
	Investment readiness work	4
	Mentoring or coaching	3
	Back office / fund management	1
Geographic extent of CDFI	Local	3
	Sub-regional	5
	Regional	4
	Multi-regional	1
	Country within the UK	1
	UK-wide	2
	International	2
Balance sheet:	Under £1 million	3
	£1 - 5 million	5
	Over £5 million	3
Number of outstanding loans:	Under 100	2
	Between 100 and 500	7
	Over 500	3

* One respondent was involved in 3 CDFIs that lend to civil society organisations.

Table 1: Respondents' roles and organisations

[1] Small and Medium-sized Enterprise.

While the response rate from CDFIs (7 out of 16, i.e. 44%) is similar to the overall response rate, 4 out of 5 banks approached responded, with separate responses from two people in the case of two banks. And while 4 out of 5 non-academic consultants responded, there were no responses from any of the 4 academics whom I approached. It is not clear if there are any reasons for this difference in response rates, though given the small sample size, there is a possibility it could be no more than chance variations.

Also, it is worth noting than some of the respondents' CDFIs make loans of more than one type, and some respondents are involved in multiple CDFIs. Both of these explain the high response rate from civil society lenders. Many CDFIs in the UK make loans primarily to business (micro-enterprises and/or SMEs) but occasionally also make loans to civil society organisations (CDFA, 2010, p.11).

Although the response rate was good overall, there were indications that some respondents were under time pressure, as expected from the pre-consultation. The responses to the first free-text question were longer on average than those of other questions, possibly because it was the first question so respondents answered it while “fresh” rather than after already having answered several other questions. Also, some of the free-text responses were very brief, consisting of short phrases in bullet-point format.

The quality of the responses was very high, with all of the free-text responses demonstrating technical knowledge of the issues facing the CDFI sector. This shows that all respondents were genuine experts. Nearly all questions were well understood, with a couple of minor exceptions. Comparing the guarantee scheme in my funding scenarios to Enterprise Finance Guarantee (EFG) confused a few people – in hindsight, it would have been better not to mention EFG. Also, in aiming to avoid nudging people in any direction I perhaps made some of my free-text questions too broad, although only one response to one question explicitly criticised the question for being too broad.

III. Interviews

Telephone interviews were offered as an alternative to questionnaires for those people who preferred them. Reasons given by respondents for choosing interviews rather than questionnaires were lack of time or wanting to answer different questions to those in the questionnaire. I considered it important not to exclude experts who were too busy to fill in a questionnaire or who had important comments to make but did not want to answer my specific questions.

One of the responses mainly involved filling in a questionnaire over the telephone, and that response was included in the analysis of questionnaire responses, except for one additional question specifically relating to financial models, which I mention below in the conclusions section. The remaining three interviews covered a variety of subjects, and tended to focus around the interviewees' own involvement in the CDFI sector (making bank loans for on-lending, board-level involvement in major players in the sector together with public sector policy-making, and wide-ranging long-term experience across the sector).

As such, the interviews were more of an adjunct to the questionnaires rather than semi-structured interviews with specially-designed schedules as described by Drever (2003).

As an overall tone in the responses, I did sense some frustration that funders did not always consult experts such as those who answered my questionnaire before launching new funding schemes. This was backed up by the free-text answers to the question in my questionnaire on the future funding situation for CDFIs. Indeed, for the last person I interviewed, who probably has more experience in the UK CDFI sector than anyone else, I explicitly asked him what he would suggest if approached by someone from the government or a charitable foundation to suggest the best method of funding CDFIs.

The main use of these interview responses was to help mould and confirm my tentative conclusions about financial models for CDFIs, as described below in the conclusions section. For the next step – identifying the scenarios for stress testing – I relied mainly on the questionnaire responses, as these were far more numerous, enabling me to spot patterns of common responses.

IV. Spreadsheet-based financial modelling

1. Types of CDFIs and types of modelling

In order to model the financial effect of stress conditions on a CDFI, I started by creating financial projections for "model" CDFIs using data from published sources. This produced two "base-case" scenarios showing the projected performance of an "average" CDFI of each of two types: a CDFI lending to businesses and a CDFI lending to civil society organisations (social enterprises and charities).

Although business lenders include both micro-enterprise lenders and small and medium-sized enterprise (SME) lenders, in practice most lend to both and none lends only to SMEs (CDFA, 2012c, p.16) so a combined model made more sense. Some social enterprise lenders are banks, which follow the financial models for banks described below, so I based my model on the figures for the non-bank social enterprise lenders.

Where GHK (2010a, p.115-116) modelled two sizes of CDFI which they termed "large" and "small", I averaged these, because the average produced comparable figures to the average figures from the CDFA annual survey (CDFA, 2012c). In this way, I intended to ensure that I used data that was compatible with GHK's but more recent where possible.

Although there is a third type of lender, the personal-lending CDFI, I was not able to model these because of wide differences between the two main types of loans they make (personal loans and home improvement loans) coupled with the lack of sufficient data for averaging. However, Dayson et al. (2008) had already carried out financial projections for these, as noted above, tackling the issues of loan types and shortage of data by using case studies instead of averaging.

When modelling “average” CDFIs, I used mean rather than median or mode as the measure of “average”. This was largely constrained by the published data sources I used, primarily CDFA (2012c). This source generally quoted mean figures or total figures, which could be divided by the number of CDFIs in the relevant category to give mean figures. Median and mode figures were not quoted, although in a few cases graphs were included that would enable approximate estimation of median figures. Most of the median figures obtained from these graphs were similar to mean figures, except for a few cases where extreme values affected the mean; these are mentioned in Findings. Mode figures, on the other hand, could be inappropriate; for example, the most popular interest rate charged might be the result of insistence from funders that CDFIs charge this rate.

In using mean figures to model “average” business-lending and civil-society-lending CDFIs, I followed the example of GHK (2010a, 2010b), except that where possible I used more recent data that had been released since GHK's report by the CDFA (2012c). Dayson et al. (2008), by contrast, projected the future performance of five predominantly personal-lending CDFIs from anonymised case studies under a variety of scenarios. With my combination of financial projections and stress-testing scenarios, I was using methods akin to Dayson et al. (2008), but applying them to data similar to GHK (2010a) in terms of the CDFI types modelled and the methods of averaging used.

The method I chose to use to model the CDFIs consisted of a standard set of financial projections: profit and loss projections, balance sheet projections and cashflow projections. These forecasts are similar to those typically requested by banks (e.g. Royal Bank of Scotland, 2012) and CDFIs (e.g. Entrust, 2012) from businesses applying for loans. They therefore have the advantage of being in a format that is familiar to staff at banks and CDFIs.

However, I made one key modification: because money is both the product (loans) as well as a medium of exchange, CDFIs tend to keep the loan fund separate from everyday income and expenditure. Indeed, in my experience it is often a condition of grant funding that the two are kept separate. As a result, I have separated the two as far as possible, especially in the cash flow projections, which are based on separate bank accounts for the loan fund and everyday expenses (the "revenue account"). Income earned on the loan fund is transferred regularly to the revenue account. This separation of accounts only affects figures in terms of interest earned on the accounts (if in credit) or interest charged on any overdraft.

For the period and frequency of the projections, I chose annual projections for five years. The annual frequency is based on the frequency of annual accounts, and the period of five years was based on the minimum period for Community Investment Tax Relief (CITR) investments, including bank loans for on-lending that utilise this form of tax relief. Banks that make CITR loans for on-lending must feel confident that a CDFI is likely to survive at least five years, so five years seemed appropriate for my projections. By comparison, Dayson et al. (2008) produced annual projections for seven years.

2. Stress-testing scenarios

I then carried out stress-testing by varying parameters in the financial projections to simulate various events. The events I chose to model arose from the opinions of the experts consulted in the questionnaires and interviews

section, as detailed below in Findings. However, the choice of events was also constrained by the ability to model their consequences quantitatively in a relatively unambiguous way.

The three scenarios I chose were: loss of revenue funding, increase in write-offs and a delay in capital funding. Loss of revenue funding was easy to model: instead of specifying the average revenue funding for the relevant CDFI type from the annual survey in the cashflow projection, I replaced this figure with zero.

For an increase in write-offs, the question is: to what level? For this, I based my choices on the maximum write-offs claimable under the government's Enterprise Finance Guarantee (EFG) programme. A higher percentage, 20%, is used for smaller lenders (less than £1 million lent under EFG), and a lower percentage, 13%, for larger lenders. Based on my experience of what constitutes a high level of write-offs for different types of CDFIs, I chose to use the 20% figure for business lenders and the 13% figure for civil-society lenders, which in general tend to have lower levels of write-off rates.

Another reason for this choice is that social enterprise lenders are larger on average than business lenders. Based on an average of 14% of CDFI loans being made under EFG (CDFA, 2012c) I confirmed that if the “model” CDFIs used EFG, the business-lending CDFI would make less than £1m in EFG loans so 20% would apply, but the civil-society-lending CDFI would make more than £1m in EFG loans, so 13% would apply.

Note that these figures are used for stress-testing purposes only; EFG itself is not modelled, and most social enterprise lenders do not use EFG, with the notable exception of the largest one, Triodos Bank. I chose the figures because they are the only examples I could find of maximum write-off rates specified in a recent official policy of a UK government department.

Finally, for modelling the delayed availability of capital, the period I chose was one year, as this was the shortest period I could model, and also happened to be the expected length of delay of Regional Growth Fund capital funding at the time I carried out the modelling. I did not delay the issue of shares, as this was not raised as a problem by the experts, but in practice shares provide only a minor source of capital for most CDFIs so the effect of this is negligible in my models based on "average" CDFIs.

3. Parameters used in spreadsheets

In the spreadsheet, I cited the sources of all the data I used. My approach was to use data from the most recent annual survey of CDFIs (CDFA, 2012c) wherever possible. Where this was not possible, I used data from the financial models previously published by GHK (2010a, pp.115-116).

Within these data sources, I had to select suitable data to use, as each used its own categorisation of CDFI data. When doing so, I asked myself the questions, "Have all the data items been selected in a consistent manner?" and "Does the resulting model resemble what I would expect to see from a CDFI of that type, based on my experience of assessing CDFIs?"

As noted above, I took an average of the "Small" and "Large" models from GHK (2010a), as this resulted in figures similar to the equivalent averages from 'Inside Community Finance' (CDFA, 2012c). It was vital to ensure that both sets of figures related to CDFIs of approximately equivalent size; otherwise the overheads would have been unrealistically high or low for a CDFI of that size. This is an example of how I used my professional experience of assessing CDFIs to check the models.

For business lending, there were additional complications, as I used a weighted average of the figures for micro-enterprises and SMEs, in proportion to the amount of outstanding loans for each of these business categories in 'Inside

Community Finance' (CDFA 2012c). For the number of full-time equivalent (FTE) loan staff and support staff, this resulted in quite a complex calculation: averaging the GHK (2010a) figures for "small" and "large" CDFIs of micro-enterprise lenders, then doing the same for SME lenders, then taking a weighted average of the resulting figures. This is an example of the measures I took to ensure data consistency.

The spreadsheet, including the Parameters tab, appears in Appendix III.

V. Methodologies for analysing results

1. Questionnaires and interviews

A statistical analysis of the results of the questionnaires and interviews would not have been appropriate, for two reasons. Firstly, the sample size is too small. Munn and Drever (2004, pp.15-16) state that a conventional statistical analysis is not appropriate for sample sizes under 30. Secondly, the survey was not intended as an opinion poll of experts, which in any case would require a larger sample size plus statistical analysis; its aim was to highlight issues affecting the resilience of CDFIs. As such, the intention was to gather expertise, focusing on issues raised by several experts rather than listing individually all the points made by each expert.

For questionnaires I totalled the responses of multiple-choice questions and identified themes based on 'categories derived from the data' (Munn and Drever, 2004, p.45) for free-text responses. Interviews were analysed individually, but were combined with questionnaire free-text responses using Drever's (2003, pp. 72-73) 'individual perspectives' method to identify financial models recommended by respondents.

The issue of experts having limited time availability, as highlighted in the pre-consultation, needs to be borne in mind during the analysis; for example, I did

not infer anything about the level of a respondent's expertise from the length of an answer, as a short answer could simply indicate lack of time.

2. Stress-testing results

I have presented the results of the stress-testing in the form of a graph plus a narrative description of how the figures indicate each scenario would affect each type of CDFI. Barton and Barton (1988, p.41) described this as a "what-if" narrative. Dayson et al. (2008) followed a broadly similar approach, except that they modelled scenarios designed to improve the performance of personal-lending CDFIs, whereas I modelled risk scenarios that would be expected to worsen the performance of other types of CDFI, as noted above.

D. Background to financial models used by CDFIs

In this section I give a narrative account of the background to the financial models used by CDFIs. Two key points arise from this narrative: firstly, that the hybrid financial models used by some CDFIs derive ultimately from traditional financial models used by financial institutions and non-profit initiatives, and secondly, that the tensions in CDFIs between achieving sustainability and social impact reflect two different rationales for funding CDFIs.

I. Models used by financial institutions pre-dating CDFIs

1. Banks

The three social banks active in the UK are sometimes classed as CDFIs. Two of them, Charity Bank and Triodos Bank, were included in the 2011 survey of CDFIs by the CDFA (2012c). While Affleck (2011) compares these two banks in terms of size and profitability, he does not describe their financial models in detail. Here, then, is a description of the basic banking model based partly on what was described to me in 1993 by one of the directors of the social bank I

worked at, which subsequently became the UK branch of a social bank operating in several countries.

The traditional banking model as used by retail banks or commercial banks, as opposed to investment banks, consists essentially of taking deposits and lending out the resulting funds. A bank charges a higher rate of interest to its borrowers than it pays to its depositors, so that the difference in interest between these two can cover overheads and bad debts. Any surplus left over after overheads and bad debts are covered forms the bank's profit (Fishwick, 2012, p.58).

The model is slightly more complex than this, in that banks have shareholders as well as depositors. As a result, while most of the money used to make loans comes from deposits, some of it comes from shares. In addition, some of it comes from reserves from previous years' retained profits. Loans, therefore, can be made from deposits, capital and reserves.

However, not all of this money can be lent out. Some money must be kept in liquid form, available to repay depositors – how much depends on the period of notice of the deposits and the ease of obtaining other funds to replace repaid deposits. This is called the liquidity requirement. Also, because there is a risk of loans not being repaid, a certain proportion of the loan fund must come from capital and reserves, since these do not have to be repaid. This is called the capital requirement.

These added complexities affect the income and expenditure model as follows. Income from loan interest and liquid funds must be enough to pay interest to depositors and cover overheads and bad debts, while generating a surplus. If the surplus is large enough, part of it is paid out in dividends to shareholders, while the rest is retained as profit once tax is paid on it.

For an individual bank, the traditional banking model is a marginal business, as overheads, bad debts, dividends and profits must all come from the relatively small difference between interest received and interest paid.

Banks therefore try to offer additional services to generate income. Current accounts can generate income in the form of fees for services. Many personal current accounts in the UK are fee-free, but make substantial charges for unauthorised overdrafts. Fees can be charged when loans are agreed (loan arrangement fees). Banks receive commissions for selling financial products such as insurance, pensions and investments, and charge for services such as overseas payments or currency exchange.

However, none of these fee-earning opportunities is as substantial as those available in investment banking. It is not surprising that some retail and commercial banks moved into investment banking. However, the high fees in some investment banking products come with high risks. The financial crisis from 2007 onwards showed what can happen if investment and retail banks are not kept separate: a failed investment bank can bring down a retail bank and seriously affect the wider economy (Lanchester, 2010; Mason, 2009).

Appendix V describes further issues around the banking model: the creation of money via fractional reserve banking, and the use of securitisation and collateralized debt obligations (CDOs). Fractional reserve banking applies to CDFIs that are banks, but their role in money creation is minor because they are small banks. No UK CDFI has used securitisation or CDOs despite recommendations such as those of Erickson (2006) in the USA. This is probably just as well, as the 'wall of money' created by CDOs and similar financial instruments led in 2008 to a global financial crisis (Hildyard, 2008).

2. Building societies

One UK community finance initiative that is a member of the Institute for Social Banking is a building society: the Ecology Building Society. Building societies are often considered similar to banks except that most of their loans are personal home mortgages. As far as financial models are concerned, their model is a simplified version of the banking model in that they do not normally have share capital. Even though funds put into a building society are sometimes referred to as shares or a share account, they behave like deposits and are treated as such, being repayable and receiving interest rather than dividends.

As a result, reserves are very important for building societies, as they have to achieve capital requirements from reserves alone. Therefore, it is important that building societies make profits in order to build up their reserves. At the same time, they have to work on tiny margins between interest received and interest paid. However, they do benefit from not having to pay dividends.

With their limited room for manoeuvre, it is not surprising that some building societies also sold off blocks of loans via securitisation, starting with Bristol & West in 1994 (Warren and Karpinski, 1995).

3. Credit unions

Although the UK, unlike the USA, does not designate any of its credit unions as Community Development Credit Unions, a few UK credit unions are linked to CDFIs to form what Conaty et al. (2004) have termed “community banking partnerships”.

The financial model used by credit unions is also derived from the banking model, except that savers invest in “withdrawable shares”, a special type of share that is similar to a deposit in that it does not fluctuate in value and can be withdrawn. Normally, holders of withdrawable shares share in the financial risks

of an organisation in a similar way to conventional shares, but for credit unions the risk is covered by the Financial Services Compensation Scheme. Credit union shareholders can receive dividends, which are generally subject to profitability, though from 8 January 2012 credit unions are allowed to pay interest on savings rather than dividends (Financial Services Compensation Scheme, 2012).

Credit unions traditionally charged a fixed rate of interest of 1% per month (12.7% APR) regardless of base rates. For loans funded by the DWP Growth Fund, this could be increased to 2% per month (26.8% APR). This interest must cover administration costs, write-offs and dividends/interest.

Small credit unions were traditionally run by volunteers, keeping administration costs low. Large credit unions could achieve the economies of scale needed to cover administration costs out of interest earned. Medium-sized credit unions, however, had a problem once they became too large to be run by volunteers, as once the first employees were taken on, the costs were too high to be covered by interest income alone. This is illustrated by the figures from Hope (2010, p. 20) for average operating expenditure for credit unions in different size ranges. These figures are highest for medium-sized credit unions, approaching the maximum permissible APR of 26.8% for credit union loans, and exceeding it once the corresponding bad debt provisions (Hope, 2010, p. 28) are added in as well.

The DWP Growth Fund provided subsidies that could help credit unions grow to get over this barrier and reach a sustainable size, and at the time of writing, the DWP is putting together further funding aimed at helping credit unions to achieve sustainability (Watt, 2011; Department for Work and Pensions, 2012).

4. Revolving loan funds

A revolving loan fund differs from banks, building societies and credit unions in that the capital for the loan fund is usually in the form of a grant (Council of Development Finance Agencies, 2012). It takes its name from the fact that money "revolves" as it is repeatedly lent out, repaid and lent again. However, because it is usually grant-funded, there is generally not as much obligation to maintain the capital value of the fund as there is with banks, building societies and credit unions.

Some revolving loan funds are called soft-loan funds, implying a "softer" obligation for borrowers to repay compared to conventional lenders. These were compared and contrasted to CDFIs by Collin et al (2001b) who found that, while soft loan funds were more numerous than CDFIs,

> soft-loan funds have a very high closure rate; the number of loans they make is often low; and their loss rates are high (Collin et al, 2001b, p. 4)

When loans are written off, this reduces the amount of money available for future lending, and eventually the fund may become depleted altogether and have to close as a result. Revolving loan funds where this happens have been criticised for being financially unsustainable, including by Collin et al. (2001a; 2001b).

On the other hand, the ability to tolerate a higher proportion of loan write-offs than banks, building societies or credit unions means that revolving loan fund loans can be provided in cases where traditional loans would be considered too risky. This can be attractive to funders, as it means that their funds are being used to achieve social outcomes that would not have happened without it. In other words, a revolving loan fund can achieve "additionality", which can be considered important in evaluating the effects of funding (Mceldowney, 1997).

Another way in which a revolving loan fund can be depleted is if income fails to cover the fund's costs. Some revolving loan funds include revenue grants or fund management fees that are designed to cover costs. Funds which do not receive revenue support may find that their capital is eroded by covering deficits (Council of Development Finance Agencies, 2012). This again can lead to criticism that a fund is financially unsustainable. Some funding models for CDFIs appear to address these concerns to some extent.

II. Models currently used by CDFIs

1. The dilemma of lending where banks say no

From the brief history of CDFIs above, it is clear that CDFIs tended to arise out of the tendency of banks and other mainstream lenders to reject certain types of clients. ICOF arose from banks rejecting loan applications from co-operatives. Enterprise-lending CDFIs arose from enterprises complaining about the difficulty of obtaining bank finance. Personal-lending CDFIs arose from banks turning down low-income clients, forcing them to rely on doorstep lenders charging exorbitant rates of interest or illegal loan sharks.

As a result, CDFIs in the UK typically only provide loans where banks will not provide suitable finance. If this were not the case, banks might consider CDFIs unfair competition because of the tax advantages available to some of them such as Community Investment Tax Relief for investors and/or charitable status.

In a perfectly-functioning market for loans, banks and other mainstream lenders would make loans to all businesses and individuals that they could profitably lend to. So, in a perfect market, a CDFI that obtains funds at commercial rates and lends only to those turned down by mainstream lenders and receives no subsidies or tax breaks would be expected to make a loss.

There might be an exception to this if the CDFI has a lower overhead cost per loan, but the large size of the major UK banks means that they benefit from economies of scale, so a CDFI's cost per loan is likely to be higher than that of major banks. While some CDFIs, like credit unions, cut costs by using volunteers, this tends to be in limited circumstances e.g. loan panels and the board of management. Also, CDFI staff are often paid less than bank staff as they are working in the not-for-profit sector. However, CDFI staff tend to work more intensively with clients than banks, so the lower staff costs and the use of volunteers is unlikely to be enough to reduce costs per loan below that of major banks in most cases (Bank of England, 2002, p.62).

So, how have CDFIs survived? Most are able to benefit from one or more of the following: cheap or free capital for on-lending, revenue support, (partial) coverage of defaults. Some may also benefit from cheap or free facilities (such as offices or equipment) and extensive use of volunteers.

Finally, there is the question of whether the market for loans functions perfectly. Allegations of discrimination on non-financial grounds have from time to time been made against mainstream lenders, such as “redlining”, where a “red line” is drawn around a disadvantaged area or group and no loans are made within it. Fighting “redlining” was a key aim of the CDFI movement in the USA, and led to the Community Reinvestment Act, which aims to stop “redlining” by forcing banks to disclose their lending by geographical area (Henderson and Lawson, 2002).

In the UK, problems of social enterprises raising finance have led to three social banks being set up to specialise in this area. Social banks can be profitable despite lacking the economies of scale of large mainstream banks (Affleck 2011, p.124), though this is partly because of funds from some ethical investors who are willing to accept a lower return on their money if it is invested ethically (Affleck 2011, p115). Also, while social banks are sometimes counted as CDFIs, they compete with other banks for loans and are not restricted to

accepting customers turned away by mainstream lenders.

In any case, the financial crisis has meant that from 2008 onwards the market for loans cannot really be described as perfectly-functioning, as problems in the inter-bank lending markets have at times restricted the money available to lend. The government recognised this, making an agreement with major banks called Project Merlin. Despite Project Merlin's intention of increasing finance for businesses, in the first three quarters of 2011, more money was repaid than lent out (Moore, 2012).

2. Combination of grants and investments

In the early days of the Phoenix Fund, many CDFIs were 100% grant-funded, but in my assessments of CDFIs from 2009 to 2012, the model I have seen most frequently is a combination of grants and investments.

Major funders such as the European Regional Development Fund (ERDF) often insist on only providing a proportion of the total cost of a project. The remainder, which must be met from other sources, is termed “match funding”. In some cases the match funding can come from a CDFI's own reserves, e.g. from previous capital funding programmes where the CDFI was allowed to retain capital from loan repayments following successful completion of the programme. However, an expanding CDFI is soon likely to find that all of its reserves have been used up for match funding, and must therefore seek match funding from other sources.

Where a CDFI receives a revenue grant towards its overheads, income earned on loans in the form of interest and loan arrangement fees can sometimes be used as match funding. However, in my recent work I have seen revenue grants becoming less and less common.

In any case, a CDFI's requirement for capital for on-lending is typically much higher than its overheads, and it is here that investments are often required. These can come from a bank, a wholesale CDFI or from individual investors. It often takes the form of “social investments”, in which I previously wrote that:

> money is invested primarily to achieve social aims and only secondarily, if at all, for financial returns (Field, 2004).

It is quite common in my experience for a capital grant to bear the risk of write-offs. This reduces investor risks, as the capital grant and lending reserves must be exhausted before bank loans or social investments are eroded by write-offs. This model could be called the “enhanced revolving loan fund” model, since the capital grant behaves like a revolving loan fund that has been enhanced by the addition of private investment.

3. Community Investment Tax Relief

Community Investment Tax Relief (CITR) is a government measure aimed specifically at promoting CDFIs by allowing tax relief to those who invest in them. This relief is available both to individuals and institutions, including banks. If an investment lasts at least five years, then the investor is allowed to subtract 5% of the amount invested from income tax (for individuals) or corporation tax (for institutions) paid in each of these years.

This tax relief is like receiving an additional return on an investment, the amount of which varies according to the tax rate paid. The 5% tax rebate is equivalent to a 5% return after tax, which for someone who pays tax at 50% (the UK's top rate from 2010-13) is the same as a 10% return before tax, in addition to any return paid on the investment itself.

On the other hand, CITR is of no use to a charitable foundation that is already exempt from income and corporation taxes. This is a pity, as Programme-Related Investment from charitable foundations is a potential source of funding for CDFIs.

CITR funds can only be used for loans to businesses (not personal loans), and then only if they are in disadvantaged areas[2] or run by disadvantaged people[3], and are not for residential property (Department for Business, Innovation and Skills, 2008). A CDFI can lose its CITR certification if it does not lend out at least 25% of the fund in Year 1, 50% in Year 2 and 75% in subsequent years (CDFA, 2003).

From its launch in 2004 until March 2011, about £70 million in loans were made to businesses thanks to CITR, which was considered disappointing compared to the original targets, and the tax relief was put forward for abolition by the Office of Tax Simplification (2011). Nevertheless, despite abolishing 43 other tax reliefs, the Chancellor of the Exchequer decided to retain it (Osborne, 2011).

4. Enterprise Finance Guarantee

The Enterprise Finance Guarantee (EFG) is the main government guarantee scheme for small business loans. It is the replacement for an earlier scheme, the Small Firms Loan Guarantee (SFLG) scheme, which since 1981 had been the keystone of the government's policy to tackle the 'market failure in the provision of debt finance' to small businesses (Cowling, 2010, p.5).

Both schemes have the same basic principle: where a business has a viable business plan but cannot offer sufficient security to obtain a loan, the government offers to guarantee a fixed proportion of the loan in return for an interest premium. Lenders had to be accredited under each scheme to be able

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2 Defined as 'being the 2104 most disadvantaged IMD wards and the 88 Local Authority Districts appearing in the top 50 of any of the six ID2000 measures' (Department for Business, Innovation and Skills, 2008, Annex A)

3 'located in an area not identified in Annex A but in which, by reference to Government recognised measures of disadvantage relating to: Income; Employment; Health; Deprivation and Disability; Education, Skills and Training; Geographical Access to Services; and Housing, there is a level of disadvantage comparable to that in the [areas identified in Annex A]' (Department for Business, Innovation and Skills, 2008, p.5)

to offer the government guarantee, and certain business sectors such as agriculture were excluded.

EFG was part of the government's response to the effects of the "credit crunch" on businesses. It extended the scope of SFLG by raising the maximum loan limit and the maximum size of eligible businesses, and by allowing overdrafts to be converted into loans (Cowling, 2010, p.9) However, at the same time it also introduced a cap on guarantee payments based on the default rate on EFG loans.

In an earlier assignment (Field, 2009) I described how, when SFLG was abruptly ended in January 2009 and replaced by EFG, the new scheme was initially only open to major banks, disadvantaging CDFIs that had previously relied on SFLG.

Since then, the conditions that favoured large banks have been relaxed. EFG was opened to CDFIs from May 2009, and from May 2010, banks were allowed to make EFG loans to CDFIs for on-lending (Capital for Enterprise, 2010). For this, CDFIs were exempted from having to pay the 2% interest premium than businesses pay on EFG loans (CDFA, 2011b).

Banks could even combine EFG with CITR when lending to CDFIs, though not if the CDFI also uses its own separate EFG facility to on-lend the funds (Capital for Enterprise, 2010). While welcoming this, some CDFI chief executives privately criticised the rules for this as being too complex, together with the other even more complex rules for combining EFG with other public funding also described by Capital for Enterprise (2010).

From April 2011, small lenders such as CDFIs were allowed a higher cap on default rates for the first £1 million lent under EFG (CDFA, 2011b). Again, this was introduced largely to benefit CDFIs.

5. Less usual models

Charitable foundations sometimes make loans to disadvantaged people to start up in business, often in combination with grants, mentoring or training. The best known of these are probably those set up by Prince Charles (The Prince's Trust, The Prince's Scottish Youth Business Trust, PRIME and PRIME Cymru). Not all of these still make loans, for example PRIME suspended its loan scheme on 12 July 2011 (PRIME, 2012).

Another charity that specialises in loans is Fredericks Foundation, which was originally funded by donations from its founder (Fredericks Foundation, 2012a) To supplement this, Fredericks has recently been awarded a grant from the government's Regional Growth Fund (Fredericks Foundation, 2011). It is also raising money in the form of social investments, on which it offers CITR (Fredericks Foundation, 2012b).

The Isle of Wight Lottery is a CDFI with a unique financial model: it runs a lottery for which the "good causes" money is lent interest-free to local businesses. For this, it was awarded the CDFA's Innovation in Reaching New Markets award on 31st January 2012 (CDFA, 2012a).

A particularly unusual example is the CDFI and loan fund linked to the Radical Routes network of co-operatives. It has a unique way of making loans which I termed peer-group loan appraisal (Field, 2008) and at the time of writing has never had a bad debt since it made its first loan in 1991. Unlike most non-bank CDFIs, its loan fund is derived entirely from social investments from supporters, though it has occasionally had small grants and donations towards its revenue costs. The CDFI does not make loans directly, but invests in Radical Routes which in turn makes the loans.

Finally, there are also a few wholesale CDFIs which provide funds to other CDFIs ("retail CDFIs") for on-lending, such as London Business Loans

(Wholesale) Ltd. When banks were reluctant to lend to CDFIs this was a vital function, but with the recent expansion in banks offering funds to CDFIs for on-lending, it may become less significant, with the notable exception of a major new player in the market: Big Society Capital.

III. Future models

1. Big Society Capital

Big Society Capital is a relatively new organisation launched on 4th April 2012 (Number10.gov.uk, 2012). It was formerly referred to as Big Society Bank, and under the previous Labour government as the Social Investment Bank (Field, 2009, p. 24).

What makes it a new model is the main source of its funding: about £400 million from dormant bank accounts. This £400 million is supplemented by £200 million from the UK's four largest high street banks to provide an initial capital of £600 million. It will develop the market for social investment by acting primarily as a 'wholesaler' (Cabinet Office, 2012).

As an example of its wholesale finance activities, it is providing funds to CDFIs for on-lending, as was announced by its chief operating officer in September 2011 (Mason, 2011). It might therefore be considered a wholesale CDFI, and if so, it is potentially the largest wholesale CDFI in the UK.

2. Peer-to-peer lending

A recent phenomenon that has taken off since the credit crunch is peer-to-peer lending, where investors lend directly to borrowers. Typically, this is done via web-based software that splits up each loan amongst a number of investors, and distributes each investor's funds amongst lots of loans. The four largest UK peer-to-peer lenders as of June 2012 were Zopa, Funding Circle, RateSetter and ThinCats (Bank of England, 2012a, p.16). Their financial model is simple:

cover the overheads with fees charged to borrowers and lenders, and any surplus is profit (Fishwick, 2012, p. 104).

Peer-to-peer lenders in the UK tend to be for-profit companies backed by venture capital, unlike CDFIs which are generally run as not-for-profit social enterprises. Also, loans are only available to borrowers with good to excellent credit ratings, though during the “credit crunch”, even these borrowers can sometimes struggle to get affordable bank finance, just as CDFIs' borrowers do.

Nevertheless, a CDFI version of peer-to-peer lending is a possibility, perhaps in social enterprise lending, where I was involved in a historical precedent.

When I worked at a small social bank in 1992-3, it offered a “Target Account”, where depositors chose the rate of interest they wanted to receive and the sectors or organisations they wanted their money to be lent to. When a loan was made, proprietary lending software was used to allocate money from deposits that were “targeted” to the appropriate sector, starting with those with the lowest rates of interest. The interest paid by the borrower was calculated by adding up the interest on each of its allocated deposits together with a premium to cover the bank's costs and bad debt provisions.

Depositors' statements listed which loans their money was allocated to, which was a unique selling point for the account. If a loan went bad, a depositor would not lose out as they usually would with a peer-to-peer lending website, since loans were covered by the Financial Services Compensation Scheme.

Although this “Target Account” was discontinued after the social bank was taken over, social banks might consider launching a modern, online version of the account similar to peer-to-peer lending.

3. Payment by Results and social impact bonds

Payment by Results (PbR) means more or less what it says: a government body pays for a service according to the results delivered by that service rather than paying, say, a fixed price or an hourly rate.

CDFIs have already been paid by results to some extent. Earlier government capital funding programmes such as the Phoenix Fund allowed the CDFI to keep the portion of the capital grant that was lent out and then repaid, often termed “recycled capital”. Once the programme was successfully completed, the “recycled capital” typically became part of the CDFI's general reserves. Indeed, many CDFIs have built up a substantial proportion of their reserves from “recycled capital”.

However, this form of PbR is relatively crude, since a CDFI gets the same financial return for a successful loan to a business that creates large numbers of jobs as it does for an identical loan that only creates one or two jobs.

A more complex form of PbR that is starting to be used for some other government contracts is the social impact bond (Social Finance, 2011). In a social impact bond, social investors are involved as well. The social investors provide the money to pay for the project. If the project is successful, the government pays their money back together with a premium. Typically, these government payments will come out of the funds that the government has saved because of the project's success. If the project fails, however, the social investors may lose their money.

Social investors already invest in CDFIs, and the British government set up CITR as an incentive to encourage this. However, just as for CDFI capital grants, the investors' tax break depends only on a very crude measure of success – in this case, the proportion of the CITR funds lent out each year. Social outcomes such as the number of jobs created are irrelevant for CITR.

I mentioned the possibility of a social impact bond for CDFIs during a seminar on Big Society Capital at the CDFA conference in Liverpool in 2011 (Mason, 2011) and received a positive response both in that seminar and later in a plenary session. The idea was also mentioned in "Just Finance" (CDFA, 2012b). At the time of writing, however, I do not know of any CDFIs funded by social impact bonds.

E. Findings

I. Questionnaires

The responses in 12 completed questionnaires, including one completed as part of a telephone interview, are described below.

As noted above, the questions were of two types: multiple-choice and free text responses. As a first step, I totalled the results of the multiple-choice questions and identified themes in free-text responses – see Appendix II.

The free-text question to start the first section related to the future funding situation for CDFIs. Based on the tone of the responses, I would classify one as positive and three as negative, but eight responses – two-thirds of the total – were mixed, mentioning both opportunities and threats. The main themes that stood out were:

- Lack of revenue funding/need for sustainability/reducing direct subsidy of overheads (which in practice amount to more or less the same thing)
- Capital funding, by contrast, is available (but not "free"), though there was some criticism of whether it meets CDFIs' needs as currently structured
- More private funding from banks and social investment is likely, driven partly by Community Investment Tax Relief (CITR)

Some of the responses described the currently available funding sources and their limitations, with much of the detail beyond the scope of my main research question. I will return to this issue below when discussing interview responses, although it is worth noting that the quality of responses and the level of detail serve as confirmation of the high level of expertise of respondents.

For the multiple-choice question on expectations of future funding, the results were as follows:

Funding type:				
	Decrease	Stay the same	Increase	Don't know
Local government capital grants:	4	3	4	0
Local government revenue grants:	7	1	3	0
Regional/sub-regional capital grants:	8	0	2	1
Regional/sub-regional revenue grants:	10	1	0	0
National/UK-wide capital grants:	4	3	2	1
National/UK-wide revenue grants:	8	2	0	2
European capital grants:	4.5	2.5	2	2
European revenue grants:	8	0	1	2
Private donations:	1	4	2	4
Grants from charitable foundations:	2	3	3	3
Bank loans for on-lending:	2	1	8	0
Social investments:	0	1	7	3
Funding from Big Society Capital:	0	0	10	1
Social impact bonds:	0	0	7	4

Table 2: Respondents' future funding expectations for CDFIs

The broad message again was "grants to decrease, other types of funding to increase". However, this concealed quite a lot of variation. For local capital grants, 4 people expected a decrease while another 4 expected an increase, with 3 choosing "stay the same". And even though newspapers are filled with

stories on government cutbacks, two respondents expected national capital grants to increase.

Notably, few people thought any type of funding would stay the same. Apart from private donations, where it tied for first place with “don't know” at four votes each, it was not a popular choice. For four questions, both “increase” and “decrease” had more votes than “stay the same”, suggesting more confidence that funding will change than on the direction of that change.

The results for the funding scenarios were particularly interesting. As noted above, I offered four scenarios: a 1-year revolving loan fund model (a), followed by a performance-related version with a bonus for achieving targets and a penalty for missing them (b). Then came two 2-year models with 50% capital grant, one matched by a CDFI's reserves (c) and the other matched by a bank loan and covered by a guarantee scheme similar to EFG (d).

Two of the respondents chose more or less the order of least risk: acbd. Two more chose badc – if confident of exceeding targets, this appears to be the best order of preference. Two more put the “basic” option a as the last choice: dcba and bdca. Then there were four free-text answers: one simply said “D best option”, one wanted c with additional bank loans if required, one said the question was “simply unanswerable” but only d was operationally sustainable, and the final answer expressed a preference for d but proposed a new funding model involving guarantee funds.

So, while the most common first choice was d, which resembles a funding option currently available, the currently unavailable Payment by Results option (b) was also surprisingly popular. The relative unpopularity of the basic “revolving loan fund” option was also interesting – it suggests several respondents want to “move on” from this old option.

The section on risks began with a pair of free-text questions concerning the most important risks and how CDFIs can be resilient when dealing with these risks. The main risk categories identified were:

- High or rising rates of problem loans (delinquency / bad debts / write-offs)
- Lack of revenue funding / difficulty of achieving sustainability (i.e. the same issue as the first response to the previous free-text question)
- The difficult economic climate
- Lack of business support to make customers investment-ready
- Attrition of existing capital and affordability/availability of new capital

When it came to the strategies for dealing with these risks, however, the responses varied a lot, with only a few issues being mentioned more than once:

- Diversification
- Mergers
- More business support for customers
- More support from banks and "new" funders such as social investors
- Better governance and management of loans/defaults/other risks

However, each of these issues was only mentioned by two or three of the 11 experts who responded to this question[4], so it would be an exaggeration to describe them as "themes" comparable to the themes that cropped up repeatedly in the other questions such as lack of revenue support for CDFIs.

What this suggests is that at present there is far more agreement on the problems facing the CDFI sector than on how to tackle them.

[4] This was the only question where one expert gave a blank response – all other questions were answered by all 12 experts.

The last multiple-choice question proposed a variety of risk scenarios and asked about their likelihood.

Risk scenarios and their likelihoods, according to questionnaire respondents				
CDFIs are forced to close as revenue funding is cut before reaching operational self-sufficiency				
Very Unlikely 0	Unlikely 0	Likely 2	Very Likely 8	Don't Know 2
CDFIs try to expand too quickly, make loans in a rush and fail to meet write-off targets				
Very Unlikely 0	Unlikely 5	Likely 5	Very Likely 1	Don't Know 1
CDFIs fail to meet loan targets after key staff leave				
Very Unlikely 1	Unlikely 4	Likely 2	Very Likely 2	Don't Know 3
CDFIs run out of money to lend after funding negotiations drag on longer than expected				
Very Unlikely 0	Unlikely 1	Likely 6	Very Likely 4	Don't Know 1
Base rate increase causes CDFIs' write-offs to increase above targets				
Very Unlikely 1	Unlikely 6	Likely 3	Very Likely 0	Don't Know 2

Table 3: Respondents' assessment of risks facing CDFIs

Risk scenarios a and d stood out as being "likely" or "very likely", and as a result, I chose these for the financial modelling scenarios. Risk scenario e was generally considered unlikely, and opinions were split on risk scenarios b and c.

The final question, about the keys to success for CDFIs, provoked responses of widely varying length amongst different experts, ranging from single sentences or short lists of points to, in one case, a long paragraph comparing US and UK CDFIs. The key point for me is that all of the experts identified keys to success, if you exclude the one who said that CDFIs are generally very close to their target, which I interpreted as implying that success had already more or less been achieved.

In other words, none of the experts saw the situation as hopeless. This contrasts notably with the concluding comments of the recent annual survey covering almost all UK CDFIs, which stated:

> The ability of CDFIs to deliver their primary mission of serving hard-to-reach markets hangs in the balance (CDFA, 2012c, p. 60)

In contrast to the responses to dealing with risks, I was able to identify some common themes in the keys to success – or at least thematic areas.

- Professionalism/good quality staff
- Good management/control of risks/loans/defaults/overheads
- Consistent funding and public policy support for the sector, requiring sustained advocacy for the sector to achieve it

Some of the responses to this question mirrored recommendations in "Just Finance" (CDFA, 2012b, pp. 19-20), which is as expected, since it was partly based on a consultation of a similar group of experts at around the same time as my survey.

II. Interviews

As noted above, one of the interview responses mainly involved filling in a questionnaire over the telephone, and that response is included in the analysis of questionnaire results, except for one additional question specifically relating to financial models, which I mention below in the conclusions section. The remaining three interviews were less structured, tending to focus on topics of interest to the interviewees. One interviewee specifically concentrated on the issue of social bonds/payment by results, another on key factors when banks make loans to CDFIs for on-lending, and another on the specific issues facing personal lenders at the time of the interview.

As an overall tone in the responses, I did sense some frustration that funders did not always consult experts such as those who answered my questionnaire

before launching new funding schemes. This was backed up by the free-text answers to the question in my questionnaire on the future funding situation for CDFIs. Indeed, for the last person I interviewed, who probably has more experience in the UK CDFI sector than anyone else, I asked him what he would suggest if approached by someone from the government or a charitable foundation to suggest the best method of funding CDFIs. Echoing one questionnaire respondent, when asked to recommend funding policies, he compared consistent funding for CDFIs in the USA with inconsistent funding in the UK. In responding to another question, he gave a warning of a shake-out in the sector, with only some CDFIs surviving, which was reminiscent of the 'hangs in the balance' quote from the CDFA (2012c, p. 60) cited in the previous section.

The main use of these interview responses was to help mould and confirm my tentative conclusions about financial models for CDFIs, as described below in the conclusions section. For the next step – identifying the scenarios for stress testing – I relied mainly on the questionnaire responses, as these were more numerous, although interview responses helped to confirm my choice.

III. Applying the results to stress testing

Based on the most popular responses on the likelihood of various risk scenarios, I chose three scenarios to pursue further by means of financial modelling, as described in Methods above. Two of these came from the responses to Question 11 in the questionnaire, where I selected those scenarios where the vast majority of responses were "very likely" or "likely": curtailment of revenue funding and delayed availability of capital. The third scenario, excessive write-offs (also described as defaults or bad debts), was chosen based largely on the free text responses.

IV. Results of stress tests

The results of the stress tests are summarised in the following graph, which illustrates the effect of each scenario on the level of reserves of the CDFI:

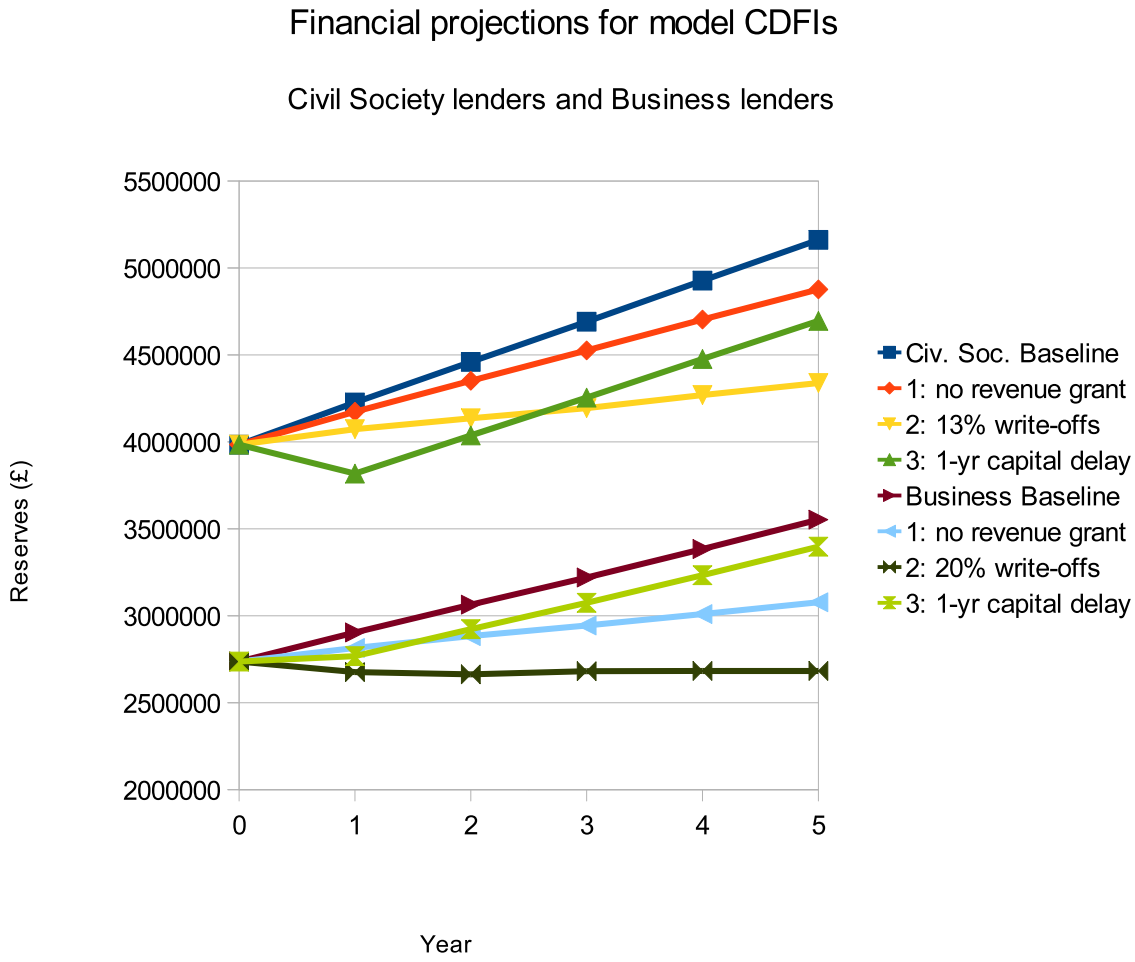


Figure 1: Financial projections for model CDFIs

1. Effects of curtailment of revenue funding

A major concern expressed by several experts, in the answers to the multiple-choice questions and free-text answers, was that CDFIs would not receive revenue funding, so this formed the subject of my first stress test.

For the business lending model, curtailment of revenue funding results in reserves over the period £474,635 below those of the baseline – somewhat more than the £444,326 in lost revenue. It also substantially reduces the operating profit and total profit, in some cases to a fraction of the original figure. This scenario does not affect the loans made or the funds available to lend.

For the social enterprise lending model, the reserves are £284,693 lower than the baseline after a loss of revenue of £266,513. The operating profit and total profit are also reduced. However, there is an additional effect, as the lack of revenue funding causes the revenue account to become negative, which could cause problems unless a CDFI had revenue reserves to cover the missing funds. The shortfall after five years is projected at £125,942.

2. Effects of excessive write-offs

In the free-text answers, the most common concern was excessive write-offs or excessive bad debts, which amount to the same thing, since when a loan becomes a bad debt, a CDFI writes it off in its accounts. As explained above, I chose to model a 20% write-off rate for business-lending CDFIs, and a 13% write-off rate for civil-society-lending CDFIs.

For the business lending model, the increase in write-offs to 20% reduces the reserves so much that they actually decrease, i.e. there is a net loss over the period. Most of the loss appears in year 1, with a small loss in year 2, a small profit in year 3 and close to break-even in years 4 and 5. The figures for loans and reserves are both £866,981 less than in the baseline case. Although the baseline scenario includes an initial decrease in loans, in line with recent reductions in loans disbursed by CDFIs, the write-offs cause a much more dramatic effect – the value of the loan book plunges to less than half its initial value.

For the social enterprise model, the increase of write-offs to 13% makes the figures for loans and reserves over the period £822,931 less than the baseline because of a substantial reduction not only in total profit after write-offs, but in operating profit before write-offs as well because of receiving less interest on loans. In this case, however, there is only a modest dip in total loan value, which picks up at the end of the period.

3. Effects of delayed availability of capital

For the business lending model, this scenario only causes a relatively modest reduction in reserves compared to the baseline: £155,059 over the five-year period. This is less, indeed, than the lost capital grants and loans for on-lending, because these loans need to be repaid to the banks (the model assumes one-fifth of bank loans outstanding are repaid by the CDFI each year). The first year's profit is reduced substantially, though subsequent years' profits are only slightly affected.

For the social enterprise model, one year's delay in capital funding reduces the reserves over the period by £465,721 compared to the baseline scenario. It also causes a significant loss in the first year, since capital funding is treated as income in the model, but the profit in the second year makes up for this. It also reduces the final total in the revenue account by about a third because of less interest earned on liquid funds. The reduction in reserves is less than half the lost capital (grant plus bank loans for on-lending). This is because the average social enterprise lender has more bank loans than capital grants, and the bank loans are gradually repaid over time. However, the annual survey points out that this average is distorted by one CDFI, which raised 80% of all the bank loans for on-lending in the year (CDFA, 2012c, p.41).

V. Comparing stress-testing results to consultation responses

To examine the resilience of financial models for UK CDFIs, it is worth highlighting financial models mentioned in questionnaires and interviews, and comparing these to the results from stress testing.

Three different respondents (2 questionnaires plus 1 interviewee) described in detail a model where overheads and bad debts are covered by earned income and the only subsidy to the loan fund is capital at below-market rates. This is equivalent to what GHK (2010a, p.115) term ‘financial sustainability’. However, the stress-testing results from scenario 2 cast serious doubt upon this model's resilience against high bad debts.

Also, those proposing “financial sustainability” models implicitly or explicitly assumed that CDFI customers would be “investment ready” (all information in place for the CDFI to decide on the loan) and subsidy would be available for advisers to get customers “investment ready”.

Four more respondents (3 questionnaires plus 1 interviewee) hinted at a model where bad debts were covered by funding or appropriate guarantee schemes, but no revenue support; what GHK (2010a, p.115) terms ‘operational sustainability’. Here the stress-testing results from scenario 1 suggest this might be a resilient model, though more so for civil-society lenders than business lenders.

There were also questionnaire responses stating that CDFIs need revenue support. While one suggested this would always be so, three others stated or implied that many CDFIs need revenue to grow until large enough to achieve operational sustainability. The stress-testing results from scenario 3 suggest that a lender with revenue support could be resilient against capital funding delays, though this is more the case for business lenders than civil-society lenders.

F. Discussion and Conclusions

I. Overall conclusions and their limitations

Combining the results of questionnaires, interviews and stress testing, the broad conclusion is that at the time of writing, the most resilient approach for business and civil-society lending CDFIs appears to be operational sustainability for CDFIs of a sufficient scale to achieve this.

Summarising the stress test results for the three scenarios and the two types of CDFI modelled, the overall results were:

Loss of revenue funding: moderate for business, mild for civil-society lenders
Increase in write-offs: severe for both business and civil-society lenders
Delayed availability of capital: mild for business, moderate for civil society

However, there are limitations for all of these. None of the scenarios reached the point where funds to lend ran out. However, in a real CDFI, it is quite possible for this to happen. Indeed, the “average” CDFI is a mixture of some with very little funds available and others with substantial funds, as can be seen most dramatically for business loans on page 29 of CDFA (2012c). For civil society/social enterprise loans, the effect is less dramatic but still noticeable (ibid., p42).

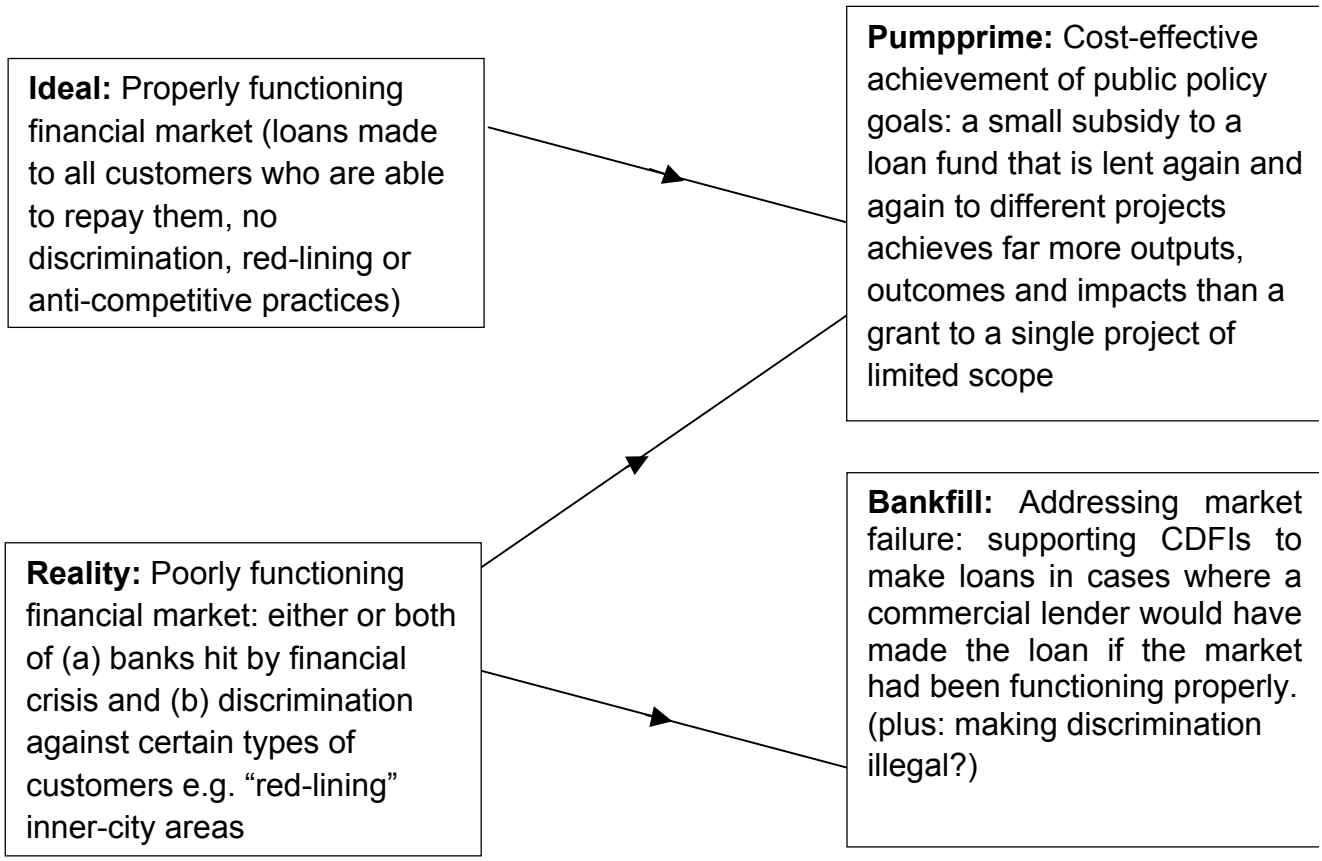
Averaging using median instead of mean might have corrected for this, but could not have corrected another problem: CDFIs with funds available for some geographic areas and business categories but no funds for other areas or categories. This is an example of a broader limitation: local issues affecting the conclusions. For example, a strong political commitment to provide revenue funding to a local CDFI could make that CDFI more resilient than CDFIs elsewhere.

II. Rationales behind financial models for CDFIs

Over time, the financial models used by CDFIs have become more complex. They began with two relatively simple models: the revolving loan fund model and the traditional bank model. However, recent funding arrangements, especially for enterprise-lending CDFIs, can involve a hybrid of capital funding matched by bank loans for on-lending, with tax relief (CITR) and guarantee funding (EFG) thrown into the mix. The question then arises: how can you tell if a CDFI's financial model is resilient if its funding includes all these elements?

My conclusion from analysis and stress-testing of the available financial models plus information from consulting leading experts in UK CDFIs is as follows:

Figure 2: Rationale for public funding of CDFIs



There are two basic rationales for CDFIs. The first, which I call “Pumpprime”, is achieving outputs, outcomes and impacts desired by funders more cost-effectively than one-off grants. This is possible because money lent to customers can be repaid and re-lent several times.

The second, which I call “Bankfill”, is addressing market failure: making loans that would have been made by conventional lenders if the market had functioned properly. Market failure can be for economic reasons such as a banking crisis, or because of discrimination against certain groups of customers such as red-lining.

Consider two market conditions: an “Ideal” financial market, in which loans are made to all viable customers, and the “Reality” of market failure. While “Bankfill” only applies when there is market failure, “Pumpprime” applies in both cases – even if market failure is resolved, there is still a case for funding CDFIs to achieve desirable outputs, outcomes and impacts.

“Pumpprime” at first sight resembles the revolving-fund model. However, it includes an element of the Payment by Results model in the form of achieving specific outputs, outcomes and impacts.

“Bankfill”, on the other hand, resembles a “fair version” of the traditional banking model. Indeed, the UK's three social banks follow this model to a large extent, though unlike most UK CDFIs they are not restricted to accepting rejected applications from other banks. Market failure in loans to civil society organisations in the UK created a gap in the market that these three banks fill.

So, how does the CDFI funding example above fit into this model? The grant funding is aimed at achieving outputs, outcomes and impacts cost-effectively, so this is based primarily on “Pumpprime”. The matching bank loan, on the other hand, resembles more closely the traditional banking model, i.e. “Bankfill”. As for the tax relief (CITR) and guarantee (EFG), these contain elements of

both. While EFG is mainly used by banks to help address market failure ("Bankfill"), its cost-effectiveness can be measured in terms of outputs, outcomes and impacts. Indeed, this has already been done for the Small Firms Loans Guarantee scheme (SFLG), the predecessor to EFG (Cowling, 2010). The same could be said for CITR, except that it is a specific tax relief only available to investors in enterprise-lending CDFIs.

This leads to a hybrid model for CDFI funding, combining elements of both "Pumpprime" and "Bankfill", with social impacts for funders who consider them important and financial returns for stakeholders requiring them. While there is some hesitation in combining them, such as from the interviewee from a social bank who questioned whether they need to be combined at all, this hybrid model is what I come across most in my daily practice as an assessor of CDFIs. Indeed, the interviewee with a high-level policy background who currently sits on the boards of several key players in the sector confirmed the need for a hybrid model.

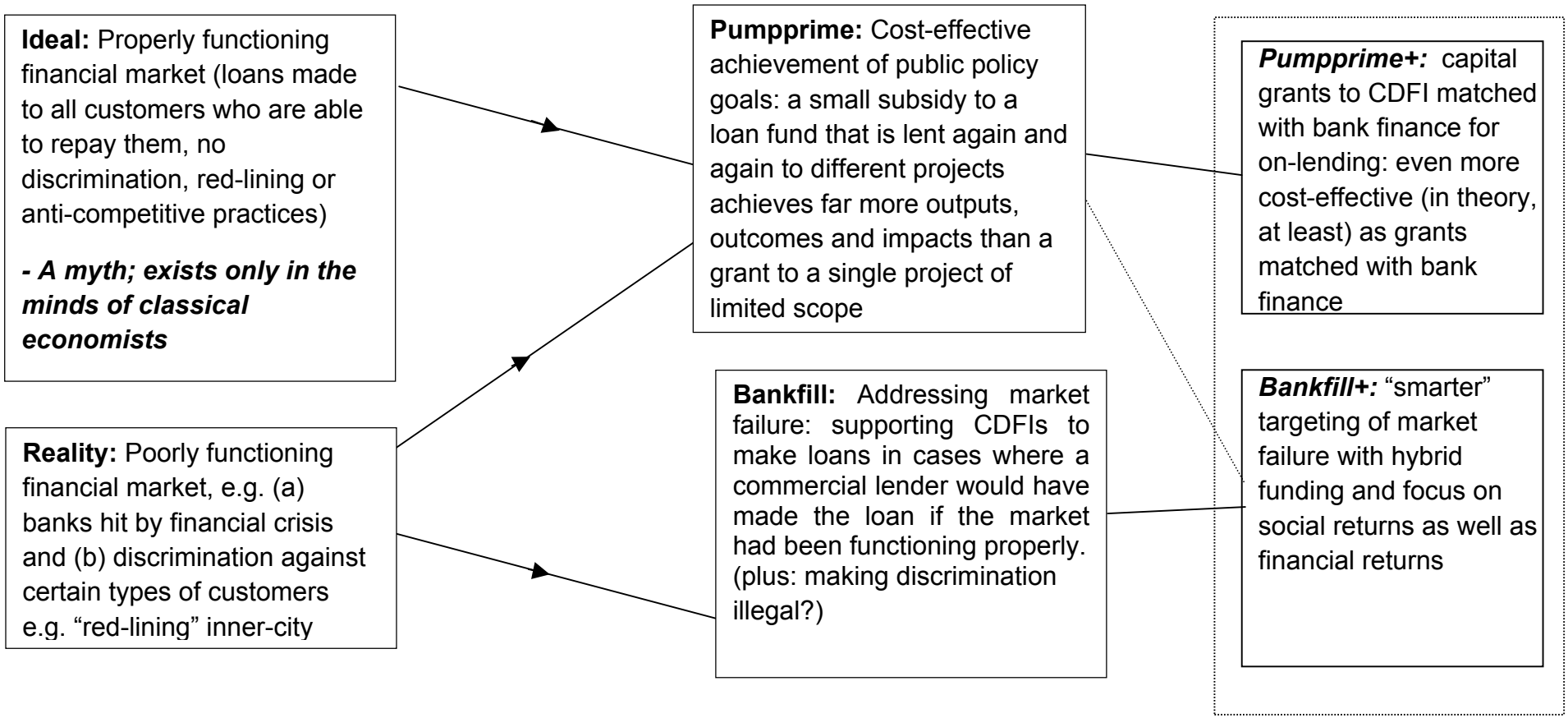
This hybrid model can be seen in two different ways. Firstly, it could be seen as a further enhancement of the cost-effectiveness of "Pumpprime", achieving even more outputs, outcomes and impacts by matching a grant with bank finance. This could be termed "Pumpprime+". Yet it can also be seen as a "smarter" way of tackling market failure, by using hybrid funding and measuring the outputs, outcomes and impacts: "Bankfill+"

With "Pumpprime+", outputs and outcomes can be achieved very cost-effectively indeed: some of the figures obtained by GHK (2010a, p.135) show that in some cases jobs can be created or preserved by funding CDFIs for the cost of a few months' unemployment benefits. In these cases, financial justice suggests that CDFIs should be funded to create and preserve jobs rather than paying for people to languish on benefits.

Meanwhile, “Bankfill+” suggests that people and businesses should have access to the finance they can responsibly make use of. The CDFA calls this “Just Finance” and argues that CDFIs have a vital role, though they would need to expand massively to meet demand. Meeting half of the unmet demand for loans would require a 4-fold expansion of social enterprise lending, a 71-fold expansion of household lending and a 123-fold expansion of SME lending (CDFA, 2012b, p. 15).

What is intriguing is that for the current hybrid funding model for enterprise-lending CDFIs, “Pumpprime+” and “Bankfill+” are two ways of looking at the same thing. From the perspective of a bank providing a loan to a CDFI for on-lending, the bank is indirectly lending to customers that it could not lend to directly, thanks to government support (“Bankfill+”). From the government’s perspective, a grant to the same CDFI provides excellent value for money in terms of jobs and businesses created and preserved and similar outcomes, thanks partly to the bank loan. CDFIs, then, can help deliver Financial Justice as well as “Just Finance”.

Figure 3: Revised rationale for public funding of CDFIs



III. The sustainability paradox

"Sustainability" has been a watchword for the CDFI sector in the UK for many years, and remains so. However, as noted above, some experts use it to mean "operational sustainability", where a CDFI's overheads are covered by earned income, while others mean "financial sustainability", where earned income covers not only overheads but also write-offs, with any subsidy limited to capital.

Pushing for "financial sustainability" creates a paradox. If the type of customers supported by CDFIs can be lent to in a financially sustainable way, then in a properly functioning market, large banks using economies of scale and able to access funds close to the base rate of 0.5% (Bank of England, 2012b) would out-compete CDFIs and force them out of business. In other words, there is a sustainability paradox: market conditions that enable CDFI financial sustainability would lead to CDFIs ceasing to be sustainable as banks would drive them out of business.

While banks remain financially strapped because of market problems and/or continue to discriminate against certain types of customers, bank competition does not pose an existential threat to CDFIs. Yet politicians may argue that CDFIs are unnecessary once bank discrimination is banned and market problems resolved. Political factors therefore cast doubts on the resilience of the "financial sustainability" approach, just as stress testing did.

A more resilient model, both financially and politically, would be "operational sustainability", where write-offs are covered in an appropriate way, e.g. by a loan guarantee scheme tailored to CDFIs' needs (CDFA, 2012c, p.25).

IV. Possible new models

The CDFA has suggested that action is needed to:

> develop an array of specialist funding streams, including: Community share issues and community land trusts; Social impact bonds; Green investment bonds; Trust and foundation endowments; Pension fund investments; Crowdfunding and peer-to-peer funding; A Social Finance Initiative; Philanthropic Input Programmes (CDFA, 2012b, p. 20).

Some of these ideas could use existing financial models, but others might require new models. For example, while one interviewee thought social impact bonds are too inflexible for CDFIs, the possibility remains of finding a way in which CDFIs are paid according to outcomes such as jobs created by the businesses they make loans to. Whatever new models are proposed, it is recommended that they be tested for resilience.

V. Implications for my professional practice

This study has been very useful in helping me improve my assessments of CDFIs, which at the time of writing forms the main source of my paid work. I discussed my tentative conclusions informally with some other assessors during a Continuing Professional Development (CPD) day for CDFI assessors in July 2012. Greater clarity around financial models could be useful as a theme for CPD, not just for assessors but also possibly for those in board, executive or management roles in CDFIs.

However, I believe this approach would really come into its own if some of the key ideas could be integrated into government policy-making. After all, the first request I received for clarification of CDFI financial models came not from the sector itself but from a policy-maker in the Treasury. As the interviewee with probably the most experience in the sector pointed out, lack of clarity of the keys to success for CDFIs has in the past led to public money being wasted on

badly-run CDFIs, with the fallout leading to funding being pulled even for well-run CDFIs. At a time of severe shortages of public funding, it is surely in everyone's interest to ensure that CDFIs are both efficiently run and efficiently funded.

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I. Appendices

I. Glossary and abbreviations

APR – Annual Percentage Rate: a standard way of presenting the total cost of borrowing (including fees etc) by stating the equivalent interest rate if the only charges had been in the form of annual interest.

BIS – Department for Business, Innovation and Skills – The UK government department responsible for policies on supporting enterprise and regional development.

CDFA – see Community Development Finance Association.

CDFI – see Community Development Finance Institution.

CDO – Collateralized Debt Obligation: a structured finance product constructed from loans; excessive and/or improper use of CDOs was partly blamed for the financial crisis that began in 2007/8.

CITR – Community Investment Tax Relief – a tax relief, spread over five years, which is available to investors in accredited CDFIs.

Civil society organisation (also called Third Sector Organisation) – any organisation that is not part of the government or for-profit sectors. This can include community organisations, clubs and societies, charities and social enterprises.

Community Development Finance Association: the UK trade association for Community Development Finance Institutions. It was set up in 2002 following recommendations of the Social Investment Task Force.

Community Development Finance Institution: a not-for-profit social finance organisation that provides finance to under-served communities or sectors.

CPD – Continuing Professional Development; studies or training which people carry out in parallel with their professional work to maintain or extend their skills.

DWP – Department for Work and Pensions – the UK government department responsible for welfare and pension policy, including financial inclusion.

ERDF – European Regional Development Fund – a European Union fund to support development in disadvantaged EU regions.

EFG – Enterprise Finance Guarantee – A scheme providing a government guarantee for small business loans. Replaced the Small Firms Loan Guarantee scheme in January 2009 and was opened to CDFIs in May 2009.

FTE – full-time equivalent staff – where some people in an organisation work part-time, this is the number of full-time jobs (in terms of time worked) that their jobs are equivalent to.

GHK – a consultancy firm; became part of ICF International in February 2012 (http://www.ghkint.com)

ICOF – Industrial Common Ownership Finance – a specialist lender to co-operatives, now trading as Co-operative and Community Finance.

IMD – Index of Multiple Deprivation; a measure of the deprivation of a particular geographic area.

LEP – Local Enterprise Partnership – a partnership between local authorities and businesses to support economic development in the areas covered by the local authorities. LEPs took over the economic development role of Regional Development Agencies in 2012.

P&L – Profit & Loss – the Profit & Loss Account shows the income and expenditure of an organisation over a given period, the difference between the two being a profit (if income was more than expenditure) or a loss (if expenditure was more than income).

PbR – Payment by Results – an arrangement where a government body pays a contractor according to the results achieved in public policy terms, e.g. the number of unemployed people who the contractor has helped obtain jobs.

Performance Framework – A programme for assessing the performance of UK CDFIs, developed and implemented by the CDFA. The 2012 version of this programme is called Change Matters 2 or CM2 (CDFA, 2012d).

RDA – Regional Development Agency – Before March 2012, each English region had an RDA responsible for supporting economic development in that region. Their role was taken over by Local Enterprise Partnerships (LEPs).

SFLG – Small Firms Loan Guarantee – Government guarantee scheme for small business loans, replaced by EFG from January 2009.

SME – Small and Medium-sized Enterprise – defined by the European Commission as a business with less than 250 employees, and either a turnover of less than 50 million Euros or a balance sheet total of less than 43 million Euros (http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm)

Social Enterprise – An organisation that exists primarily for social purposes rather than to maximise profit.

Social Investment Task Force: an organisation set up by the UK government in

2000 to look at ways of overcoming barriers to finance faced by disadvantaged communities.

II. Questionnaire and results

Questionnaire on resilience of financial models for CDFIs

Stuart Field, November 2011

As part of my MA dissertation in Social Banking and Social Finance, I am consulting a selection of experts on Community Development Finance Institutions (CDFIs). The main issue I am looking at is **"How resilient are financial models for CDFIs in the UK?"**. My aim is to find out how CDFIs can become more financially resilient so that they can concentrate on serving customers rather than being bogged down in frequent negotiations with funders to ensure their survival[5]. To help me research this issue, I would be very grateful if you could answer the questions below.

Note: Relationship to work on Social Impact Bonds for CDFIs
At the Community Development Finance Association (CDFA) conference in Liverpool in September 2011, I raised the possibility of Social Impact Bonds for CDFIs, which could in principle provide revenue and/or capital funding. While this research does not address the feasibility of Social Impact Bonds for CDFIs directly, some of the information generated might be useful for any future feasibility study.

Confidentiality – ethics protocol
In answering the questions, you have the right of confidentiality: neither you nor any CDFIs or other organisation(s) you are associated with will be named without your consent. This is a key principle of the ethics protocol agreed with Plymouth University and the Institute for Social Banking (Bochum, Germany) who jointly run the MA course. Please could you therefore indicate the extent to which you and any organisations you are associated with are willing to be identified.

Name …..... Consent to mention your name? Y / N

Organisations you are involved in:

1st organisation.....Consent to be mentioned? Y / N

Position in 1st organisation.....

[5] Note that resilience is not the same as financial sustainability. A CDFI with a long-term grant funding agreement can be more resilient than a financially sustainable CDFI whose loans for on-lending must be continually re-negotiated.

2nd organisation.....Consent to be mentioned? Y / N

Position in 2nd organisation.....

3rd organisation.....Consent to be mentioned? Y / N

Position in 3rd organisation.....

[The questions together with totals of responses are as follows:]

Background questions

A. What is your involvement in the CDFI sector?

a. I work for a CDFI as a: Chief Executive 1 / Member of staff 6 / Board Member 0
b. I help fund CDFIs via: Grants 0 / Loans for on-lending 2 / Equity (shares) 0
c. I research the CDFI sector 3
d. Other ….4

B. Which types of loans are offered by the CDFI(s) you are involved in?
- a. Personal loans 3
- b. Home improvement loans / personal mortgages 2
- c. Loans to micro-enterprises 6
- d. Loans to small and medium-sized enterprises 6
- e. Loans to social enterprises / civil society organisations 1 (x3), 8
- f. Other (please specify).....

C. What additional services are offered by the CDFI(s) you are involved in?
- a. Financial literacy training 3
- b. Debt counselling 2
- c. Business advice 4
- d. Investment readiness work 4
- e. Mentoring / coaching 3
- f. Other (please specify).Fund management/Back Office 1.....

D. What is the geographic extent of the CDFI(s) you are involved in?
- a. Local 3
- b. Sub-regional 5
- c. Regional 4
- d. Multi-regional 1
- e. Country within the UK 1
- f. UK-wide 2
- g. International 2 (+1 if client registered in the UK)

E. Please specify the size of the CDFI(s) you are involved in, in terms of:

a. Balance sheet: under £1 million 3/ £1 million - £5 million 5/ over £5 million 3

b. Number of outstanding loans: under 100 2/ between 100 and 500 7/ over 500 3

Questions on CDFI funding

F. Please describe briefly how you see the future funding situation for CDFIs:

No. of responses received: 12.
THEMES and number of respondents mentioning each:
A. Lack of revenue funding/need for sustainability/reducing direct subsidy of overheads 5
B. Capital funding is available (but not “free”) 7 - some criticism of whether it meets CDFIs' needs as currently structured
C. More private funding from banks and social investment is likely, driven partly by Community Investment Tax Relief (CITR) 4
D. Overall tone of responses: Negative 3; Neutral 8; Positive 1.

G. How do you think the contribution of the following CDFI funding sources is likely to change in the next few years:

a. Local government capital grants: decrease 4/ stay the same 3/ increase 4/ don't know 0
b. Local government revenue grants: decrease 7/ stay the same 1/ increase 3/ don't know 0

c. Regional/sub-regional capital grants: decrease 8/ stay the same 0/ increase 2/ don't know 1
d. Regional/sub-regional revenue grants: decrease 10/ stay the same 1/ increase 0/ don't know 0

e. National/UK-wide capital grants: decrease 4/ stay the same 3/ increase 2/ don't know 1
f. National/UK-wide revenue grants: decrease 8/ stay the same 2/ increase 0/ don't know 2

g. European capital grants: decrease 4.5/ stay the same 2.5/ increase 2/ don't know 2
h. European revenue grants: decrease 8/ stay the same 0/ increase 1/ don't know 2

i. Private donations: decrease 1/ stay the same 4/ increase 2/ don't know 4
j. Grants from charitable foundations: decrease 2/ stay the same 3/ increase 3/ don't know 3

k. Bank loans for on-lending: decrease 2/ stay the same 1/ increase 8/ don't know 0
l. Social investments: decrease 0/ stay the same 1/ increase 7/ don't know 3

m. Funding from Big Society Capital: decrease 0/ stay the same 0/ increase 10/ don't know 1
n. Social impact bonds: decrease 0/ stay the same 0/ increase 7/ don't know 4

H. Imagine that a loan fund of a CDFI has the following options available. In each case, you can assume that the CDFI has to repay any capital grant that is

not lent within the specified time period. (EFG = Enterprise Finance Guarantee.)

a. 100% capital grant funding for 1 year, but no revenue grants or EFG

b. 100% capital grant for 1 year, with your CDFI receiving a 20% revenue bonus if its lending targets are achieved, but your CDFI must pay a 20% penalty if it fails to achieve its targets, no EFG

c. 50% capital grant funding for 2 years, with the 50% match coming from your CDFI's reserves (assume that your CDFI has enough reserves for this), no revenue grants or EFG

d. 50% capital grant funding for 2 years, with the 50% match coming from a bank loan for on-lending, and 75% of write-offs covered subject to a maximum 15% payout (similar to EFG), no revenue grants

Please indicate your order of preference (from best option to worst option)
and briefly explain why:

acbd2 badc2 dcba bdca

Simply unanswerable – only d has any operational sustainability on the face of it

A. With some additional bank loans if required. This would maximise the grant. Point d. has insufficient bad debt covey.

D best option

would like to discuss as d (my preference) assumes a position re EFG which is questionable in MY VIEW long term **********
Personally don't like any of them and would much prefer policy gtee funds to cover bad debts- with no revenue

Questions on how CDFIs deal with risks

I. Please describe briefly the most important risks currently faced by CDFIs:

No. of responses received: 12.
THEMES and number of respondents mentioning each:

- High or rising rates of problem loans (delinquency / bad debts / write-offs) 6
- Lack of revenue funding / difficulty of achieving sustainability 6
- The difficult economic climate 3
- Lack of business support to make customers investment-ready 3
- Attrition of existing capital and affordability/availability of new capital 5

J. What can be done to make CDFIs resilient when dealing with these risks?

No. of responses received: 11.
THEMES and number of respondents mentioning each:

- Diversification 3
- Mergers 2
- More business support for customers 2
- More support from banks and “new” funders such as social investors 3
- Better governance and management of loans/defaults/other risks 2

K. How likely do you think the following risk scenarios are in the CDFI sector?

a. CDFIs are forced to close as revenue funding is cut before reaching operational self-sufficiency

Very unlikely 0/ Unlikely 0/ Likely 2/ Very Likely 8/ Don't Know 2

b. CDFIs try to expand too quickly, make loans in a rush and fail to meet write-off targets

Very unlikely 0/ Unlikely 5/ Likely 5/ Very Likely 1/ Don't Know 1

c. CDFIs fail to meet loan targets after key staff leave

Very unlikely 1/ Unlikely 4/ Likely 2/ Very Likely 2/ Don't Know 3

d. CDFIs run out of money to lend after funding negotiations drag on longer than expected

Very unlikely 0/ Unlikely 1/ Likely 6/ Very Likely 4/ Don't Know 1

e. Base rate increase causes CDFIs' write-offs to increase above targets

Very unlikely 1/ Unlikely 6/ Likely 3/ Very Likely 0/ Don't Know 2

L. And finally: What in your opinion are the keys to success of CDFIs?

No. of responses received: 12.
THEMES and number of respondents mentioning each:

- Professionalism/good quality staff 4
- Good management/control of risks/loans/defaults/overheads 5
- Consistent funding and public policy support for the sector, requiring sustained advocacy for the sector to achieve it 4

Thank you for filling in this questionnaire. Please e-mail the response to Stuart Field at ssmfield@yahoo.com
If you have any questions, please e-mail me or phone me on 0121 558 0374 or 0791 611 4669 or Skype: stuart-field

III. Example of a stress-testing spreadsheet

1. Technical details of spreadsheets

I used the Calc spreadsheet programme in OpenOffice, a free software package with broadly similar functionality to Microsoft Excel. In order to enable compatibility with Excel, I saved the spreadsheets in an Excel-compatible format. Each scenario for each type of CDFI had a separate spreadsheet, so there were four spreadsheets per CDFI type (baseline, scenario 1, scenario 2 and scenario 3), so with two CDFI types modelled this gave eight spreadsheets altogether.

All spreadsheets used the same layout and main formulas; only the numbers were different. The design philosophy was to make the spreadsheets as flexible as possible, so that a wide variety of scenarios could be modelled.

This requirement for flexibility led to approximations. The main one of these concerned repayments. Model changes in write-off rates meant that I could not use a standard amortization schedule, which would generate exact loan repayments. Instead, I had to estimate repayments received on each year's loans, which I did in the “Repayments” tab in the spreadsheet. I kept track of the errors in these approximations, which were generally low, although became more significant when modelling higher write-off rates. See the example spreadsheet below.

Each spreadsheet had five tabs. Three of these were the financial projections themselves: Profit & Loss (P&L), Balance Sheet and Cashflow, and one was the Repayments tab described above. But the first tab of all is Parameters, and it is here that most of the data was entered to generate each specific scenario.

2. *Parameters tab*

The spreadsheets used to carry out stress-testing comprised five tabs: Parameters, P & L, Balance Sheet, Cashflow and Repayments. The first tab, Parameters, includes the key parameters used to create the model. The model is based on published data, for which sources were quoted. Where the source is "Inside Community Finance", data comes from the 2010-11 annual survey of CDFIs carried out by the CDFA (2012c). Where the source is "GHK" or a letter is given, see pages 115-116 of the main report by GHK (2010a). Parameters themselves are generally typed in boxes that are highlighted in yellow.

Financial models for CDFIs: financial projections

Basic parameters

	Opening	Year 1	Year 2	Year 3	Year 4	Year 5	Source
Interest rates							
Loan interest (average)	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	Inside Community Finance
Bank interest received		3.30%	3.30%	3.30%	3.30%	3.30%	see R
Bank overdraft interest		3.30%	3.30%	3.30%	3.30%	3.30%	see R
Loan for on-lending interest		3.30%	3.30%	3.30%	3.30%	3.30%	see R
Loan arrangement fee		1.00%	1.00%	1.00%	1.00%	1.00%	Inside Community Finance
Percentage missed repayments *	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	Inside Community Finance
Annual write-off rate	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	Inside Community Finance
Average loan disbursed **	15500	31000	31000	31000	31000	31000	Inside Community Finance
Average loan term (months) **	41	83	83	83	83	83	Inside Community Finance
Number of loans made in year **	165	39	39	39	39	39	Inside Community Finance
Staff costs (including pension etc.)							
Lending staff full-time equivalent (fte)		28789	28789	28789	28789	28789	see L
Support staff (fte)		33472	33472	33472	33472	33472	see L: CEO & admin
Chief Executive (actual cost)		33472	33472	33472	33472	33472	GHK model includes CEO in support staff
Number of fte loan staff		3.8	3.8	3.8	3.8	3.8	GHK ave of Social Small & Large
Number of fte support staff		1.75	1.75	1.75	1.75	1.75	GHK ave of Social Small & Large
Depreciation rate for fixed assets		40.00%	20.00%	20.00%	20.00%	20.00%	HMRC approved rates for SMEs

Notes

* Percentage missed repayments approximated as follows: opening amount is average PAR 30+days.

** For opening average loan, term and number, the average remaining balance, remaining term and outstanding number of loans is used (approximated as half the disbursed figures)
For all other figures, the average loan paid out and the average term of loans paid out should be entered.

Sources: where a letter is given, the data comes from Evaluation of Community Development Finance Institutions (CDFIs), GHK, 2010, p.115-116.
Where this letter is preceded by the word "see", the figure appears in the notes associated with the relevant variable in the GHK model.
The text "Inside Out 2010" is the Community Development Finance Association (2010) reference in the main text.
HMRC approved rates for SMEs refers to the depreciation rate allowed for tax purposes (http://www.hmrc.gov.uk/capital_allowances/investmentschemes.htm)

3. *P&L (Profit & Loss) tab*

This tab projects the profit or loss for a CDFI for each year for the next 5 years – in this example, a social enterprise lender under stress-testing scenario 3: 1-year capital funding delay. The first-year loss resulting from this is indicated with a minus sign and printed in red.

Financial models for CDFIs: financial projections

Profit and Loss Projections

	Year 1	Year 2	Year 3	Year 4	Year 5
Income					
Loan interest	221,340.00	240,215.67	244,548.81	234,339.42	241,974.77
Loan arrangement fees	12,090.00	12,090.00	12,090.00	12,090.00	12,090.00
Bank interest	117,653.12	86,917.77	95,072.48	106,361.44	105,745.81
Other earned income	0.00	0.00	0.00	0.00	0.00
Revenue grants	53,302.60	53,302.60	53,302.60	53,302.60	53,302.60
Total operational income	404,385.72	392,526.04	405,013.88	406,093.46	413,113.18
Capital grants	0.00	409,001.32	409,001.32	409,001.32	409,001.32
TOTAL INCOME	404,385.72	801,527.36	814,015.21	815,094.78	822,114.51
Expenditure					
Staff costs: loan staff	109,398.20	109,398.20	109,398.20	109,398.20	109,398.20
support staff	58,576.00	58,576.00	58,576.00	58,576.00	58,576.00
Chief Executive	33,472.00	33,472.00	33,472.00	33,472.00	33,472.00
Other overheads	120,867.72	120,867.72	120,867.72	120,867.72	120,867.72
Depreciation	0.00	0.00	0.00	0.00	0.00
Total operational costs	322,313.92	322,313.92	322,313.92	322,313.92	322,313.92
Operating profit/loss	82,071.80	70,212.12	82,699.96	83,779.54	90,799.26
Loan write-offs	179,025.00	203,824.77	213,667.32	208,581.69	220,982.13
Finance costs	69,415.34	55,532.27	60,742.58	62,134.22	59,707.18
TOTAL EXPENDITURE	570,754.26	581,670.96	596,723.82	593,029.83	603,003.23
Profit / (Loss) in year	-166,368.54	219,856.40	217,291.38	222,064.95	219,111.28
Profit / (Loss) cumulative	3,817,229.94	4,037,086.34	4,254,377.72	4,476,442.68	4,695,553.95

4. Balance Sheet tab

This tab projects the balance sheet for a CDFI at the beginning and end of each of the next 5 years. Again, the loss of loans for on-lending and the initial reduction in reserves from the 1-year delay in capital funding can be seen.

Financial models for CDFIs: financial projections

Balance Sheet Projections

	Opening	End Year 1	End Year 2	End Year 3	End Year 4	End Year 5
Fixed Assets	0.00	0.00	0.00	0.00	0.00	0.00
Current Assets						
Debtors						
Loans brought forward		2557500.00	2911782.36	3052390.26	2979738.39	3156887.60
Loans advanced		1209000.00	1209000.00	1209000.00	1209000.00	1209000.00
Loan repayments *		675692.64	864567.33	1067984.55	823269.11	692901.84
Loans written off		179025.00	203824.77	213667.32	208581.69	220982.13
Loan book (net)	2557500.00	2911782.36	3052390.26	2979738.39	3156887.60	3452003.63
Other debtors						
Cash at bank & in hand	3565246.20	2633871.89	2880984.22	3223073.85	3204418.53	2949125.26
Total Current Assets	6122746.20	5545654.25	5933374.48	6202812.24	6361306.12	6401128.89
Liabilities						
Loans for on-lending	2103495.26	1682796.21	1840684.39	1882855.13	1809308.42	1620044.26
Bank overdrafts		0.00	0.00	0.00	0.00	0.00
Other creditors						
NET ASSETS	4019250.94	3862858.05	4092690.09	4319957.11	4551997.71	4781084.63
represented by:						
Share capital	35652.46	45628.10	55603.75	65579.39	75555.03	85530.67
Reserves	3983598.48	3817229.94	4037086.34	4254377.72	4476442.68	4695553.95
Total capital & reserves	4019250.94	3862858.05	4092690.09	4319957.11	4551997.71	4781084.63

NOTE: * Only the capital portion of loan repayments appears here.

5. Cashflow tab

The fourth tab gives five years of cash flow projections for the loan fund account and a separate revenue account. See Parameters for explanation of data sources. The 1-year capital delay stress test was carried out by making the Year 1 figures for capital grants received and new loans for on-lending zero.

Financial models for CDFIs: financial projections

Cash flow projections

	Year 1	Year 2	Year 3	Year 4	Year 5		
LOAN FUND ACCOUNT							
Balance brought forward	3565246.20	2621215.43	2853647.91	3173780.17	3133479.53	Inside Community Finance p42	
Cash in:							
Loans repaid:							
capital portion of repayments	675692.64	864567.33	1067984.55	823269.11	692901.84		
loan interest received *	221340.00	240215.67	244548.81	234339.42	241974.77		
Bank interest received *	117653.12	86500.11	94170.38	104734.75	103404.82		
Capital grants received	0.00	409001.32	409001.32	409001.32	409001.32	Inside Community Finance	41.00%
New loans for on-lending	0.00	578587.24	578587.24	578587.24	578587.24	Inside Community Finance	58.00%
Additional shares issued	9975.64	9975.64	9975.64	9975.64	9975.64	Inside Community Finance	1.00%
TOTAL CASH IN	1024661.41	2188847.31	2404267.94	2159907.47	2035845.63		
Cash out:							
New loans:	*1209000.00*	*1209000.00*	*1209000.00*	*1209000.00*	*1209000.00*		
less loan arrangement fees *	*12090.00*	*12090.00*	*12090.00*	*12090.00*	*12090.00*		
Loans advanced net of fees	1196910.00	1196910.00	1196910.00	1196910.00	1196910.00		
On-lending capital repaid	420699.05	420699.05	536416.50	652133.95	767851.39	20% of earlier years' funds	
Interest on loans for on-lending *	69415.34	55532.27	60742.58	62134.22	59707.18		
Interest on loan fund overdraft *	0.00	0.00	0.00	0.00	0.00		
Transfer to revenue account *	281667.78	283273.50	290066.60	289029.95	297762.42		
TOTAL CASH OUT	1968692.18	1956414.83	2084135.69	2200208.11	2322230.99		
Balance carried forward	2621215.43	2853647.91	3173780.17	3133479.53	2847094.17		
REVENUE ACCOUNT							
Balance brought forward	0.00	12656.46	27336.30	49293.68	70939.00		
Cash in:							
Transfer from loan fund account *	281667.78	283273.50	290066.60	289029.95	297762.42		
Other earned income						not used at present	
Revenue grants	53302.60	53302.60	53302.60	53302.60	53302.60	Inside Community Finance	
Bank interest received	0.00	417.66	902.10	1626.69	2340.99		
TOTAL CASH IN	334970.38	336993.76	344271.30	343959.24	353406.01		
Cash out:							
Staff costs: loan staff	109398.20	109398.20	109398.20	109398.20	109398.20		
support staff	58576.00	58576.00	58576.00	58576.00	58576.00		
Chief Executive	33472.00	33472.00	33472.00	33472.00	33472.00		
Other overheads	120867.72	120867.72	120867.72	120867.72	120867.72	See GHK indicator M	
Interest paid on revenue account	0.00	0.00	0.00	0.00	0.00		
Fixed asset purchases						not used at present	
TOTAL CASH OUT	322313.92	322313.92	322313.92	322313.92	322313.92		
Balance carried forward	12656.46	27336.30	49293.68	70939.00	102031.09		

NOTES:

* Net earned income received via the loan fund account (loan interest and loan arrangement fees, less interest paid) is transferred to the revenue account each month.

6. Repayments tab

This tab was used to estimate future loan repayments. The negative figures in Opening Loans for Year 5 are because of approximation errors.

Financial models for CDFIs: projected loan repayments

	Opening	Year 1	Year 2	Year 3	Year 4	Year 5
From Parameters:						
Loan interest (average)	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Percentage missed repayments	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Annual write-off rate	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Average loan made	15500	31000	31000	31000	31000	31000
Average loan term (months)	41	83	83	83	83	83
Number of loans made in year	165	39	39	39	39	39
Average repayment on these loans	£426.15	£472.25	£472.25	£472.25	£472.25	£472.25
Number of outstanding loans	*165*	*112*	*171*	*218*	*260*	*295*
Opening loans: Opening balance		2557500.00	1764342.54	971185.08	178027.61	-152454.66
Cash due to be repaid on loans		843784.53	843784.53	843784.53	351576.89	0.00
Cash received in loan repayments		793157.46	793157.46	793157.46	330482.28	0.00
Interest portion of cash received		179025.00	123503.98	67982.96	12461.93	-10671.83
Loans written off		179025.00	123503.98	67982.96	12461.93	-10671.83
Closing balance		1764342.54	971185.08	178027.61	-152454.66	-152454.66
Year 1 loans: Opening balance		*1209000.00*	1062809.82	855059.46	647309.11	439558.75
Cash due to be repaid on loans		110505.51	221011.02	221011.02	221011.02	221011.02
Cash received in loan repayments		103875.18	207750.36	207750.36	207750.36	207750.36
Interest portion of cash received		42315.00	74396.69	59854.16	45311.64	30769.11
Loans written off		84630.00	74396.69	59854.16	45311.64	30769.11
Closing balance		1062809.82	855059.46	647309.11	439558.75	231808.39
Year 2 loans: Opening balance			*1209000.00*	1062809.82	855059.46	647309.11
Cash due to be repaid on loans			110505.51	221011.02	221011.02	221011.02
Cash received in loan repayments			103875.18	207750.36	207750.36	207750.36
Interest portion of cash received			42315.00	74396.69	59854.16	45311.64
Loans written off			84630.00	74396.69	59854.16	45311.64
Closing balance			1062809.82	855059.46	647309.11	439558.75
Year 3 loans: Opening balance				*1209000.00*	1062809.82	855059.46
Cash due to be repaid on loans				110505.51	221011.02	221011.02
Cash received in loan repayments				103875.18	207750.36	207750.36
Interest portion of cash received				42315.00	74396.69	59854.16
Loans written off				84630.00	74396.69	59854.16
Closing balance				1062809.82	855059.46	647309.11
Year 4 loans: Opening balance					*1209000.00*	1062809.82
Cash due to be repaid on loans					110505.51	221011.02
Cash received in loan repayments					103875.18	207750.36
Interest portion of cash received					42315.00	74396.69
Loans written off					84630.00	74396.69
Closing balance					1062809.82	855059.46
Year 5 loans: Opening balance						*1209000.00*
Cash due to be repaid on loans						110505.51
Cash received in loan repayments						103875.18
Interest portion of cash received						42315.00
Loans written off						84630.00
Closing balance						1062809.82
TOTAL LOANS: Opening balance		2557500.00	2827152.36	2889054.36	2743206.00	2852282.48
Cash due to be repaid on loans		954290.04	1175301.06	1396312.08	1125115.46	994549.58
Cash received in loan repayments		897032.64	1104783.00	1312533.36	1057608.53	934876.61
Interest portion of cash received		221340.00	240215.67	244548.81	234339.42	241974.77
Loans written off		263655.00	282530.67	286863.81	276654.42	284289.77
Closing balance		2827152.36	2889054.36	2743206.00	2852282.48	3084090.87

IV. Ethics Protocol

The key ethical issue in this research is commercial confidentiality. As an assessor of CDFIs, I work under a strict obligation of confidentiality. In order to maintain this strict confidentiality, and also to avoid conscious or unconscious bias in selecting experts, I will not send my questionnaire or carry out interviews with experts from organisations that I have assessed or am likely to be assessing in the near future.

I will not use any data, even in anonymised form, without permission of the CDFI whose data it is.

When I interview people, I will explain their rights of confidentiality: neither the interviewees nor the CDFIs they are associated with (if any) will be named without their consent.

Where possible I will try to use published rather than unpublished material, not just in order to avoid confidentiality issues but because it makes it possible for those interested in my research to check the references I quote. If I have to use unpublished material, I will obtain the consent of the author.

There are also some specific ethical issues relating to this work that I will need to resolve. One of these concerns parallels between stress-testing and work that I have done as part of a contract. The key difference is that my contract work was based primarily on performance indicators/benchmarks that were unpublished at the time rather than the published financial models and CDFI statistics that, as noted above, I am using here where possible.

As part of the contract I have already discussed and tentatively resolved another possible issue, that of copyright relating to my paid work on financial models, and I am hopeful that using public data where possible will avoid any other ethical issues relating to my stress-testing work.

For the questionnaires, there is also a specific issue regarding overlap with a suggestion I raised at the 2011 Community Development Finance Association's conference on social impact bonds for CDFIs. To avoid conflicts of interest, I will explain the connection clearly in my questionnaire.

Another issue concerns a report originally written for a UK Government official based on his verbal request, but which he never acknowledged receiving. I sent a copy without the references, saying that a copy with references would be available for a fee, but received no reply. I will contact the government department in question to clarify if they have any objection to the document being included as an appendix in my dissertation or in any published work arising from it.

V. Fractional reserve banking, securitisation and CDOs

1. Fractional reserve banking

Although traditional banking is a marginal business, the retail and commercial banking sector as a whole is responsible for creating a large proportion of the money supply via fractional reserve banking. When a bank lends money and this money is used to buy something, the money usually ends up as a deposit in another bank account and can be re-lent, with the process repeating itself.

This process of banks creating money has a limit that is set by the need for a proportion of loans to be covered by capital and reserves as noted above. All the same, large amounts can be created this way. For example, if the minimum capital requirement is 5%, then the value of shares and reserves can be multiplied by a maximum of 1 / 0.05 = 20 times.

Money created by fractional reserve banking is, however, temporary money, unlike money created by a central bank. When a loan is repaid, the money ceases to exist.

Finally, money created by secured bank lending is backed by the assets that the loans are secured on, rather like currency backed by gold under the gold standard. Money created by unsecured lending is backed by the bank's intangible confidence in those it lends to, rather like currency after the gold standard, which is backed primarily by confidence in the central bank issuing it.

A paradox of fractional reserve banking is that a bank that can increase the amount of money in circulation by maybe 20 times (2,000%) often itself relies on tiny margins of maybe a few percent to generate profits.

2. Securitisation and CDOs

Another way in which retail and commercial banking have been influenced by techniques used in investment banking is through the process of securitisation. This technique was recommended for CDFIs by Erickson (2006), although to my knowledge no UK CDFI has used it.

As noted above, a bank is only allowed to make loans as long as it meets minimum capital requirements. However, a bank can avoid having to shut its doors to new borrowers by selling on a block of loans to investors. This is a form of securitisation. This is clearly good for banks and borrowers, as it stops borrowing from grinding to a halt. However, the financial institution that buys the loans may not have to meet the same capital requirements as banks, removing a key brake on money creation via fractional reserve banking. This is one factor behind what Hildyard (2008) described as the creation of a “wall of money”.

While securitisation is nothing new, the process was taken one step further in the run-up to the financial crisis in the form of collateralized debt obligations

(CDOs). The block of securitised loans was “sliced” into three different tranches based on the purported risk of default. Individual loans would be split between each tranche, with the first part of the risk on the loan taken by the riskiest tranche and the second part by the “mezzanine” tranche, with the supposedly safest tranche only being at risk once the other two had been exhausted.

The “safest” tranches were typically rated as investment-grade and sold to investors and institutions requiring low-risk products. However, when some of the loans turned out to be so risky that even the “safest” tranches were at risk, this led to a collapse in confidence that spread across the financial system (Lanchester, 2010).

VI. A draft document I wrote in 2008 on request of a civil servant

Financial and economic models for community development finance

Introduction

In the wake of the 2007/8 banking crisis, it is worth looking at the basic models behind traditional banking and how they went wrong, and comparing it to the models used by community development finance.

1. The traditional banking model

1A. The profit and loss aspect of the banking model

The heart of traditional banking consisted of taking deposits and making loans. In this model, the main source of income was interest on loans. This interest had to pay interest on deposits, administration costs and provisions for bad debts, with the profit being what was left over after these costs were deducted.

As different loans had different risk levels, they were charged different interest rates. Often these would be linked to base rate. For example, a loan of 2% over base might comprise 1% for bad debt provision and the remaining 1% for administration costs and profit contribution. A more risky loan would have a higher bad debt contribution; a more expensive loan to administer might have a higher administration provision.

Likewise, deposits would traditionally pay interest at a certain amount below base rate, with the difference between the interest rate and base rate being a provision for administration costs and profit contribution. Typically, large deposits would pay just under base rate, whereas smaller deposits would pay substantially less than base rate in order to cover the administration costs.

Administration costs are highest on current accounts, because of the large numbers of transactions and additional services provided such as bank cards and ATMs. One way of paying for these is to make bank charges e.g. a charge per cheque written, or a monthly fee for up to a certain number of transactions. This method is used in many countries and for corporate banking in the UK, but for personal banking the “free banking” model is typically used. In this, there are no charges for standard services so long as the account stays in credit. The administration costs and profit must come from other sources: paying little or no interest on credit balances, charging high amounts for non-standard services such as overseas transactions, or more controversially by large charges when account holders are overdrawn. The fairness of this last source of income is the subject of an ongoing court case between the banks and regulators.

As time has gone by, increasing competition between the banks has led to

margins being squeezed. Banks and building societies have launched products such as high interest current accounts and savings accounts paying close to or even above base rate. Likewise, special offers have been made on loans and particularly mortgages, paying not much over base rate, or in some cases below base rate for a period (often compensated for by high loan arrangement fees).

All of this means that the basic banking model has become increasingly marginal in recent years. At the same time it has also become more fragile, since an increase of bad debt rates by even a fraction of one percent (e.g. from 1% to 1.5%) can wipe out the tight margins banks operate on. Banks and building societies have become increasingly dependent on other sources of income. These include loan arrangement fees, commissions from other products sold to their customers, and linked products such as payment protection insurance – which has itself given rise to allegations of mis-selling.

This in turn has meant that it is more profitable for banks to make loans then sell them on via wholesale markets so that the money can be lent out again with more fees, commissions and sales of linked products. However, once loans are sold on, the link between bank and customer is broken, and so bankers were less interested in the long-term performance of their loans – so long as repayments were up to date until the loans were sold on, this was enough. Clearly, this was a recipe for disaster.

1B. The balance sheet aspect of the banking model

A traditional bank or building society's balance sheet would have loans as the largest asset, with liquidity for future loans invested in a mixture of government bonds, deposits with other banks and money market placements. The liabilities would consist of savings and current accounts plus deposits from other banks, with share capital and reserves to balance it off. Because of the small margins on interest income, a bank's balance sheet total is usually many times larger than its total income.

However, banks also have to abide by special rules such as capital adequacy. Traditionally, they could only lend out a certain multiple of their capital and reserves. This multiple is designed to protect banks against high bad debts in economically challenging times, but also to restrict the amount of money created by fractional banking. Otherwise, every time a loan was made and the proceeds of the loan ended up in another bank account, the money could be lent out again, and so on ad infinitum – or rather, until the value of money itself (in terms of purchasing power) collapsed.

Capital adequacy started as a simple "risk asset ratio" but over the years it has been modified to take into account varying rates of risk on different types of loans. Current capital adequacy rules are based on the Basel II formula. However, under this the maximum multiplier for capital is now much higher than it used to be – from a fixed ratio of around 7 to 1 twenty years ago, we now have a ratio that varies according to the type of loans made but can reach

figures like 30 to 1. This, too, has made the financial model for banks more fragile.

Even with these higher ratios, bank lending was still constrained by the amount of capital and reserves, which are typically much harder to increase than retail deposits (and, before the credit crunch, funds borrowed from the money markets). Once again, this provided banks with an incentive to sell on their loans rather than keep them on their balance sheet, even though doing so meant that the link with the customer was at least partly broken.

If the loans were sold on to non-bank entities, regulations did not require these non-bank entities to meet capital adequacy requirements. In some cases Special Purpose Vehicles were used – companies whose sole purpose was to own a block of loans sold by a bank. The use of Special Purpose Vehicles which were often held offshore and excluded from capital adequacy requirements was another major factor behind the credit crunch.

2. The social banking model.

A “social bank” is a bank which is set up with specific social purposes rather than purely to make profits. Such a bank, of course, still needs to make profits as well as meeting its social objectives, so it is worth looking first at how it does so.

2A. Profit and loss for social banks

Social banks tend to be based on the traditional banking model rather than the model of selling on loans which contributed to the credit crunch. The reason for this was partly because of the importance of maintaining links with their customers in the specialised sectors they operate in, but also because, in the UK at least, there was no real market for buying and selling blocks of the sector-specific loans made by social banks. Therefore, they tend to keep loans on their balance sheet in the traditional way.

This, of course, meant that their margins got squeezed along with those of traditional banks. This was made worse by social banks being smaller and therefore less able to benefit from economies of scale than traditional banks. However, they can compensate for this by working on higher margins, for two main reasons.

Firstly, their sector-specific expertise meant that in some cases they could price risk more effectively than traditional banks. This was helped in some cases by non-traditional methods of securing loans such as group guarantees. This in turn meant that they could make good loans to projects which traditional banks would turn down because of incomprehension of the project’s financial model.

Secondly, some “ethical” investors are prepared to accept lower financial returns if their money is used to fund social and environmental projects. This

means that social banks tend to pay less interest on deposits, and therefore offer higher margins. Social banks also place less emphasis on current accounts as these are administration intensive.

In addition to the higher margins, many social banks work out of one main office, and so do not have the costs of maintaining a branch network. In this respect they are not unique, as the same is true of Internet banks, but social banks combine this with close links to customers, often via a network of regional representatives.

The upshot of this is that social banks are generally still fairly marginal, though less so than traditional banks as regards their lending. However, in the current credit crunch they have an additional possibility to profit from high money market rates, as described in the next section.

2B. Balance sheet for social banks

A typical social bank's balance sheet is similar to that of a traditional bank, with one common difference. There is such a demand for ethically-screened savings products from ethical investors that many social banks cannot lend out as much of the money as they would like. Something like 50% of the money lent out is not uncommon. This means that they often have a large proportion of their balance sheet in government bonds, money market placements or on deposit with other banks.

They are therefore in the opposite position to banks such as Northern Rock which relied on money market funding and were nationalised once this dried up as a result of the credit crunch: they are providers of wholesale funds. Although the amount they provide is not that significant in the market as a whole, issues do arise if a social bank has direct placements with any other bank that fails. On the other hand, so long as they avoid this, they are in a good position to profit from money market rates which are abnormally high because of the crisis of confidence in inter-bank lending.

Capital adequacy rules under Basel II mean that a typical social bank will have higher capital ratios, because its loans are typically to small organisations and therefore considered riskier according to traditional risk pricing models. This is not usually a problem, because ethical investors are quite keen on investing in the capital of a social bank, and social banks' share issues are typically oversubscribed. Likewise, ethical investors are often happy with a lower share dividend from a social bank compared to what they would expect from a conventional bank.

3. Community development finance models

Community development finance can be seen as a further step beyond social banking. The impetus from this came typically from community activists who saw that certain communities – both physical communities and communities of

interest – were receiving what they considered to be a raw deal from the banks. The worst examples of this included “redlining” – policies of not lending to anyone within a particular geographical area such as an immigrant community in the USA. As a result, people in these communities were dependent on loan sharks charging exorbitant rates of interest. Protest against this led ultimately to the Community Reinvestment Act, where banks have to disclose their lending by geographical area. It also led to the US community development finance movement, which specialises in making loans to those unjustly excluded from finance.

Community development finance in the UK comes partly from community activism against financial exclusion, and partly from the social banking movement. Credit unions are also part of the mix, though their financial and operational models are different from those of a typical community development financial institution (CDFI).

There are various different models for community development finance, and it is probably best to consider each one separately.

3A. Credit union / CDFI model without subsidy

The model traditionally used by credit unions and CDFIs that operate without subsidy can be viewed as similar to the social banking model but extended further. Credit unions and CDFIs are smaller still than social banks, and their administration costs can be very substantial as a percentage of loan income. To cover these costs, they typically need high margins. Credit unions traditionally pay no interest on investment, so all loan interest can go to administration, bad debts and surpluses. The same is true for many CDFIs, and some of them offer Community Investment Tax Relief (CITR) so that investors still get a return but in the form of tax rebates rather than interest or dividends.

Regarding the balance sheet, credit unions, like banks, are FSA regulated and covered by the Financial Services Compensation Scheme (FSCS), and as such have to meet tests which bear some similarity to banks’ capital adequacy requirements. CDFIs generally do not take deposits, so just make loans from capital and reserves.

Small credit unions and CDFIs which do not receive subsidies tend to have a large proportion of the administration work carried out by volunteers. The volunteers often include highly skilled people such as retired bank managers or accountants. However without subsidies, these organisations tend to remain small, as volunteers’ time is limited, and the organisation cannot afford to take on staff capable of carrying out the work of the highly skilled volunteers.

3B. Credit union / CDFI model with subsidies - and the case for subsidies

There is quite an extensive array of subsidies available for economic development in disadvantaged communities. Most subsidies come in the form

of grants for specific projects. In order to get value for money for these grants, it is common practice to look at the outputs expected from a grant in terms of jobs created and preserved, sales created and preserved, and other project-specific objectives.

If grants are made to a CDFI for on-lending, they can create and preserve jobs and sales at a rate similar to traditional economic development grants, with the added bonus that when loans are repaid the money can be re-lent creating and preserving additional jobs and sales. CDFIs using this “recyclable grant” model can be a very cost-effective form of funding economic development. The European Commission has recognised this, launching funds such as JEREMIE which are specifically designed to encourage lending to disadvantaged communities to promote economic development.

Typically, these grants have a requirement for match funding. While some CDFIs can get other grants for match funding, especially in the early stages, as a CDFI grows it may be able to get bank loans for on-lending. These loans often come from a social bank, and in some cases they take advantage of CITR tax relief leading to low interest rates on loans to CDFIs (1.5% in the case of the Co-operative Bank, which claims tax relief so that the effective rate of interest they receive on these loans is over 7%).

Some credit unions also receive subsidies on a similar basis, though these tend to be for social rather than economic objectives (e.g. providing an alternative to loan sharks). Typically the subsidy will pay the salary of a credit union development worker. As credit unions are covered by the Financial Services Compensation Scheme, raising investment should in principle be easier than for CDFIs where the investor bears the full risk. New legislation is currently under consideration to enable local businesses to invest in credit unions, and this could also help.

Just as with credit union development workers, there is also a case for subsidising CDFIs until they reach the size where economies of scale enable them to cover the costs of a fully professional staff. Otherwise, as noted above, they can have a tendency to remain small and run largely by volunteers. However, there is a tendency for the character of the organisation to change. The “peer-group” system where volunteers with business experience appraise business loan applications can sometimes be more like the TV programme “Dragon’s Den” than traditional banking practice. Successful expansion therefore also requires awareness and management of these changes.

3C. Diversification of income

While grant funding can be very helpful, it is of its nature unreliable: credit unions and CDFIs often do not know until the last minute whether their grant funding will be renewed. As well as the bad effect on staff morale, this is a particular problem for financial organisations because they have ongoing obligations in the form of outstanding loans and investments which need

servicing regardless of whether a grant is made or not. Current grant funding arrangements often do not take this factor sufficiently into account.

However, the organisations themselves usually do try to get around this problem by diversifying their income sources. As well as offering loans and investments, they may offer ancillary services such as developing business plans, offering seminars on setting up businesses, offering debt advice counselling etc. Where these ancillary services are grant funded, they are usually allowed to claim part of the organisation's overall administration costs under the full cost recovery principles, which helps ensure that the organisation remains viable even if one funding source is lost

Also, there are CDFIs which are themselves the result of diversification: they are a project within a larger voluntary organisation. This allows them to reduce their costs compared to a stand-alone CDFI, but it can mean that they are less inclined to keep going once funding has ended, leading to the problems noted above of servicing ongoing loans.

Finally, there are a handful of CDFIs which are based on the traditional model of charities that help the poor, but by means of soft loans rather than handouts. These organisations often have no intention of becoming financially self-sufficient, so surveys of the CDFI sector which include them may be misleading if the aim is to measure the financial independence of CDFIs.

4. Regulatory implications

If the above model is taken into account, certain regulatory implications for community development finance are suggested.

4A. Regulation for social banks

Social banks are regulated essentially the same as any other bank of a similar size and structure, and for the most part this seems to be the correct approach. There is a question regarding risk pricing, namely that social banks' own ways of pricing of risk on specialist loans based on experience can in some cases be more accurate than the Basel II framework. On the other hand, some social banks have particular exposure to sector-based event risks such as the reduction of public subsidy for renewable energy, or changes in payment of care for disabled people. However, even where these require a social bank to raise more capital than would otherwise be necessary, up to now there has been sufficient demand from ethical investors to raise the additional capital. Despite major fluctuations in the shares of major banks, I feel it is still likely that successful social banks could raise additional capital if needed.

4B. Regulation for non-bank community development finance institutions

Currently, the only organisations involved in community development finance which have their own regulatory regime are credit unions. Credit unions are in a

special situation in that credit unions in the UK and Republic of Ireland hold a specific exemption from the EU Banking Co-ordination Directives. UK credit unions are also in the FSCS as noted above.

Regulatory compliance is a substantial burden for credit unions, and especially for small credit unions. As the financial services industry is effectively guaranteeing their members' savings via the FSCS, this level of regulation is probably justified by the risks involved. However, regulation needs to be kept under review to ensure it captures the true risks in the current market conditions for financial services.

Regulation for other CDFIs is based on their structures and activities, and is no different from other organisations with similar structures and activities. CDFIs making loans within the scope of the Consumer Credit Act (CCA) must hold a consumer credit licence and take part in the Financial Ombudsman Scheme. Other loans are only regulated if they are secured by a first mortgage on residential property. The situation here is no different from non-bank institutions making similar types of loans, and the regulation tends to be relatively light-touch.

However, CDFIs receiving major grant funding from certain sources such as ERDF have to provide substantial amounts of data to funders, leading to a regulatory burden typically of the same order of magnitude as credit unions.

The only area where regulation is currently different in practice for a CDFI than for other institutions is in the case of CDFIs registered as societies for community benefit under the Industrial and Provident Societies Act 1965 ("bencoms"). Under this Act, special reasons are required for why a society should be registered as a bencom rather than as a company. For a while it seems that the FSA has taken the view that setting up a CDFI is an acceptable reason if the CDFI takes on board the self-regulatory framework currently under development by the Community Development Finance Association (CDFA). This has no specific basis in law – notably, it is not restricted to the legal definition of "approved community development finance institutions" which is purely a status granted for CITR tax relief.

One justification for this is that there are specific exemptions from prospectus and advertising regulations under the Financial Services and Markets Act (FSMA) for bencoms issuing withdrawable share capital. However, most of these exemptions also apply to the other type of society registered under the Industrial and Provident Societies Act 1965: the bona fide co-operative. Indeed, some exemptions are available for any issue of non-transferable shares. Also, the bencom is by no means the only legal structure for CDFIs: others are often companies limited by guarantee or companies limited by shares, with a few plcs and at least one community interest company. Group structures are also quite common. A few are registered charities, and some of the bencoms are exempt charities. In each case, regulation is basically the same as other organisations with similar structures.

A few CDFIs have FSA authorisations for specific areas of business, for example ICOF (Co-operative and Community Finance) is authorised to hold client money. It originally obtained this authorisation because of managing local authority co-operative development funds, but is able to use the authorisation to do other things such as offer “back office” and treasury services for other CDFIs.

Many more CDFIs voluntarily take part in the self-regulatory regime of the CDFA. This is not just for those structured as bencoms: any CDFI can take part. The process of self-regulation is still under development at present.

5. Current developments and future prospects

5A. Banks and small business finance

A dramatic recent development is the government investment in capital in Royal Bank of Scotland/NatWest and Lloyds TSB/HBOS via UK Financial Investments Ltd. One of the conditions of this investment relates to these banks continuing to lend to small businesses and homeowners. It is not yet clear exactly what these conditions entail. However, it is clearly the intention that future lending policies enable viable propositions to be financed while avoiding the mistakes of the past.

While developing future lending policies, it is important to bear in mind previous market distortions which the Government now has an opportunity to help correct. Prior to the banking crisis, home loans and personal credit were often cheaper and easier to obtain than business credit. As a result, many entrepreneurs financed their business partly via second mortgages or personal credit (personal loans and credit cards). They would put in the money they had personally borrowed into their business, where it was often considered as equity and used to leverage additional business loans. This meant that the real leverage rates on small business finance were often much higher than recorded by the bank, and high leverage rates contributed to the banking crisis. At the same time, this also meant that those entrepreneurs who were in a position to take out second mortgages or obtain cheap personal credit had a head-start over others in a less fortunate position.

The Government has long sought to correct this imbalance by means of the Small Firms Loan Guarantee Scheme (SFLGS), which banks use to guarantee a proportion of a loan to an entrepreneur who had no spare equity to draw on. However, the SFLGS had a long history of under-utilisation and has never been that popular amongst banks and their business lending staff. One exception to this is the UK branch of Triodos Bank, a Netherlands-based social bank, which in recent years has been generally positive about SFLGS.

The banking crisis now means that fewer entrepreneurs can now draw on spare equity, as both house prices and the maximum loan-to-value have fallen. More

are therefore likely to turn to schemes such as SFLGS and new EU funds for small business loans such as the recently-announced European Investment Bank “EIB loan for SMEs” fund.

However, it is still likely in many cases that there will be an increasing funding gap between the amount of investment a business needs and the amount it can raise in terms of business finance and equity from the owner. It is therefore important also to consider ways of raising additional equity (e.g. from business angels) and sources of mezzanine finance. Here again the EIB plans to be one possible source.

If these issues can be resolved in an appropriate way, the small business sector will be in a better competitive position, as finance will go to those with the strongest business cases rather than those whose owners have the deepest pockets.

5B. Prospects for community development finance

It is not yet clear what role social banks and CDFIs will be expected to play in the new financial industry climate where governments invest directly in major banks. Social banks have highlighted their continuing success and expansion amidst the crisis affecting their larger cousins. CDFIs have pointed out their successes in selecting and knowing their customers well enough to make good loans even when banks have turned them down.

This success is something which should be built on. Many commentators have pointed out the moral hazard inherent in providing substantial funds to major banks in financial difficulty. One way of addressing the moral hazard issue is to make funds also available to social banks and CDFIs. In particular, in order to avoid further moral hazard, funding should be structured in a way that rewards success rather than failure. This might mean departing from the conventional grant funding model where unspent money is clawed back even if all outputs and outcomes are met, or the CITR model whose tight rules on money lent in each year of operation can hamper the provision of finance under the flexible terms needed in times of financial crisis.

Here again, the EIB has plans to launch a pan-European microcredit fund, but as its plans envisage only around 30 EU microfinance institutions receiving money from this fund, most of the UK’s CDFIs are unlikely to benefit directly from it. Other models, such as the regionally-based funds used in recent years, are therefore still likely to be needed.

One of the key contributions of social banks and CDFIs in these times of banking crisis is to show that another way of finance is possible – one which has worked on a small scale alongside conventional banking and largely escaped its recent pitfalls. In order to ensure that finance achieves sustainability as well as the innovation for which the UK financial services sector is world-famous, it is vital that alternatives such as social banking and community

development finance can continue to be developed.

Stuart Field, 5th November 2008