Credit scoring, data sharing and home credit

Credit scoring and data sharing in economic literature

1. An accurate, portable and transparent credit record can be beneficial to customers and to credit providers. In 1970 Akerlof[1] noted that moneylenders in India could operate because they had a 'personal knowledge about the character of the borrower' and lenders lacking this information faced adverse selection. More recent studies by the World Bank and others[2] suggest that an accurate, portable and transparent credit record that can be shared with a number of credit providers can increase lending activity, reduce the price of credit (particularly for customers with good records) and make more credit available to a wider proportion of the population.

2. Recent work by the Federal Reserve[3] states that:

> Available evidence indicates that the information that CRAs maintain on the credit-related experiences of consumers, and the credit history scoring models derived from these experiences, have substantially improved the overall quality of credit decisions while reducing the costs of such decision making. The availability of these data has also greatly enhanced the process of screening prospective customers to facilitate the marketing of credit and insurance products, thereby reducing the costs of such marketing by limiting solicitations to customers who are most likely to qualify for the products. If not for the information that the agencies maintain, consumers on the whole would receive less credit at higher prices.

3. An accurate, portable and transparent credit record can be beneficial as it:

   (a) *Increases the mobility of customers.* A portable credit record allows customers to move more easily—there is less risk associated with the severing of old relationships and starting new ones as accurate/transparent information is available which helps the new provider establish and build trust more quickly.

   (b) *Reduces the cost of borrowing to lenders*

      (i) *Reduces bad debts.* Past payment performance is a good predictor of likely future non-payment and hence a system that uses a credit record can reduce the amount of bad debt and cost of missed payments. Experian said that those members (of a CRA) using positive data derive considerable benefit from access to this level of information, typically reducing bad rates by approximately 50 per cent whilst maintaining or even increasing their accept rates.[4] Evidence also suggests that both positive and negative data can help predict default.[5]

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[1]G Akerlof, *The Market for Lemons*, Quarterly Journal of Economics 84, pp 488–500 (1970).
[2]M Miller, *Credit Reporting Systems and the International Economy*, MIT Press (2003).
[3]Robert B Avery, Paul S Calem and Glenn B Canner, *Credit report accuracy and access to credit*, Federal Reserve Bulletin summer issue, pp 297–322 (2004).
[4]Experian written evidence to House of Lord's EU committee:
www.publications.parliament.uk/pa/ld200506/ldselect/ldeucom/210/210we11.htm.
[5]J Barron and M Staten, *The value of comprehensive credit reports: Lessons from the US experience*, Credit Research Centre, Georgetown University (2000).

(ii) *Significant cost and time savings.* A recent presentation from the World Bank suggests that there may be significant cost and time savings from having a reliable credit scoring system based on shared data.[6] Evidence from North America suggests that credit scoring has significantly reduced the amount of time a customer or small business loan takes to be approved, and allows loan officers to concentrate on less clear-cut cases.[7] Evidence from mainstream lenders has also suggested that individual/ manual assessment, the alternative to an automated credit scoring system, is seen as too costly an option.[8]

(c) *Provides an unbiased analytical assessment.* Experian stated that individual scorecards provided an unbiased analytical assessment that was not reliant on an individual's judgement and allowed the provider to have consistent decision rules.[9] Mr Rees, Head of the Legal Committee of the CCA, said: 'I think what has been proven scientifically is that credit scoring systems are able to provide more credit more safely to more people than the old manual systems that were generally in use; this is scientific method applied to credit-granting.'[10],[11]

(d) *Increases the likelihood of customers repaying.* Customers will be more likely to repay if credit-scoring systems are in place—to boost their own ratings and give themselves access to cheaper credit. In general, the more providers a credit record is shared with the greater the inducement to repay as the more severe is the penalty for non-payment.[12]

(e) *Reduces the level of overindebtedness.* According to the *Financial Times*, the Bank of England has called for high street banks to increase the amount of positive and negative data they share with CRAs.[13] In addition, *Which?* states that it believes that poor credit data sharing is one of the chief culprits behind the UK's credit card serial borrowing crisis.[14] Sharing this data enables potential credit providers to get a more accurate assessment of a customer's financial position, and this should in turn reduce the level of overindebtedness.

(f) *Makes pricing mirror cost.* As other creditors can more accurately assess the risk of default they are able to price credit products in line with customers' risk profile and hence the price paid by 'good' customers is likely to fall. Evidence from US credit cards suggests that not only do prices fall for the 'good' customers but all prices fall as the market becomes more competitive.[15]

(g) *Reduces the market power of incumbents.* It has been suggested that creditors can use their information advantage over their existing borrowers to increase

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[6]L Klapper, *Development of Credit Reporting Around the World*, The World Bank, Development Research Group (2004), and *Doing Business 2004*, The World Bank, pp 55–69 (2004).
[7]L Mester, *What's the point of credit scoring*, Federal Reserve Bank of Philadelphia Business Review (September–October), pp 3–16 (1997).
[8]CC results of the mainstream questionnaires.
[9]Experian *Explaining Experian* (2005).
[10]Mr Rees's evidence to the House of Lords EU committee on 2 February 2006.
[11]Mr Rees told us that the research he was commenting on was in relation to conventional remote credit and might not necessarily be correct in the context of home credit.
[12]D Klein, *Promise keeping in the great society: a model of credit information sharing*, Economics and Politics 4, pp 117–136 (1992).
[13]*Financial Times*, *HSBC move on data sharing puts pressure on other banks*, 26 July 2005: 'The Bank linked a sharp rise in personal bankruptcies with the growth in unsecured lending, which it said accounted for the largest proportion of banks' bad-debt write-offs. The review said a big proportion of households borrowed from more than one lender, so creditors did not have a full picture of households' financial burden.'
[14]Which?, Evidence to the Treasury Committee on credit charges and marketing, second report of session 2004/05 (2004).
[15]J Barron and M Staten, *The Value of comprehensive credit reports: Lessons from the US experience*, Credit Research Centre, Georgetown University (2000).

their rents.[16] In addition, a credit provider taking on a new customer or a group of customers with no information about the likelihood of default will be at a disadvantage compared with an incumbent provider that has information about the likelihood of default. The Treasury Select Committee also noted that with the increased prevalence of risk-based pricing, non-sharing of positive information may preclude consumers from being eligible for lower rates elsewhere as competition for these customers is prevented.[17]

(h) *Increases credit penetration among 'higher risk' groups.* Evidence from the USA suggests that credit scoring has enabled a significant penetration of lending into lower socio-economic groups.[18] The same study suggests that credit availability increases when more data is provided.

4. Work by Pagano and Jappelli[19] suggests that a system that provides accurate, portable and transparent credit records containing repayment information is more likely to occur where there is greater mobility among economic agents, borrowers are heterogeneous, the credit market is large and the cost of information sharing is low. However, the absence of such a system can be a stable equilibrium in a competitive market if the expected benefit to the incumbents from informational rents (ie higher prices to 'good' customers) and lower competition (from both intra- and extra-credit providers) is greater than the expected benefits of sharing information.

Data sharing in home credit

5. In most credit markets in the UK some, and increasing all, of a customer's repayment data is shared between companies.[20] Data is contained on CRA databases and shared through closed user groups[21] under the principle of reciprocity (see Appendix 2.2) with the aim of promoting responsible lending. We have been told by providers of mainstream credit products that recent payment data (that relating to the last three months), full data[22] and data on similar credit products is the most predictive of future repayments but that the more data they had on customers the greater the predictive power of their scoring models. We were also told that providers of mainstream credit products were increasingly making credit decisions remotely[23] and hence relying on CRA data. Not being registered on a CRA would make credit more difficult for an individual to obtain from any provider of mainstream credit products we talked to.

6. By contrast, very little home credit repayment data or even default data is shared between home credit companies or with other credit providers. Only one large home credit company, LSB, currently shares full data with all three CRAs and even this data is not specifically identified as relating to home credit loans. In addition, CCA figures indicate that about 10 per cent of CCA members register defaults[24] with

[16]M Miller, *Credit Reporting Systems and the International Economy*, MIT Press (2003).
[17]Treasury select committee, Second report, 25 January 2005.
[18]J Barron and M Staten, *The Value of comprehensive credit reports: Lessons from the US experience*, Credit Research Centre, Georgetown University (2000).
[19]T Jappelli and M Pagano, *Information Sharing in Credit Markets*, The Journal of Finance 43, pp 1693–1718 (1993).
[20]For example, the Treasury Select committee second report (pp 57) stated that 'APACS members have agreed a new set of data sharing principles, including for the first time explicit support from all APACS members for the sharing of full data on credit card accounts (within the constraints imposed by law)'.
[21]The term 'closed user group' can be misleading as any credit provider may join as long as it provides data to an acceptable standard and signs up to the membership terms.
[22]As defined in the Principles of Reciprocity.
[23]New applications for consumer financial services result in around 200 million credit searches a year across the full range of organizations and products. Over 50 per cent is agreed remotely—ie with no face-to-face involvement by the lender. Experian written evidence to the House of Lords EU committee.
[24]Though there is no common definition of default, the CCA's advisory policy is that a member may consider registering a default with a CRA once an agreement has reached term, but less than one-half the repayments (or an amount totalling less than half the contracted repayments) have been made. Thus, if, at the end of a 28-week loan, less than 14 weeks' worth of

Experian and another three members register defaults with other CRAs. The CCA told us that these lenders supplied, on a monthly basis, data to the CRA about their accounts that were in default.

Credit scoring in home credit

7. Credit scoring, in its most general sense, is the ‘scoring’ of new and/or existing customers’ risk, for the purpose of issuing credit to them or managing the credit that is outstanding with them; it can be a formal or informal process and information that makes up the ‘score’ can come from a variety of sources. Table 1 outlines information sources used by the five largest home credit providers. Two information sources are used by all five home credit providers to assess loan applications: their own customer data (ie customers’ past repayment history including repayments on step-up loans held by the provider) and the customers’ own records (ie payslips and rental agreements etc).

8. Many of the largest home credit providers have systems of rules or scorecards which help them to define their better customers. These are primarily based on the customers’ repayment history and are used to highlight customers to whom more credit could be given. Paragraph 17 discusses one such system (the Provident credit scoring system, known as System Enhanced Lending (SEL)) in more detail.

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payments had been made, the account could be considered to be in default. Thus home credit businesses have a very different definition of default than that used by much of the rest of the consumer credit industry. The CCA told us that its definition was, however, acceptable to the Information Commissioner.

TABLE 1 **Information used by home credit companies to assess existing or new customers**

	Agent qualitative assessment	*Customer held records*	*Company data(the customers payment record)*	*CRA (public) **	*CRA (reciprocal)†*	*CRA (other such as search data)*
Provident	Yes	Yes	Yes *(use an internal credit scoring system (SEL), for example a non-quality customer applying to the call centre is rejected)*‡	No *(use an internal application scorecard built by Scorex a subsidiary of Experian)*	No	No
Mutual	Yes	Yes	Yes	Yes§	No	No
S&U	Yes	Yes *(wage slips council tax receipts)*	Yes	Yes§	No	No
LSB	No	Yes (*including salary details for the last three years). LSB customers also fill out a compre-hensive application form*	Yes (*payment history is crucial for future loans)*	Yes§	Yes.§ *LSB is a Full Subscriber to Experian, Callcredit and Equifax*	Yes
Cattles	Yes	Yes *(credit is denied if insufficient income)*	Yes *(each customer has a credit limit)*	Yes§	No¶	Yes
Other home credit companies	Yes	Yes	Yes *(for example, step-up loans are an important part of credit control and responsible lending*)#	A significant number of CCA members use this information at least in relation to new customers§#	About 10 per cent of CCA members add default data to Experian and hence could search default data	No

Source: Home credit companies.

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*The Information Commissioner (IC) breaks down CRA information into three types: public information, information from lenders (reciprocal) and other information. *Credit Explained* published by ICO in March 2005 indicates the types of information together with the amount of time it stays on a consumer's file.

†According to the Standing Committee of Reciprocity (the body that revises the principles of reciprocity regarding the data on credit performance shared by closed user groups) there are two basic types of reciprocal data subscribers:

- *Full Subscriber:* The subscriber agrees to provide positive, delinquent and default data on a regular (usually at a minimum monthly, depending on the nature of the product) basis on all accounts within a particular product/portfolio where the necessary legal consents/notifications have been obtained.
- *Default-only Subscriber:* The subscriber agrees to provide data on all accounts which are in default. A definition of default is included in Section 3.2. Reference should also be made to the latest Guidance Note on Defaults published by the Information Commissioner.

Source: POR September 2005.

‡A standard non-quality customer is one that has a quality score of [✂] per cent or less for their last [✂] payments. However, at the present time, a quality score of [✂] per cent is used in the call centre as the quality score cut-off point.

§A credit check may only be made for some loans, for example if the loan is above a certain amount. Neither LSB nor Cattles credit check 'canvass' customers until such customers have a loan of a sufficient size.

¶ Cattles has in the past supplied default customer data through the CCA to the CRAs [✂].

#CCA submission.

CRA information

9. As a user of full reciprocal data LSB provides monthly data on its home credit customers to the CRAs and in return is able to access full data from the CRA when doing a credit check. LSB told us that its credit-scoring models (which are mostly based on CRA information ([✂] to [✂] per cent)) are highly predictive,[25] served a useful purpose and gave a good picture of the arrears level; LSB also stated that [✂] to [✂] per cent of the people considered for loans had credit from other providers. In terms of cost, LSB suggested that the biggest cost of the system was the cost of the credit check (Callcredit indicated that this cost could vary from [✂] to [✂], depending on volume) and that administratively it did not find it to be a burden to contribute the data to the CRAs though it had spent heavily on IT systems.

10. Mutual, S&U and Cattles do not supply data on their home credit customers to the CRAs[26] and hence can use only the public information collected by the CRA. However, all three companies use public CRA information (ie information on county court judgements, electoral roll and individual voluntary arrangement records) for the assessment of some loans. Cattles will additionally look at the other information collected by a CRA such as recent search information (see Appendix 2.2 for a definition).

11. Provident told us that it had trailed the use of public CRA information for customers applying to its call centre but that it found that this information over and above the data it already collected added nothing to the predictability of default. Consequently it is the only large provider that does not use any CRA information at all.

12. Out of the four companies that collect CRA data to assess customers, two ([✂]) are less likely to lend to a potential customer if that customer has no record with the CRA. [✂] told us that such customers were unacceptable risks because they were likely to be *(a)* transient, *(b)* working illicitly, *(c)* fraudulently claiming benefit or *(d)* non-householders. [✂] told us that it would be 'wary' of such customers and that it was 'not a good sign'. The CC has been given evidence which suggests that such customers at a point in February 2004 constituted about a quarter ([✂] per cent) (see paragraph 2.115) of Provident's customer base.

Non-CRA information

13. Home credit companies expect agents to use their local knowledge when assessing new customers. For example, Cattles told us that it expected agents to corroborate certain information supplied by the customer and Park told us that 'agents will ascertain any friends, relatives or neighbours who have traded with us'.

14. Some of the five companies questioned will bring in a manager or a credit controller to actually underwrite the loan, for example S&U suggested that it uses controllers as they have no financial interest in promoting new customers, while others such as Provident will rely much more on the agent's opinion. Provident said that agents became attuned to making good lending decisions; however, agents were still provided with credit limits dependent on the customer and on the agent's record (see paragraph 16).

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[25]LSB said that these scoring models were highly predictive because of the type of credit products LSB offered; being higher value over the longer term. It also said that it did not use this scoring model for short-term products, as indicated in the first footnote to paragraph 5.

[26]Cattles told us that it had in the past supplied default customer data through the CCA to the CRAs. However, it does not make use of the reciprocal arrangements (at default level only), preferring to rely on data gathered directly from customers, agents or internally.

15. We have been told that the payment book provides an accurate, portable and transparent credit record and that any home credit or other small sum credit provider is able to see the complete up-to-date payment history. The CCA also said that the payment books had more of a direct relevance to home credit customers than CRA data.[27] However, we were told by Park that not all customers keep up-to-date payment books[28] and home credit lenders told us that they treated them with some caution as customers might not always show them comprehensive data on their payment histories (and, if in need of credit, have a powerful incentive to conceal defaults or imperfections or just show the book that is in order). We have been told by Provident that agents are encouraged to request payment book information when issuing a loan, particularly when the customer has a current home credit loan with another provider, and that the payment book will have an impact on the size of the initial loan offered.

16. The five largest home credit providers collect and electronically store their customers' repayment data. This data is often used to decide which customers to market additional loans to and which customers to lend additional amounts to. Park told us that the weekly limit was gradually increased as the customer demonstrated a repayment level that was comfortable and affordable. An important part of the repayment data comes from step-up loans; for example, Provident told us that 'a home credit lender will tend to make a smaller trial run loan to trial the customer's ability to handle repayments' while the CCA told us that home credit providers' use of step-up loans demonstrated how home credit companies used data, whilst minimizing risk on the first loan by granting only a small amount of initial credit.[29] Provident also noted that once a customer was gained by a provider, the provider would rely heavily on its own repayment data of the customer for any future lending.

17. Provident told us that its 'SEL[30] scorecard uses the customer's payment and issue history with Provident to determine whether a customer is sufficiently credit worthy to be granted further credit'. Provident's SEL data is used to screen any potential customer who applies through its call centre (if they previously have had a Provident home credit loan) as well as to give new and experienced agents limits on what they can lend existing customers without requiring a manager to sign off the loan. Provident's call centre will currently deny future credit to any customer who has a quality score below [✂] per cent (indicating that they have missed [✂] out of their past [✂] payments or equivalent). Provident told us that SEL had saved them more than £[✂] million in 2004 directly[31] and more if indirect benefits were taken into account such as ability to market more products and reducing the management time in assessing new loan applications etc.

[27]CCA submission to the CC.
[28]Home credit customer research by NOP also indicated that 18 per cent of home credit customers did not have an up-to-date payment book in their possession.
[29]CCA submission to the CC.
[30]Provident described SEL as follows:

> To determine an existing customer's credit risk, every customer is scored every week using a behavioural scorecard, SEL. This scorecard uses the customer's payment and issue history to determine whether the customer is sufficiently creditworthy to be granted further credit. A message is then sent from the system onto the collecting list used by the agent indicating where a customer can be granted further credit and where no further credit should be issued at the current time. Any credit to a customer which is not indicated by the message on the collecting list or is outside an agent's individual lending limit must be authorised by local management. A report on the branch system is produced every week which highlights lending to customers not recommended by the scoring system. The message produced is only a guide to the agent and the final lending decisions are still made by the agent or manager. This process is run weekly to reflect the latest payments by, or issues to, the customer and every customer is re-scored every week whether or not credit is currently required. Agents are still required to assess the affordability of any credit to existing customers and to take the final lending decision as they have face to face contact with the customer and will be aware of information not available to the scoring system.

[31]Provident told us that the difference in contribution per customer was more than £[✂]. Given that Provident had 1.5 million customers, this suggests that the benefit of the system is £[✂] million a year not including the benefit of the 'go large' initiative which would not have been possible to introduce without SEL.