Understanding Consumer Over-Indebtedness Using Counselling Sector Data: Scoping Study

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APPENDICES

Summary

The findings of this study can be summarized as follows

- Individual-level data on consumer indebtedness collected by debt counselling agencies provides a rich source of information unparalleled in household surveys, the national accounts or data available from lenders. When issues of sample selection and attrition are taken into account, the data allows for high quality statistical analysis of consumer indebtedness.

- The Consumer Credit Counselling Service (CCCS) collect and hold very high quality data on client 'balance sheets', incomes and expenditures, together with detailed data on the composition of client debts. CCCS counsel approximately 100,000 individuals per annum and offer Debt Management Plans (DMPs) to approximately 20,000 individual per annum. Their data holdings offer a large sample size with a healthy time-series dimension. They demonstrate best practice in data collection and holding within the sector.

- CCCS data is highly usable for statistical analysis. The data is coded and categorized on a consistent basis, and allows the researcher to transform the CCCS database into a dataset fit for statistical analysis with relative ease. The investigators were able to create two datasets for analysis: a dataset comprising all clients who were counseled (by telephone) by CCCS between January 2004 and December 2008, and a dataset subsequently tracking all individuals who began a CCCS DMP in the same period.

- Analysis of the New Client dataset suggests that it is a valuable source for statistical indicators of both the cross-sectional and time-series dimensions of consumer debt. It can be used to track over time the mean (and distributions) of client characteristics, including various measures of debt exposure and 'overindebtedness'. The data also allow econometric modeling of both. As such, the data are an important complementary data source to the commonly used data derived from more aggregate statistics such as those provided by the Bank of England.

- Analysis of the DMP dataset suggests that it offers a wealth of data relating to clients on DMP plans, at high frequency (monthly), with regular re-surveys of client financial and demographic information. It can be used to model the likelihood of lapsing from a plan, as well as micro-simulate changes in plan terms

- Overall, the report is very positive about the scope for using CCCS data as a complement to BIS's existing data sources, and the report also suggests a number of directions for future research using the datasets.

1. Introduction

This report describes the results of a project commissioned by the Department of Business, Innovation and Skills which took place between August and October 2009. The project's objectives were to investigate the feasibility of using individual level data on clients of the Consumer Credit Counselling Service (CCCS) as a dataset for analyzing overindebtedness and, assuming this was feasible, to construct a dataset that was appropriate for statistical analysis and to provide some basic descriptives from that dataset. The project showed that it was feasible to achieve these objectives, and this report describes both that dataset and provides some basic statistical analysis.

The study was undertaken by Prof. Richard Disney (Professor of Economics, University of Nottingham) and Dr. John Gathergood (Lecturer in Economics, University of Nottingham) in collaboration with CCCS. The study followed on from a earlier study conducted by Richard Disney, John Gathergood and Sarah Bridges (also a Lecturer in Economics at the University of Nottingham) on the causes of consumer overindebtedness using U.K. household survey data, commissioned by the then Department for Business Enterprise and Regulatory Reform.

The key objective of the study, as described in the project proposal, is: *The aim of the study is to create a coded dataset and user guide suitable for a statistical analysis of over indebtedness among households in the United Kingdom using individual-level client records held in the Consumer Credit Counselling Service (CCCS) client database.* The principal element of the study was the creation of a dataset fit for econometric analysis using individual-level client records held on the CCCS database. As a precursor to a future research project, the study also involved a preliminary analysis on the feasibility of using CCCS data for ensuring research projects. These could include:

1. A 'monitoring system' for debt distress based on current and updateable household data, to complement macroeconomic indicators.

2. An investigation at the household level of the persistence of over indebtedness across selected household types.

The subsequent contents of this report are as follows. Section 2 sets out the advantages of using CCCS client records compared to other available data sources. This was inherent in the project proposal; we can now be more specific on this issue. Part One (Sections 3 and 4) of the report proper describe in detail the stages involved in the construction of two datasets from CCCS client records: a repeated cross-section dataset for monitoring debt distress and, secondly, a longitudinal dataset based on clients

receiving ongoing debt advice for investigating the persistence of overindebtedness across household types. Part Two (Sections 5 and 6) of the report provide some simple descriptive statistics from the constructed data set and thereby illustrate the feasibility of using it to investigate various research issues, such as using the cross-section dataset for monitoring debt distress and of using the DMP data to examine the performance of DMPs and persistence of consumer debts (especially the time to repayment and welfare cost). A final section of the report therefore provides some recommendations on future work which could be conducted using these datasets.

2. Sources of Data on Consumer Overindebtedness

The project objective detailed in the introduction sets out the primary motivation for using data held by CCCS as a key resource in understanding trends in consumer over-indebtedness. Now that we have been able to access and understand more fully the data held by CCCS, we can provide a fuller justification for use of the CCCS data and emphasize its advantages. A full summary of the available data sources for understanding consumer overindebtedness is provided in Appendix 1. Our previous report on 'Drivers of Over-indebtedness'[1] also describes these other data sets in greater detail This section outlines the distinct advantages of counselling sector data in general and the use of data provided by CCCS in particular.

Ideally, for the understanding of consumer indebtedness a researcher would have a representative household survey with detailed data on household assets and debts, on arrears on credit lines and household bills, on incomes and expenditures, on characteristics of the household and key 'events' (such as loss of job or a health shock); all collected at high-frequency. In an ideal world, these data would also include information on repayment histories and on credit limits applied by lenders, to give a complete picture of both the household's current financial position and the available credit to the household. Finally, this data set would contain repeated observations over time for both households with and without debt problems that would allow a duration analysis as households are observed to move into and out of debt problems. And one could think of more features of the data set which might be desirable. However, such a dataset as described has not existed until recently although the Wealth and Asset Survey which commenced in 2006-07 and accompanying Household Annual Debtor follow-up should provide better information in due course.

[1] Bridges, S., Disney, R. and Gathergood, J. (2008) **Drivers of Over-indebtedness**, Report to Department for Business Enterprise and Regulatory Reform, October.

Organizations providing financial advice typically collect a range of data on their clients demographic, income and financial characteristics for the purpose of providing that advice. In the U.K., financial advice is available from a large number of fee-charging and non-fee-charging agencies, some of whom also provide financial services such as the administration of Debt Management Plans (DMPs)

The main advantage of using counselling sector data for analytical purposes is that the counselling agency collects a wide range of socio-economics and financial data at the individual level, providing a complete picture of client assets and debts, in order to inform their advice. Furthermore, clients of counselling organizations have an incentive to reveal true information to debt counselors in order to gain better financial advice. Also, the use of counselling sector data simplifies the issue of identifying over-indebtedness or financial distress, as consumers self-identify themselves as requiring advice and are asked in detail about their assets and debts. As well as this, where counselling agencies provide ongoing advice services and 'debt management plans', they typically collect data on the evolution of individual debts and arrears plus repayment behavior.

The main drawback of counselling sector data is of course that it inevitably 'selects' on a group of individuals who require (or perceive themselves to require) counselling. This limits the scope for aggregating such data to provide a 'representative' picture of the position of households in the economy as a whole, especially if the counselling agency targets on particular sub-groups of the population such as the very poor or those with specific credit arrangements. Ideally, therefore, the credit counselling service data should be drawn from a counselling service that is available to a broadly representative population of those 'at risk'. Whilst the selected individuals who request counselling may not themselves be a representative cross-section of the population as a whole, it is likely that *changes* in the flow of applicants for counselling do contain important information for the economy as a whole. Our view is that there is inevitably a trade-off between quality of information and the self-selection of applicants when using such data sources, and so long as it is understood that any inferences drawn (for example on the reduction in indebtedness among those on debt management plans) is essentially a 'treatment effect for the treated', such data and form a very useful evidence base to supplement other sources simply because of the sheer quality and comprehensive nature of the collected information.

CCCS collect data on client assets and debt, income and expenditures and demographic information for approximately 100,000 individuals per annum who contact the agency and participate in a counselling appointment. This sample size is much larger than that available in a household survey (which typically interviews 10,000 individuals, of which up to 6% might have credit arrears). The agency also holds

records on the origin of the client's enquiry to CCCS (approximately 40% of CCCS clients are referred to the charity by lenders) and on the outcome of debt counselling. For individuals who choose to participate in a DMP (the typical duration of which is 8 years), CCCS collect and hold data on all payments of debts made under the plan, as well as refresh data on all other variables captured at an annual counselling re-interview. Therefore the CCCS data holding offers potential for both the monitoring of consumer over-indebtedness via the flow of clients contacting CCCS for advice, and the persistence of over-indebtedness across client groups through those observed on a debt management plan.

As outlined at the beginning of this section, no single data source in the U.K. provides ideal individual level data for the purposes of monitoring and researching consumer over-indebtedness. Of the data currently available, the CCCS data provides distinct advantages in terms of the size of the dataset, its detail and its cross-sectional and longitudinal dimensions. All statistical analysis must pay attention to the type of data being utilized and the limitations of statistical inference which can be drawn from the data. The dataset we have constructed using CCCS's data is informative about a particular sample of individuals, with data collected for particular needs. However, on balance we think this source of data is extremely valuable for understanding consumer over-indebtedness and the particular questions that this project seeks to address.

PART ONE: CREATION OF THE DATASETS

3. Utilizing CCCS Client Records

This section describes the creation of the two datasets for the statistical analysis of consumer overindebtedness (as set out of the second stage of the project) based on CCCS's client records. CCCS collects and holds data principally to inform and facilitate credit counselling and in a format useful for internal processes and needs. The needs in this project differ in some respects from those of CCCS and so a major part of this project is the creation of datasets fit for statistical analysis. We would like to emphasize from the outset that CCCS have been extremely helpful to the project by providing data in a usable format, together with detailed data dictionaries and guidance on CCCS's internal data collection and holding procedures. They have done so at minimum cost and have incurred costs not anticipated at the start of the project for which they have sought no additional recompense. CCCS staff has been generous with their time in solving some problems which arose with the logistics of data transfer and in answering questions about the data we have put to them. We are impressed with the professionalism of the organization and especially with the sophistication of their data collection and storage processes, which demonstrate best practice in the free-to-client debt advice sector

3.1. Data Transfer

CCCS have provided data on all clients who contacted the organization by telephone between January 2004 and December 2008. CCCS also provide advice via an online counselling tool, for which data is not available at present in a usable format for this project. The sample provided to us covers 90% of CCCS total clients over the period. This time period was chosen due to CCCS's introduction of a data warehouse at the beginning of the period and the move to a new data warehouse at the end of the period. Since the inception of the new data warehouse project, only a few months of data are available (from February 2009) onwards and these data may be susceptible to teething problems with the new system. However, in future updates to the dataset could be provided.

Data was provided in anonymised format with all individual identifiers removed (name, address, other contact information, date of birth, internal CCCS identifiers) and replaced with a single randomly-assigned 8-digit numerical identifier. The lowest-level geographic identifier provided was the first 3 or 4 digits of the client's postcode. It would not be possible for anyone in possession of the data to infer the identity of any individual client of CCCS from the data.

Transfer of the data and conversion into a format fit for analysis in statistical software was a non-trivial issue. The electronic size of the data transferred was approximately 20GB, comprising over 400 million pieces of information. Data were extracted from the CCCS data warehouse in tab-delimited format in a number of separate files (covering demographic data, income and expenditure data, assets and liability data, data relating to the counselling interview) and transferred via external data storage to the University of Nottingham. This was then read-into our statistical software package (STATA). This was a reasonably demanding process computationally and took in total approximately 5 working days to achieve.

Were further data transfer to occur on an ongoing basis, we would envisage the process being quicker as updates of data involve smaller data extractions which could be read into STATA in a shorter time period. Also, the initial reading-in of data into STATA required the creation of a large amount of 'code' which could be easily replicated for updates.

3.2. Coding and Labelling / Categorizing

The data holding, once read into STATA, comprised a number of files, equivalent to a number of very large spreadsheets, with rows of data connected by an individual identifier. Some files contained one-observation per individual (such as a file which recorded the date and time when the client first contacted CCCS) while others contained multiple lines per individual, such as a listing of client expenditure and income details over a number of years. Much of the data was uncoded, that is, inserted into the spreadsheet as written text. To enable statistical analysis, this data had to be converted into numerical data. For example, descriptions of the client's labour market status (e.g. employed part-time, employed full-time, unemployed) had to be converted into numerical variables, such as a variable for whether the individual is employed (taking a value of 1 if employed, 0 otherwise). In most cases variables required some 'cleaning', such as numerical data which counselors had mistakenly entered as non-numerical information, or values that had been entered which were outside plausible ranges. The details of these recoding, categorizing and labellings are not included here, but are coded into STATA .do files (essentially programs of commands to modify the data) freely available to BIS on request. The construction of .do files involved an initial investment of approximately 10 days work, but the files substantially reduce the time period required to undertake the same process for updates of the data. Section 4 includes a codebook for the data, which describes each variable in detail.

3.3. Selection of the Relevant Sample for Data Analysis

Use of CCCS data for statistical analysis requires an understanding of what data CCCS collect at what stages in the counselling process, the means by which the data is collected and for what purpose it is collected. This is an important issue because the context in which data is collected is essential to underpin a correct statistical interpretation. The section sets out the nature of the CCCS client base and stages of data collection.

Clients who seek debt advice can utilize CCCS's service by either contacting the Service in person, by telephone or by making use of the CCCS online advice tool (excluded from our dataset). Upon contacting CCCS, clients are asked in general terms about the nature of the advice that they need. (Some individuals are directed to other services at this stage, for example some individuals mistakenly contact CCCS expecting types of advice which cannot be offered by the Service). Of those seeking advice on debt-related matters, the majority raise questions relating to specific advice or in relation to an issue that can be dealt with directly by the counselor. No individual information on this type of client is collected. If the client wants detailed advice on how to handle their debts, the individual is offered a counselling interview, which typically occurs within one week via telephone, at which detailed information is shared by the client with the counsellor. Approximately 40% of clients who fall into this category are referred to the service by their creditors. At the counselling interview stage, the counselor obtains detailed information on client incomes and expenditures, assets and debt, plus demographic information so as to obtain a complete picture of the client's financial position.

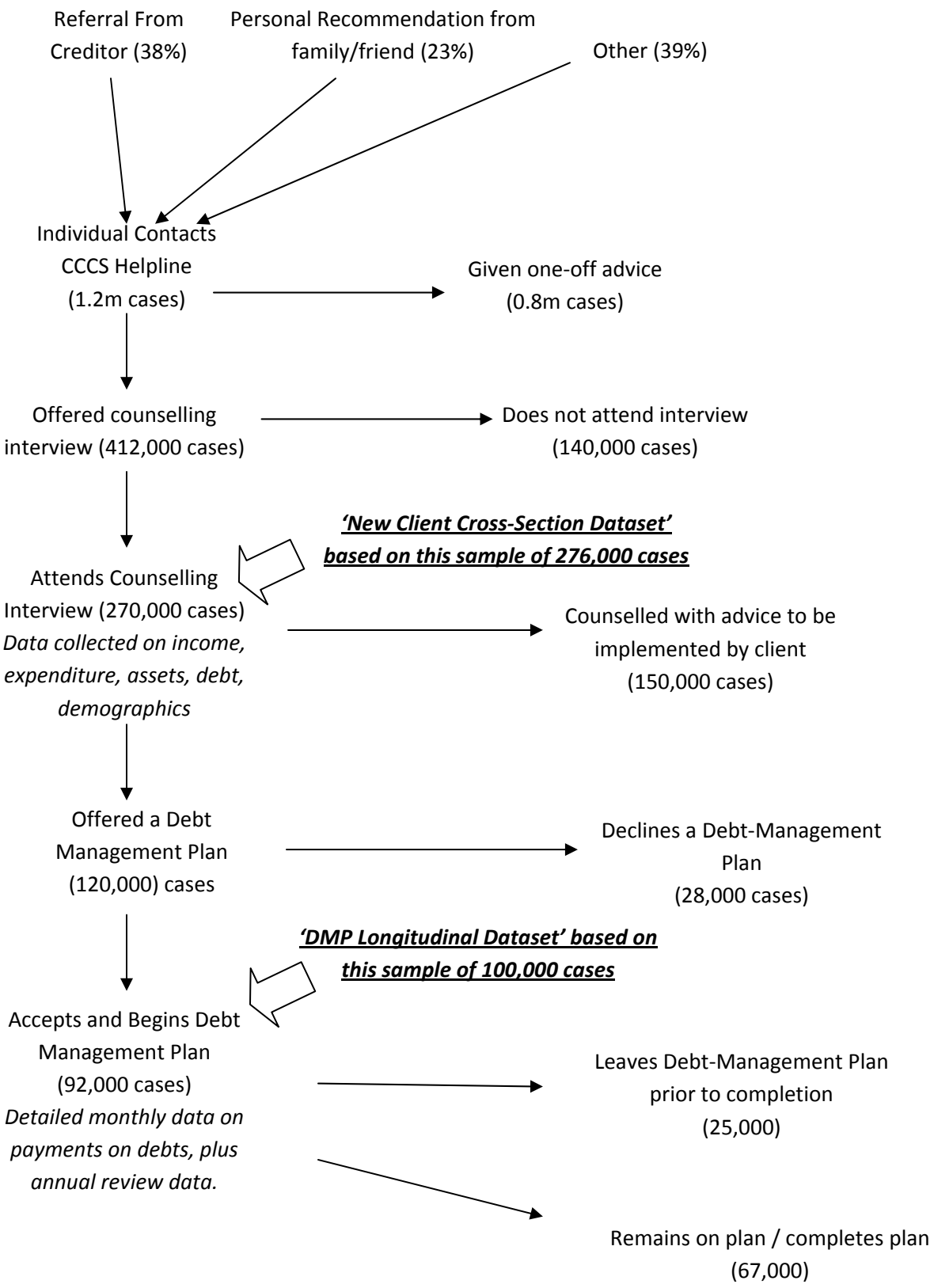
Following the interview, the counselor will recommend a course of action which takes two possible forms: firstly, that the client implements the advice of the counselor independently or, secondly, that the client moves onto a CCCS 'Debt Management Plan'. The former case typically arises where the client can organize the repayment of debt with minimal negotiation with the creditor, or alternatively where the client's financial situation can only be resolved via bankruptcy, an Individual Voluntary Agreement (IVA) or a Debt Relief Order (also offered by CCCS). The Debt Management plan is recommended to clients who can potentially repay their debts but only with substantial re-negotiation of payments with creditors. A DMP takes the form of an ongoing individual-specific plan to repay debts in which CCCS negotiates a repayment plan with the client's creditors on his/her behalf and then administers the plan, collecting payments from the client and disburses repayments to creditors. It involves CCCS monitoring client repayments, re-appraising the client's financial situation via an annual review and offering the client protection from creditors. No charge is levied on the client for this negotiation and for the

management plan in general, in contrast to privately-owned debt management agencies. The typical plan has an 8-year duration. Figure 1 below summarizes these stages in the counselling process and the approximate number of clients CCCS dealt with at each stage between January 2004 and December 2008.

As illustrated, there are two points at which data collection occurs: first at the counselling interview for those clients who are offered and accept an interview, and secondly via a DMP if the client is offered and accepts the DMP arrangement. Data collection occurs on an ongoing basis for this latter group of clients. On this basis, two separate datasets have been constructed in the present project: a 'cross-sectional' dataset (one observation per individual) including all individuals who reach the counselling stage and a 'longitudinal dataset' (in which there are repeat observations for each individual) based on individuals accepting a DMP. Hence all of the individuals in the second dataset are also recorded in the first dataset.

The principal use for the cross-sectional dataset could be for the monitoring of debt distress. This dataset captures the changing characteristics of individuals receiving counselling advice from CCCS. The main use of the longitudinal dataset could be to understand the persistence of arrears and repayment of consumer debts for those individuals who enter a DMP. As these are distinct datasets and usages, from hereon they will be referred to separately as the 'New Client Dataset' and 'DMP Dataset' respectively.

Figure 1: CCCS Client Activity 2004-2008



4. Data Outputs

4.1 'New Client Cross-Section Dataset'

The 'New Client' dataset contains 271,760 observations of individuals who participated in a counselling appointment between January 2004 and December 2008. Table 1 below lists the variables collected by CCCS and included in the New Client dataset. The data can be broadly categorized as follows:

Demographic information: age, gender, marital status, family size,
labour market status, occupation,

Financial information: value of all debts: unsecured, secured, car loans
value of all assets: financial, housing, car
value of all expenditure, by types
value of monthly income (also available by type)

Unsecured debt in detail: balances for each form of unsecured debt
contracted payments for each type of unsecured debt
term remaining for each type of unsecured debt

Table 1: Variables in New Client Dataset

Variables Name in Dataset	*Description*	*Comments*
pid	individual identifier	
hlrefno	name of referral organization	e.g. Capital One
hlrefc	category of referral organization	e.g. credit card provider
ctime	length of counselling interview	in minutes
cyear	year of counselling interview	
cmonth	month of counselling interview	
Demographics		
birthyear	year of birth	
age	age	
occupation	occupation by category	e.g. higher education
postcode	first 3 / 4 digits of postcode	
region	region of residence	
noofsmokers	number of smokers in household	
mstat	marital status	
empstat	employment status	
male	male individual	
hstatus	housing ownership status	
nadults	number of adults in household	

ndep	number of dependent children	age under 18
Finances		
udebt	total value of unsecured debt	
mortdebt	total value of mortgage debt	
hvalue	total value all housing owned	including second homes
hpdebt	total value hire-purchase debt	including self-employed
othdebt	total value other debt	
finasset	total value of financial assets	
carvalue	resale value of car	estimated by respondent
mortterm	months left to pay on mortgage	for all mortgage types
Income and Expenditure		
clothing	total monthly spending on clothing	
travel	total monthly spending on travel	incl. work-related expenses
food	total monthly spending on food	
services	total monthly spending on utilities	
housing	total monthly spending on housing	incl. mortgage /rent
motoring	total monthly spending on motoring	
leisure	total monthly spending on leisure	
priority	total monthly spending on priority debt	CCCS category
sundries	total monthly spending on sundries	
sempspend	total monthly self-employed spending	
other	total other spending	
income	total monthly income (net)	also recorded by type
Details of Unsecured Debts		
udcat - udsc	variables recording balances on unsecured debts for: catalogues, collection agency, credit card, ge capital, overdraft, personal loan, store card, other	1 variable per category
cpcat-cpsc	variables recording contracted monthly payments for each of above, where applicable	1 variable per category
tcat-tcsc	term remaining on repayments for each of above, where applicable	1 variable per category

The 'Details of Unsecured Debts' variables provide a debt-by-debt account of balances, contracted payments (where applicable, such as for personal loans) and term period remaining (again, where applicable) for each client. CCCS do not ask clients about the value of arrears on unsecured debt; instead counselors ask for one figure including the current value of both the debt item and any arrears accrued on it.

By way of illustration, the data snapshot below shows a record for one CCCS client. The client, who was counseled in February 2008, was a 25 year old female single full-time office/clerical worker living in

rented accommodation in the south-east who had been referred to CCCS by a family member /friend. She had total unsecured debts of £9,583 of which £7,158 was on catalogue credit, £800 was overdraft and £1,733 was a personal loan. There were five debt items in total. The terms of the catalogue debt included a monthly repayment of £215 for 100 months; the terms of the overdraft included an implied £40 per month payment over 20 months; the terms of the personal loan included a £87 per month payment over 20 months. Her monthly post-tax total disposable income was £1,272. Her total monthly expenditure was £1,045. So by her self-reported expenditure values, she could only afford payments of £227 per month but was contracted to pay £337 per month.

pid	hlrefo	hlrefc	ctime	cyear	cmonth	birthyear	age
1000015	Family/Friend	Personal Recommendation	60	2008	2	1982	25

occupation	postcode	noofsmokers	region	mstat	empstat	male
Office/Clerical	BN21	N/A	South East	single	employee - full time	female

hstatus	nadults	ndep	udebt	mortdebt	hvalue	hpdebt	othdebt	finasset	carvalue	mortterm
renter	2	0	9583	0	0	0	0	0	0	0

clothing	travel	food	services	housing	income	other	motoring	leisure	priority	sempspend	sundries	udcat	udcoa	udcct
25	0	173	104	440	1272	88	177	23	0	0	15	0	0	7158

udge	udoth	udovd	udpl	udsc	cpcat	cpcoa	cpcc	cpge	cpoth	cpovd	cppl	cpsc	tcat	tcoa
0	0	800	1733	0	0	0	215	0	0	40	87	0	0	0

cppl	cpsc	tcat	tcoa	tcc	tge	toth	tovd	tpl	tsc	ndebtitems
87	0	0	0	99.91978	0	0	20	19.91954	0	5

4.2 Comparison with British Household Panel Survey (BHPS)

As described in Section 3.3., one potential drawback of using CCCS client data is that it is not representative of the population at large, nor the proportion of the population affected by over-indebtedness. To gauge the possible extent of this selection issue, we here compare the characteristic of the CCCS 'New Client' dataset with those of households in the British Household Panel Survey (BHPS). The BHPS is the only nationally representative household (annual) panel survey in the United Kingdom. It surveys respondents across a range of socio-economic topics including household characteristics, labour market-related information, earnings histories, and (at regular 5 year intervals) household assets and debts. A detailed description of the asset and debt data contained in the BHPS can be found in our

previous report[2]. Another U.K. household panel, the Family and Children's Study (FACS) contains more detailed debt and arrears data, but is not representative of the U.K. population at large (it samples only families with children)

BHPS data on household assets and debt is for the years 1995, 2000 and 2005. Consequently, we choose to compare the characteristics of clients who contacted CCCS in 2005 with those of respondents in the BHPS in 2005. We identify household characteristic for BHPS households from the household head (the household member who contacts CCCS is not necessarily the household head) and restrict the sample to those households with a head of household aged under 65. Table 2 compares the average characteristics of CCCS households in 2005 with the average characteristics of all BHPS households in 2005 and with those of BHPS households who report that keeping up with payments on consumer credit is a a 'heavy burden' or 'something of a burden' upon the household (as opposed to 'not a problem'.

From Table 2, it can be seen that the typical CCCS client is younger, less likely to be male (though this may in part be due to a greater proportion of non-working spouses/partners contacting CCCS than responding to the BHPS); less likely married or self-employed. The CCCS clientbase exhibits a greater proportion of respondents who are employed, but also a greater proportion unemployed (hence there are a greater proportion of BHPS respondents out of the labour force compared to CCCS clients). Turning to financial characteristics, average household income among CCCS clients is lower, they have little in the way of financial assets compared with BHPS clients, and typically have unsecured debts 10 times greater than the BHPS sample as a whole and five times greater than the those BHPS households who report problems paying for consumer credit.

These comparisons reveal that the sample of CCCS clients differs from the BHPS sample in a number of dimensions[3]. As might be expected, CCCS clients have, on average, much larger unsecured debts and are more likely unemployed. Obviously, selection into CCCS clientbase on the basis of higher indebtedness causes this difference, which may well be correlated with singleness and gender. However, as noted, it may be the case that female spouses/partners are more likely to contact CCCS. It is notable that the selection bias on indebtedness is not reflected in markedly different age, employment or income comparisons. The very high level of average debt among CCCS clients relative to BHPS clients implies

[2] Bridges, S., Disney, R. and Gathergood, J. (2008) **Drivers of Over-indebtedness**, Report to Department for Business Enterprise and Regulatory Reform, October.

[3] However, it is likely that the 'selection bias' arising in the CCCS sample is less severe than that which would arise in a comparison with clients of other large debt advice agencies, which have narrower demographic clientbases.

that the average CCCS client has unsecured debts which would place them in the top 0.5% of the distribution of BHPS households by unsecured debt.

Table 2
Comparison of 2005 CCCS households with 2005 BHPS households

Number of Observations	CCCS Households	All BHPS Households	BHPS Households Problems Paying Consumer Credit
Age	37.8	43.7	40.4
Male=1	0.46	0.58	0.54
Married	0.33	0.66	0.67
Number of Children in Household	0.67	0.75	1.03
Employed	0.74	0.64	0.63
Self-Employed	0.04	0.11	0.10
Unemployed	0.10	0.03	0.04
Household Income	£1,400	£2,232	£2,177
Financial Assets	£100	£11,200	£1,800
Unsecured Debt	£30,500	£2,700	£7,500
Number of Obs.	54,000	7900	800

4.3 'DMP Longitudinal Dataset'

The 'DMP Longitudinal Dataset' contains observations of 91,257 individuals who began CCCS DMPs between January 2004 and December 2008. Clients in the DMP dataset are also captured at their initial counselling session in the New Client dataset and undergo repeat counselling interviews on an annual basis. Records of these repeat interviews are also captured in the dataset, though we delete these repeat observations in our analysis of 'New Clients' only in Section 6 of the report.

Records kept on DMP clients are extremely detailed. The dataset includes records of every reported change to client income plus all debt repayments, itemized at the individual debt category. Clients typically make monthly payments whilst on a plan, with a new record line added per month for each debt item. Over the period considered a typical client has over 100 records in the dataset – which amasses across all clients to a dataset with more than 10 million records of income changes and debt

payments. As each record includes 10 variables (detailing client id, date, amount etc.) this totals over 100 million individual cells of data. Statistical analysis of a data set of this size is beyond the scope of the computing power of the processors used on this project. In principle it is possible to analyse this amount of data. To do so would require the use of specialized computer equipment, such as the University of Nottingham's Supercomputing Centre which has been used by economists in the economics department to analyse datasets of up to 100 million observations and 1 billion cells of data.

Therefore, for the purposes of this report the data was condensed into an aggregated dataset (at the individual level) which reduced the number of observations to such a level where the dataset could be analysed with a conventional computer processor. Table 3 therefore lists the semi-aggregated data held on DMP clients in addition to the variables listed in Table 1. The variables listed in Table 3 record the key elements of a DMP plan: year and month of inception, total debt at inception, monthly scheduled payments and remaining term and whether the client is up to date with payments. It is possible to infer from the month of the most recent payment whether the client has lapsed on scheduled payments.

Table 3: Variables in DMP Longitudinal Dataset (in addition to data on clients beginning a DMP held in the New Client dataset)		
startdebt	value of debt upon beginning DMP	
dmpmonth	number of months client has been on DMP	
ndmpdebts	number of debts covered by DMP	
currentdebt	current value of DMP debts	
tend	number of months until client completes DMP	
producttype	type of DMP	CCCS offers two types, a standard DMP and an 'Extended DMP'
reqpmt	required DMP payment per month	
actpmt	the actual payment made toward the DMP in the previous month	
startyear	year started DMP	
startmonth	month started DMP	

As in the previous section, by way of illustration a snapshot of the data is provided below. The entry refers to the same client as the previous snapshot provided in Section 5.1 (pid 1000015), a 25 year old female single full-time office/clerical worker living in renter accommodation in the south-east who had been referred to CCCS by a family member /friend. She had total unsecured debts of £9,583 of which £7,158 was on catalogue credit, £800 was overdraft and £1,733 was a personal loan. There were five debt items in total. As the data snapshot below illustrates, at the point of beginning the DMP her total unsecured debt had grown to a value of £9,961, which was to be repaid in a total of 19 monthly payments of £499. She was 15 months through the plan, with 13 still to run. The current value of outstanding debt yet to be repaid was £6,269.45

pid	startdebt	dmpmonth	ndmpdebts	currentdebt	tend	producttype	reqpmt
1000015	9691	15	5	6269.45	13	DMP	499

actpmt	startyear	startmonth	currentyear	currentmonth
499	2008	4	2009	7

Across the 91,000+ individuals the size of the debt to be repaid, length of time over which repayments are scheduled to be repaid and monthly repayment amount vary greatly, as will be described in Part Two. Also, not all clients keep to their payment schedule. By the terms of both CCCS DMP and Extended DMP plans, if clients miss two payments in succession or a total of 4 payments over a 12 month period they are dropped from the plan (and hence have to seek other means of renegotiating their debts with their creditors), with exceptions made where clients present mitigating circumstances.

4.4 Conclusion to Part One

Part One of the report has explained how the CCCS client data were obtained and formatted into a format fit for data analysis. Ascertaining the usability of the data was the most essential and basic element of the scoping study, and the results are strongly positive suggesting that CCCS data being highly usable and well setup for statistical analysis. This is not always the case with proprietory datasets and we are very pleased with the quality of the data holdings and ease with which the data has been transferred into a usable format. The New Client and DMP datasets contain a wealth of information on client characteristics, assets and debts, incomes and expenditures. As we have noted, it is very uncommon for a household survey dataset to contain such detailed data, or for lender datasets to contain comprehensive information on all client debts in this form. Part Two of the report explores the possibilities for using these datasets to monitor the prevalence of overindebtedness and the

characteristics of the overindebted, and to improve our understanding of the dynamics of debt management/repayment plans.

PART TWO: FEASIBILITY STUDIES

5. Use of New Client Dataset for Monitoring Debt Distress

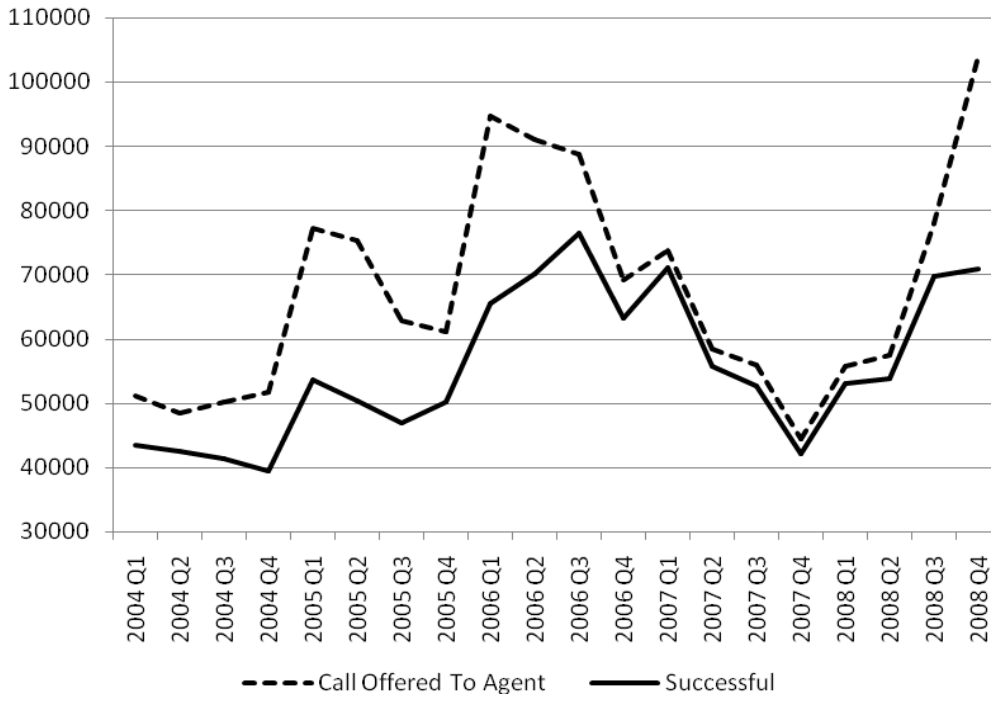
This section develops a framework to illustrate how indicators from the New Client dataset can be used to monitor patterns in overindebtedness among clients undergoing debt counselling with CCCS. The New Client dataset includes detailed information on individual socio-economic and financial characteristics, plus particularly detailed information on the individual's debts. This data source is very rich and could be utilized for the analysis of a number of specific issues relating to certain types of debts or clients. The purpose of this section, however, is to consider its suitability for the monitoring of debt-distress at a semi-aggregated level and to identify and monitor groups of individuals who are at risk of severe debt distress.

The focus of a debt-monitoring tool is the repeated cross-section dimension of the data. The database provides a month-by-month flow of individuals seeking debt advice, and a natural comparison is between the groups of individuals seeking advice at different points in time in order to identify emerging risk-groups and the characteristics of individuals affected by overindebtedness. This section begins therefore by examining the time dimension of the dataset and the evolution of the average characteristics of the sample over time. Socio-economic and financial characteristics are considered. The main conclusion of the section is that the profile of the over-indebted is remarkably steady over the period considered. When the determinants of household debt-to-income ratios and income gearing in the cross-section are compared over time, we also find remarkable consistency in the central characteristics of over-indebted households.

5.1 Client Numbers

Caution must be exercised when analyzing client numbers and drawing conclusions about the total number of individuals facing debt difficulties among CCCS's clientbase or across the U.K. economy more generally. This is because the number of clients counseled by CCCS is dependent upon both the level of demand for debt advice and CCCS's capacity to cope with demand, and because CCCS represents only part of the credit counselling sector, which in turn deals with only a proportion of the total number of overindebted households in the U.K. By way of illustration, Figure 2 below plots the number of calls by individuals attempting to contact the service via telephone between 2004 and 2008 and the number of calls answered by CCCS helpline staff.

Figure 1
CCCS Caller Numbers 2004 - 2008



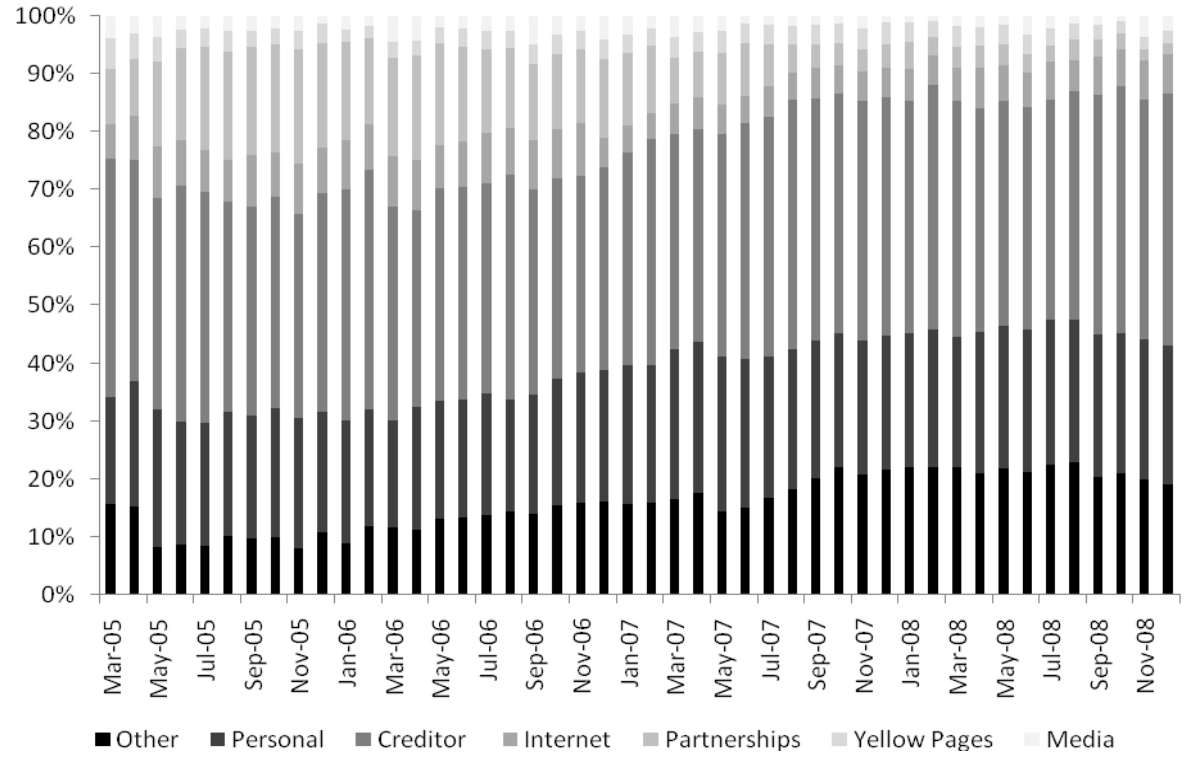
In the earlier period - 2004 Q1 through 2006 Q2 – the number of individuals contracting CCCS consistently grew quarter-on-quarter from 50,000 per quarter to 90,000 per quarter, allowing for some seaonality, especially in Q1. CCCS's capacity to answer all calls made lagged behind this growth in call attempts throughout the period. With falling caller numbers from mid-2006, CCCS's capacity to answer calls reached an accommodating level of approximately 70,000 per month at which over 95% of calls attempted were answered. Caller numbers fell to 45,000 per month by 2007 Q4, well within capacity, and as caller numbers began to increase again in 2008 Q1 the service had spare capacity to deal with calls. However, from 2008 Q3 caller numbers increased sharply and rose well above CCCS's 70,000 capacity, reaching over 100,000 per quarter. CCCS is currently increasing capacity to meet this growth in demand.

We are lead to believe that this pattern of demand for debt advice compared with supply capacity to handle enquiries is repeated across other debt advice agencies. Appendix 2, Figure 1, provides a comparable illustration for the National Debtline (figures provided by the Money Advice Trust). ND's capacity to answer approximately 15,000 calls per month has been sufficient to meet 80% of demand

since June 2007. However, in December 2008 the total number of calls per month doubled to approximately 40,000 causing the proportion of calls dealt with to fall below 50%.

Clients are referred to CCCS from a variety of sources: Creditors (approx. 40%), Family Members or Friends (approx. 20%) and the internet / yellow pages / media being the leading categories. As can be seen from Figure 3, the pattern of referrals appears steady over time. It is notable that periods of growing demand for advice from CCCS are not associated with rising referrals from creditors. Growth in the 'other' category suggests that clients are approaching CCCS from an increasingly broad spectrum of backgrounds and referrals.

Figure 2
Referral Categories, March 2005 - Dec 2008



An implication of these patterns in demand for advice and capacity constraints is that the time pattern of calls dealt with by the debt advice agencies is not a good indicator of the total demand for debt advice and the total numbers of individuals experiencing debt distress when demand for advice is rising and capacity constraints are being reached. However, it is apparent that demand for debt advice fell

substantially in the period following Q3 2006, and that might be taken as indicative of falling overindebtedness among CCCS's client base and possibly across households in general as a whole.

Therefore, we prefer not to refer to aggregated values of debts across all clients as this may substantially understate the aggregate level of overindebtedness in the economy in times of economic downturn due to capacity constraints being reached. Instead, we prefer to report average characteristics of callers and distributions across callers. Working on the premise that each caller has an equally likely chance of having their call answered (though CCCS do provide some priority to callers from particular creditor referrals), we take the average of characteristics among successful callers as indicative of the average of the whole population of successful and unsuccessful callers. This is the approach taken to the summary statistics included in the sections that follow.

5.2 Socio-Economic Characteristics of the Client Base

The New Client dataset can be used to examine the full variety of client characteristics described in Table 1. In this and the next section we focus on socio-economic and financial characteristics. The figures below plot the time-series of mean age, gender, number of adults and children within the client's household, employment status and occupational category. It is notable that across each of these categories the mean characteristics of CCCS client base are very stable over the sample period.

Figure 3 illustrates the how the average age and gender composition of the New Client sample has changed over time. Between March 2005 and December 2008 the average age of a client in the dataset rose from a little over 41 years old to a little over 42 years old. Over the same time period, the proportion of male clients initially fell from 44% to 41% before rising to 46% by the end of the period. Anecdotal evidence from CCCS staff suggests that in periods of rising unemployment the proportion of male clients tends to increase. That evidence is in keeping with the pattern evident in the data.

Figure 4 describes the time series for the average number of adults and number of children in the household of which the individual client is part. For the purposes of CCCS client records, the household is defined as the household unit in which the client normally resides. CCCS's median client is married or co-habiting, with the proportion of married or co-habiting clients showing a steady time pattern. The majority of clients have at least one child, and again the time-series for average number of children in a client's household is very stable over time.

Figure 5 plots the time series for the proportion of unemployed and self-employed clients in the New Clients. Since early 2006 there has been a steady increase in the proportion of clients who are unemployed. This trend is also apparent in National Debtline client data (Chart 2 in Appendix 1). As of late 2008, approximately 20% of CCCS's clients were unemployed. In early 2008 there was a marked increase in the proportion of clients who are self-employed following the introduction by CCCS of a debt counselling service geared towards the self-employed in late 2007.

The occupational categories of CCCS's clients in work (approximately 80% of the sample) are described in Figure 6. It is notable that more than 60% of CCCS's clients work in the four categories of office, manual, medical services and retail. These are typically low-skilled or semi-skilled occupations in which individuals are normally contracted on a medium-term basis (hence providing some job security), but which also exhibit higher income volatility at the individual level than professional and managerial occupations. The 'other' category is composed of civil service, educational, IT, middle-management, professional and senior management classifications.

Figure 3
Age and Gender of New Clients , March 2005 - Dec 2008

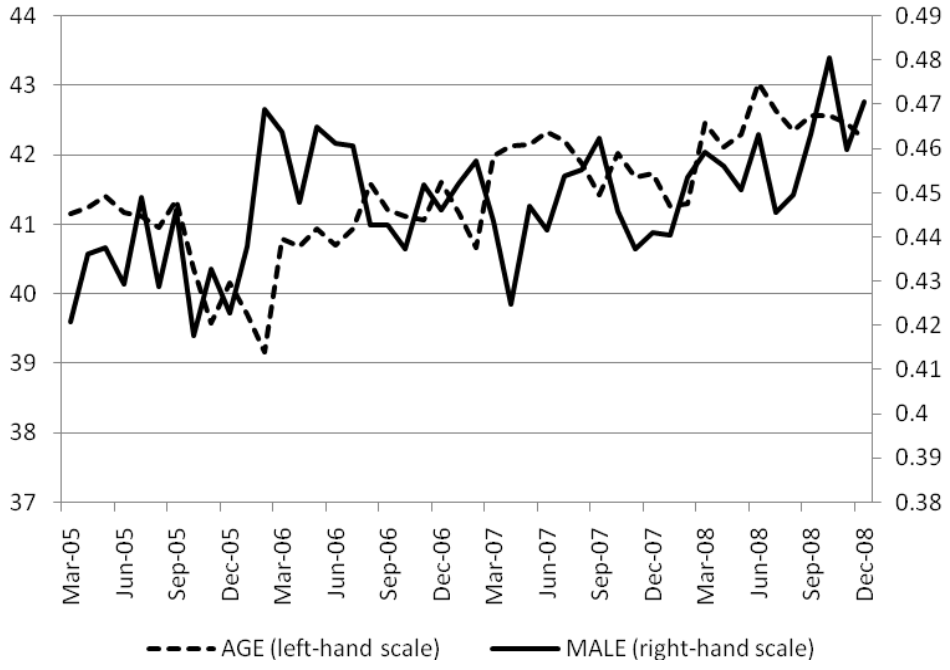


Figure 4
Average Household Size, March 2005 - Dec 2008

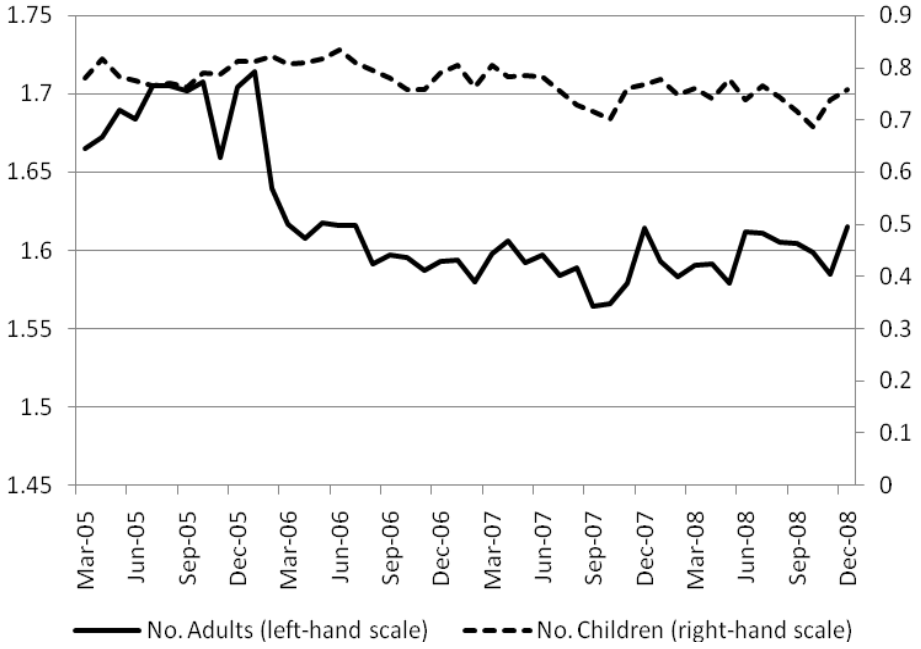


Figure 5
Proportion of Employed and Self-Employed
New Clients March 2005 - Dec 2008

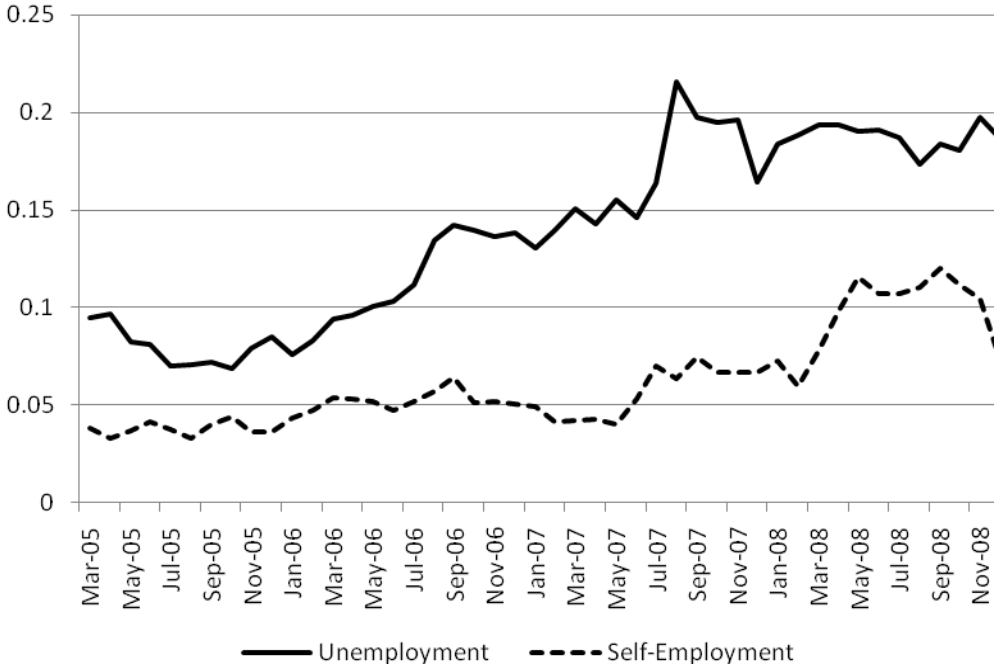
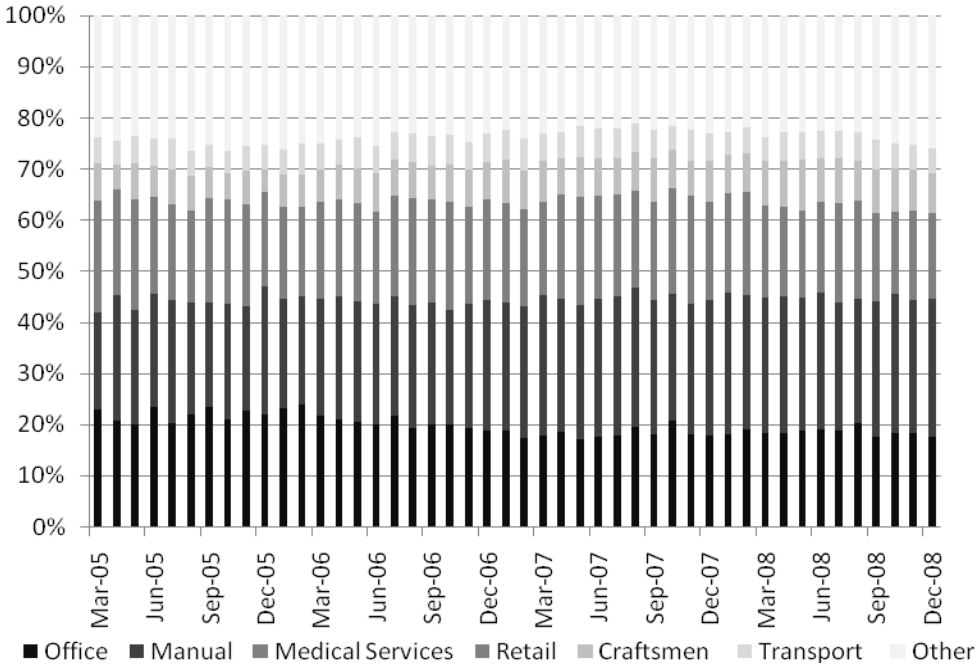


Figure 6
Occupation Categories, March 2005 - Dec 2008



5.3 Financial Characteristics of Client Base

This section describes the average financial characteristics of CCCS's client base. The cross-section distribution of client characteristics is discussed in the next sub-section. The previous section established that there is a stable profile of the average CCCS client: a low-to-semi-skilled middle-aged worker who is married/co-habiting with children. These characteristics are in part indicative of the profile of individuals who have been able to obtain substantial amounts of unsecured credit: old-enough to have a significant credit history, in employment in contractual work (but, as noted, in occupations likely to exhibit high income volatility) and with family commitments which reduce the flexibility of household expenditure. However, the obvious topic of immediate interest is the debt level of CCCS clients and how this has changed over time. There are various measures which could be calculated and included in a debt-monitoring report such as average unsecured debt per client, total debt per client, debt-to-income ratio (income gearing), and so on. The task of this section is in part to identify key statistics which summarize the financial situation of the client base. For ease of reference we reproduce here Figure 1 showing CCCS caller numbers between 2004 and 2008.

Figure 1
CCCS Caller Numbers 2004 - 2008

The time series of average client income is provided in Figure 7. The net income variable covers the post-tax and with-benefits income of all earners in the household with whom the client shares financial responsibility, normally the client's spouse or co-habiting partner. Over the period March 2005 to November 2008 average client household monthly income lies in the range £1200 to £1350 (£14,400 and £16,200 annual income respectively). It is notable that in periods of lower demand for debt advice, average client income falls. This might be indicative that periods of high demand for debt advice are associated with higher-income individuals seeking advice. Figure 8 illustrates the average net worth for CCCS clients over the period March 2005 to November 2008. Net worth is calculated as the sum of the value of the client's home, plus the value of any financial assets owned by the client, plus the value of all cars owned by the household, minus any mortgage principal outstanding, minus unsecured debts, minus car loans, minus hire purchase debts, and minus other loans. This measure of net worth excludes rights accrued in state and private pensions schemes. The different profiles for homeowners and renters are attributable to most homeowners having positive housing equity. Average net worth for renters over the period is around –£13,000; average net worth for homeowners is around +£50,000.

Turning to the profile of client debts, Figure 9 illustrates the time series for both average total unsecured debts per client and the average unsecured debt-to-income ratio. The average total value of a client's unsecured debt in and of itself is not informative as to the extent of the debt burden facing clients, because ability to repay debts is dependent in the short run upon client income and over the life-cycle on lifetime wealth ('permanent income'). Average total client unsecured debt over the period (which includes both secured and unsecured debts) averages between approximately £20,000 and £30,000. The average unsecured debt-to-monthly net income ratio is calculated as the average across all clients of their total debts divided by their total household income. This value falls steadily over the period to a ratio of approximately 16 by the end of 2008. An alternative measure of the burden of client debt is the value of the contracted payments which clients are obliged to meet on their credit commitments in order to avoid credit arrears. CCCS do ask their clients specifically about their mortgage costs, which are subsumed into a more general question about housing costs. Figure 10 illustrates the time series for contracted payments on unsecured debt as a percent of net monthly income.[4] Total average unsecured debt per client over the period is approximately £24,000, of which credit card debt and personal loan debt each account for approximately £10,000. Therefore the majority of the contracted payments for

[4] In calculating a 'contracted payment', CCCS utilise the absolute values of repayment specified on specific loan agreements e.g. personal loans and a fixed percent of the outstanding balance on another credit arrangements varying from 3% on credit card debt to 5% of catalogue balances and overdrafts.

which consumers are liable are repayments on personal loans and minimum payments on credit card debts. The time series for this statistics shows a gradual decline in average contacted payments to an average of approximately £650 by late 2008. This figure is steady relative to the time series for client numbers.

Figure 7
Household Income, March 2005 - Dec 2008

Figure 8
Household Net Worth, March 2005 - Dec 2008

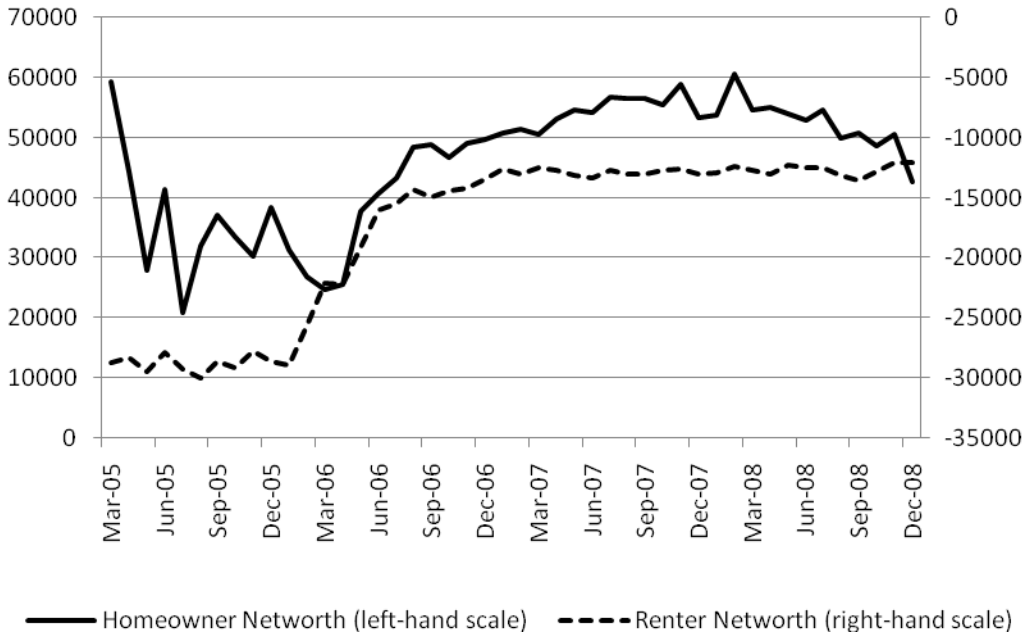


Figure 9
Total Unsecured Debts and Debt-to-Income Ratio, March 2005 - Dec 2008

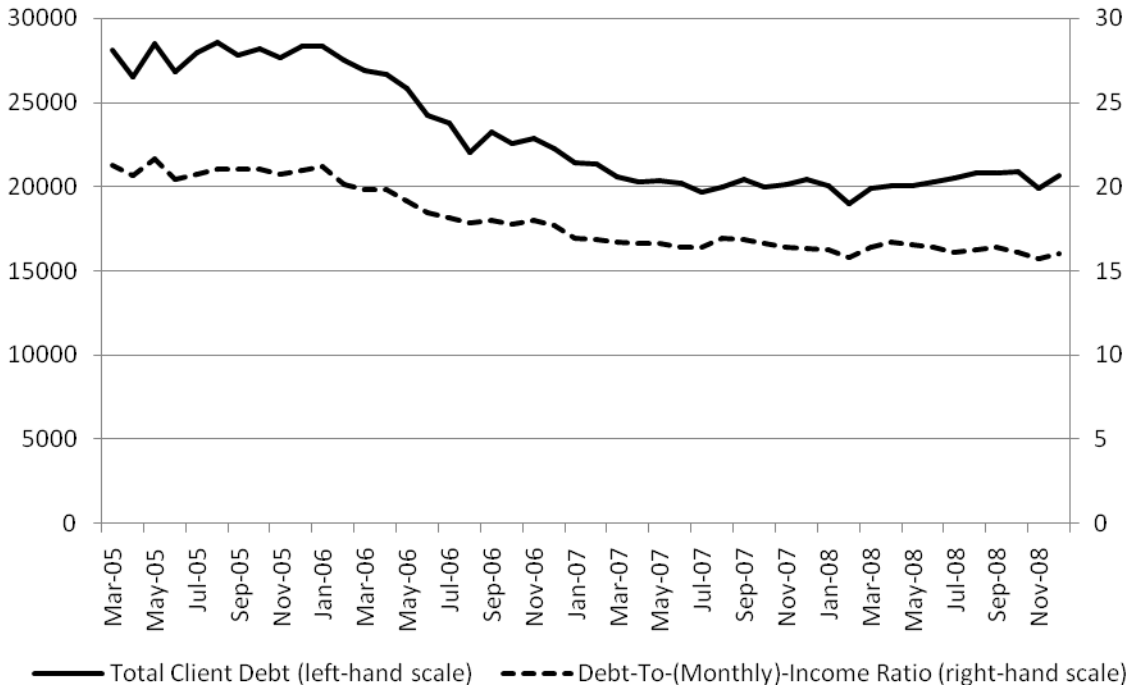
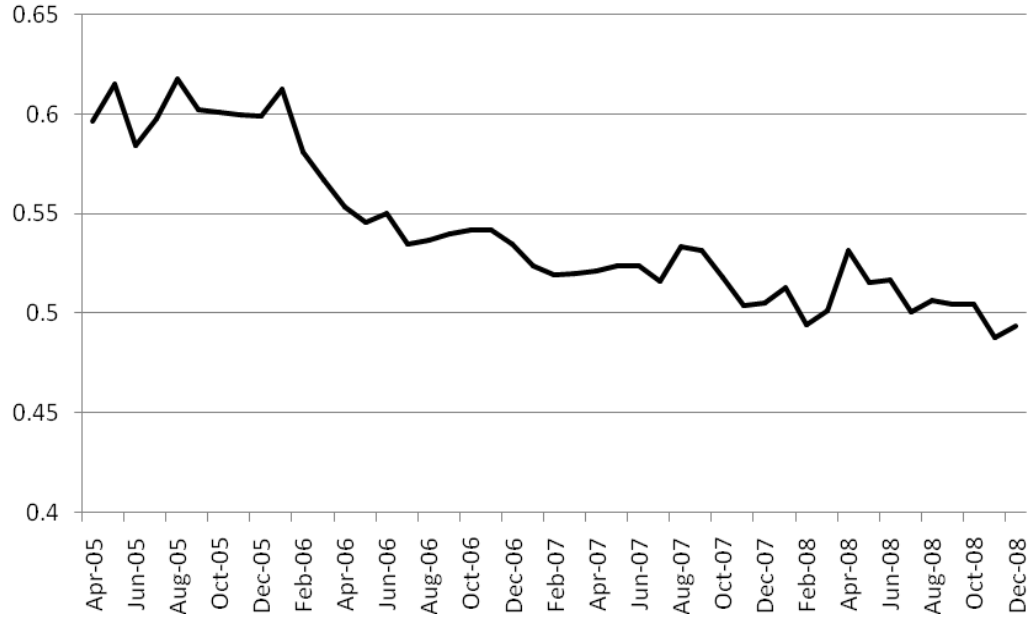


Figure 10
Average Contracted Monthly Payments on Consumer Credit as a Proportion of Monthly Income, March 2005 - Dec 2008



5.4. Multivariate Analysis of Measures of Overindebtedness

The previous section focused on the time series for the average socio-economic and financial characteristics of CCCS clients. From these an evolving picture could be formed of the 'typical' characteristics of a CCCS client. This section explores further the cross-section distribution of client debts and characteristics. In the cross-section, clients vary markedly in their characteristics and in their extent of over-indebtedness. This variation is also of interest in monitoring over-indebtedness – for policy purposes there may be an interest in which groups exhibit the highest levels of over-indebtedness, and how the composition of over indebted clients as a whole is evolving over time. In this section we focus on two measures of over-indebtedness: the debt-to-income ratio and the contracted payment-to income ratio. These are measures of, i) client debt and, ii) debt service costs relative to client income.

Table 4 describes a selection of characteristics of clients in the bottom-third, middle-third and top-third of the distribution of the debt-to-income ratio. Clients at the top-end of the distribution are typically older, more likely to be male, more likely to be married, have fewer children, be self-employed and have larger mortgage debts relative to those lower in the distribution. In terms of the composition of their consumer credit commitments, those in the top-third exhibit notably larger credit card and personal loan debts compared with other categories of debt. However, it is also notable that those in the top third of the distribution have lower average incomes. That implies that the top-end of the distribution is characterized by lower-income households with above-average debt, not higher-income households with very high levels of debt.

Table 4: Characteristics of Clients by Debt-to-Income Ratio

	Bottom-Third	Middle-Third	Top-Third
Debt-to-Income Ratio	5.95	16.1	32.4
Demographics			
Age	40.2	42.3	45.6
Male	0.37	0.44	0.50
Married	0.29	0.35	0.42
Co-habiting	0.12	0.12	0.10
Divorced	0.08	0.08	0.07
No. Dependent Children	0.93	0.78	0.65
Labour Market			

Unemployed	0.19	0.12	0.12
Self-Employed	0.04	0.05	0.07
Retired	0.04	0.05	0.06
Household Monthly Income	£1,300	£1,310	£1,270
Housing			
Home owner	0.28	0.30	0.34
Mortgage Debt	£28,300	£31,500	£39,000
Balances on Unsecured Credit			
Catalogue	£370	£360	£340
Collection Agency	£750	£1,030	£1,500
Credit Card	£4,110	£8,100	£17,590
Overdraft	£820	£1,140	£1,570
Personal Loan	£4,270	£9,800	£18,150
Store Card	£150	£230	£340
Other Unsecured Debt	£370	£390	£670

Table 5 describes a selection of characteristics of clients in the bottom-third, middle-third and top-third of the distribution of monthly contracted payments. The characteristics of households in the top-thirds of the distribution of monthly contracted payments mirror those of the debt-to-income distribution: they are typically older, more likely to be male, married and self-employed and have debt portfolios dominated by credit card and personal loan debt.

Table 5: Characteristics of Clients by Monthly Contracted Payments			
	Bottom-Third	Middle-Third	Top-Third
Total Contracted Payments			
Demographics			
Age	40.1	42.3	45.6
Male	0.36	0.43	0.52
Married	0.21	0.33	0.53
Co-habiting	0.10	0.13	0.11
Divorced	0.09	0.08	0.06

No. Dependent Children	0.72	0.81	0.86
Labor Market			
Unemployed	0.24	0.12	0.07
Self-Employed	0.03	0.05	0.09
Retired	0.05	0.05	0.04
Household Monthly Income	£1,020	£1,280	£1,600
Housing			
Home owner	0.21	0.28	0.42
Mortgage Debt	£18,710	£27,900	£53,250
Balances on Unsecured Credit			
Catalogue	£280	£380	£420
Collection Agency	£360	£730	£2240
Credit Card	£2,540	£6,870	£20,570
Overdraft	£780	£1,020	£1,740
Personal Loan	£3,600	£10,210	£18,250
Store Card	£95	£205	£430
Other Unsecured Debt	£330	£390	£720

To gain a better understanding of the multivariate relationship between client characteristics and these measures of debt exposure, Table 6 describes OLS estimates for the value of the debt-to-income ratio and the value of contracted monthly payments. A common set of covariates are included in both regressions, as well as regional dummies. Household income is included in the regression for monthly contractual payments but not for the debt-to-income ratio.

The multivariate analysis confirms the general pattern of characteristics associated with higher debt exposure in Tables 4 and 5. Both the debt-to-income ratio and the level of monthly contractual payments increase with age, being male, married, decrease with income, increase with self-employment and monthly income. The dummy variables for employment status (unemployment, self-employed, retired) show that, relative to those employed, the unemployed typically have lower debt-to-income and monthly contractual payments levels, as do the retired. Self-employed clients typically have higher debt exposure by both measures.

In analyzing the results in Table 6, it is notable that the strength of the coefficients indicates that regional location has a stronger impact on the level of debt exposure that many demographic variables. Firstly, there is a pronounced regional pattern in debt exposure. Compared with London, clients in all other regions bar the Isle of Man exhibit lower levels of debt exposure by both measures. The magnitude of the coefficients on these regional dummies is also typically higher than the magnitude of the coefficients on demographic dummy variables for marital status (relative to being single) and unemployment (relative to being employed). This suggests that, controlling for demographics, there is a strong regional pattern in debt exposure which is at least as strong as the variation in overindebtedness across categories of marital status and employment status.

Table 6
Multivariate Analysis of Debt-to-Income Ratio and Contracted Monthly Payments

Dependent Variable	Debt-to-Income Ratio	Monthly Contractual Payments
Estimator	OLS	OLS
Demographics		
Age	0.15** (0.03)	5.91** (0.09)
Male=1	2.22** (0.05)	104.8** (1.93)
Married	0.38** (0.07)	46.1** (2.4)
Co-habiting	-0.30** (0.09)	-7.73** (3.10)
Divorced	-0.75** (0.11)	-21.2** (3.63)
No. Children	-1.4** (0.03)	-29.0** (0.94)
Employment		
Unemployed	-0.85** (0.08)	-65.3** (2.79)
Self-Employed	1.87** (0.12)	122.7** (4.13)
Retired	-1.39** (0.14)	-118.7** (4.90)
Debt Characteristics		
Number Credit Items	0.93** (0.007)	63.7** (0.24)
Income	-	0.25** (0.002)
Homeowner	0.22** (0.06)	44.77** (2.17)
Region of Residence		
East Anglia	-0.43**	-32.7**

	(0.13)	(4.37)
East Midlands	-1.02**	-71.6
	(0.12)	(4.19)
Isle of Man	3.08*	181.9**
	(1.54)	(53.4)
North East	-1.24**	-69.8**
	(0.14)	(4.68)
North West	-1.24**	-53.6**
	(0.09)	(3.43)
Northern Ireland	-2.02**	-83.3**
	(0.24)	(8.23)
Scotland	-3.17**	-74.9**
	(0.15)	(5.14)
South East	-0.34**	-22.2**
	(0.09)	(3.31)
South West	-0.37**	-39.8**
	(0.12)	(3.98)
West	-0.85**	-68.8**
	(0.14)	(4.78)
West Midlands	-0.59**	-51.7**
	(0.10)	(3.63)
Yorkshire	-0.67**	-53.7**
	(0.11)	(3.74)
N	182,275	182,275
F(23, 182251/182250)	1422.90	6512.77
Prob > F	0.0000	0.0000
R-squared	0.15	0.46
Root MSE	11.37	393.25

* indicates p value<0.05 ** indicates p value<0.01

Section 7 of the report suggests recommendations as to how the CCCS datasets could be utilized on an ongoing basis for monitoring debt distress and understanding the performance of DMPs. By way of conclusion to this section, we outline the possibilities arising from our analysis in the feasibility study. Firstly, conditional upon accounting for the various selection stages which clients undergo in order to appear in the debt counselling dataset, the data can be used to track the time-series of client characteristics and levels of debt exposure. CCCS have collected data relating to client characteristics on a consistent basis since early 2004, and hence have developed a lengthening time series of observations. It is clear from our short analysis here that there are evolving patterns in client types and characteristics through periods of lower and higher demand for debt advice. Secondly, again conditional upon an understanding that the CCCS sample does not cover the whole population of potentially over-indebted

households, the data can be used to understand the cross-sectional relationship between debt exposure and client types. The multivariate analysis included in Table 4 could feasibly be conducted over a number of different time periods to infer how the determinants of over-indebtedness have changed over time. Taken together, there are a number of potentially fruitful directions for research which could be applied to the New Client dataset.

6. Use of DMP dataset to Understand Persistence of Over-Indebtedness

The previous section focused on the characteristics of households seeking debt advice from CCCS, how those characteristics have changed over time and those which are most strongly associated with high levels of debt exposure. This section focuses upon DMP clients and understanding the dynamics of DMPs. This focus on DMPs has been chosen in part to reflect the immediate policy relevance of better understanding DMPs, but also because it allows us more generally to analyse the dynamics of client repayment of excessive debt.

6.1 DMP Client Characteristics

As a starting point, summary characteristics of clients undertaking the CCCS DMP compared with those counseled into other debt solutions are summarized in Table 7. (From the flow chart in Figure 1, note that approximately 150,000 clients were counseled with a suggested course of action over this period.) The major debt solutions suggested to CCCS clients are DMP (71% clients), bankruptcy (10%), 'client can handle' (5%), IVA (1%), token payments (10%), and 'income maximization' (2%). 'Client can handle' refers to the client being able to fulfill contractual payments within their current budget. 'Token payments' refers to the client offering creditors a token minimum payment (such as £1 or £5) in the short-term until their circumstances change. 'Income maximization' refers to the hitherto uncommon situation whereby clients cannot make use of bankruptcy/IVS/DRO options, nor have sufficient income to begin a feasible plan of repayment, nor have prospective income growth which might justify short-term token payments. In such circumstances, CCCS recommends to the client such measures as checking benefit eligibility, taking on additional hours of work or a second job or letting or sub-letting spare rooms in the client's accommodation. (It should be noted that in the period since the end of our sample data – that is from late 2008 onwards, the proportion of clients falling into this category has risen sharply.)

Table 7: Characteristics of CCCS Clients by Counsellor Recommendation						
	DMP	Bankruptcy	Token Payments	Client Can Handle	IVA	Income Maximisation
Age	42.7	43.9	41.3	39.5	42.1	41.0
Male	0.43	0.41	0.41	0.43	0.59	0.45
Married	0.36	0.24	0.30	0.27	0.37	0.36
Unemployed	0.10	0.25	0.27	0.14	0.02	0.22
Income	£1,330	£1,045	£1,100	£1,300	£1541	£1127
Home Owner	0.24	0.07	0.39	0.24	0.26	0.46
Unsecured Debt	£24,400	£22,800	£16,200	£10,800	£46,000	£17,300
Debt-to-Income Ratio	18.7	21.4	15.3	8.3	31.0	16.3
Monthly Contractual Payments	£720	£659	£495	£312	£1224	£510

Based on these summary statistics some comparisons can be drawn between clients in the different recommendation categories. DMP clients typically exhibit higher debt-to-monthly-income ratios than clients recommended into income maximization, but lower ratios than those recommended into bankruptcy or an IVA. Unsurprisingly, only a small proportion of homeowners are recommended into bankruptcy. The debt-to-monthly income ratio clearly correlates with the type of recommendation. Clients with lower ratios are recommended into self-administered, non-bankruptcy options such as 'client can handle' or into token payments anticipating a change in future income / expenses which will allow debt repayment. Clients with the highest ratios are recommended into bankruptcy options, reflecting the lack of other feasible recourse for clients at the higher end of the distribution of debt exposure. The DMP option appears applicable to clients who cannot resolve their over-indebtedness through self-administered re-organization of their finances, but are not in such an extreme scenario as to warrant bankruptcy/IVA.

6.2 DMP Characteristics

The typical terms of a DMP are summarized in Table 8 below, which records average unsecured debt at the inception of the DMP, the number of debts covered within the DMP, the number of months over which the DMP is scheduled to run and the average required payment across all clients who began a DMP between January 2004 and December 2008. CCCS provide DMPs in two forms: a standard DMP and an Extended Term DMP (longer than 10 years); separate statistics are provided for each type.

Table 8: Average DMP Characteristics		
DMP Type	Standard DMP	Extended Term DMP
Number of Clients	50,627	40,416
Starting Debt	£22,000	£32,000
Number of Debts	6.44	7.80
Monthly Payment	£260	£122
Total Number of Months	91	335

Approximately 20% more clients are enrolled onto a Standard DMPs than an Extended Term DMP, with typically lower starting debts, fewer debt items, greater monthly payments and shorter terms on their plans. Interest charges applicable to debts are frozen at the point of inception of the DMP, so that the term of the loan is dependent upon the individual's monthly spare income available for payments. The average monthly payment across both types of plan of £200 is greater than the median payment of £143, as illustrated by the right-skew on the distribution of monthly payments shown in Figure 12. Similarly, the average starting debt across both plans of £26,300 is higher than the median starting debt of £19,700, as before illustrated by the right-skew on the distribution of starting debts shown in Figure 13.

Of the 91,257 individuals who started DMP plans of either type between January 2004 and December 2008, 25,357 had lapsed making payments, approximately 27%. The average number of months in which clients lapse is 7 months since the beginning of the plan. The wealth of data available on DMP clients would allow a rich modeling of the propensity of clients to lapse on a DMP plan. The full dataset available offers high-frequency repayment data (monthly) combined with the annual counselling reviews which provide updates on the full range of client characteristics. However, as explained in Section 5.2 it has proved unfeasible to make use of all of the available data for the purposes of this report. Therefore, we limit the analysis here to the relationship between client characteristics and debt position / DMP schedule at origination and the likelihood of subsequently lapsing on the DMP. Hence we omit data on the evolution of client characteristics (incomes, demographics, employment etc.) and use only data available at the point when the DMP contract was agreed.

Figure 11: Monthly Payments for DMP Clients

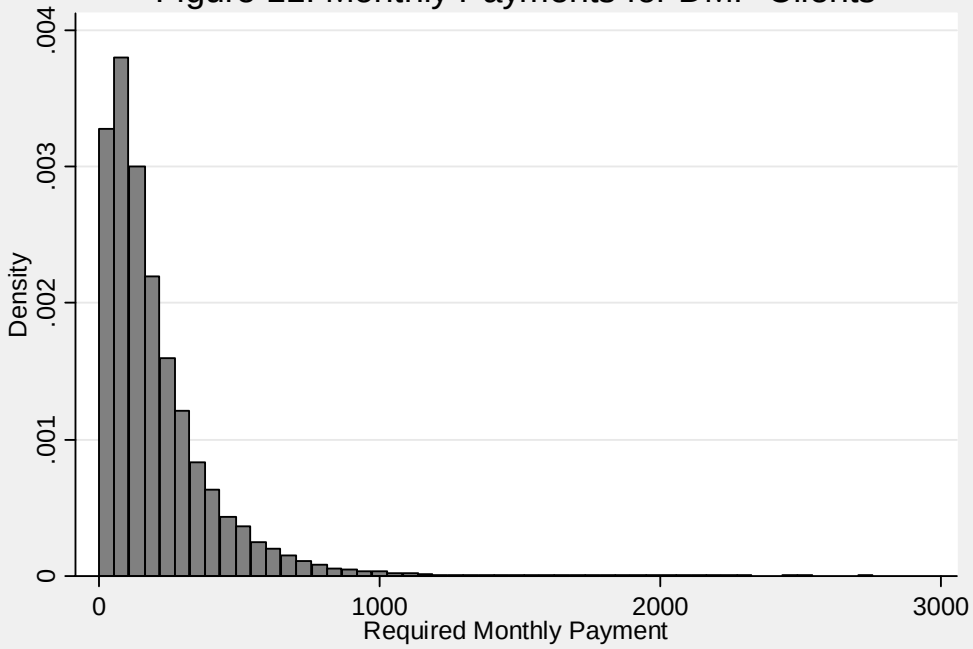


Figure 12: DMP Client Debt at Start of Plan

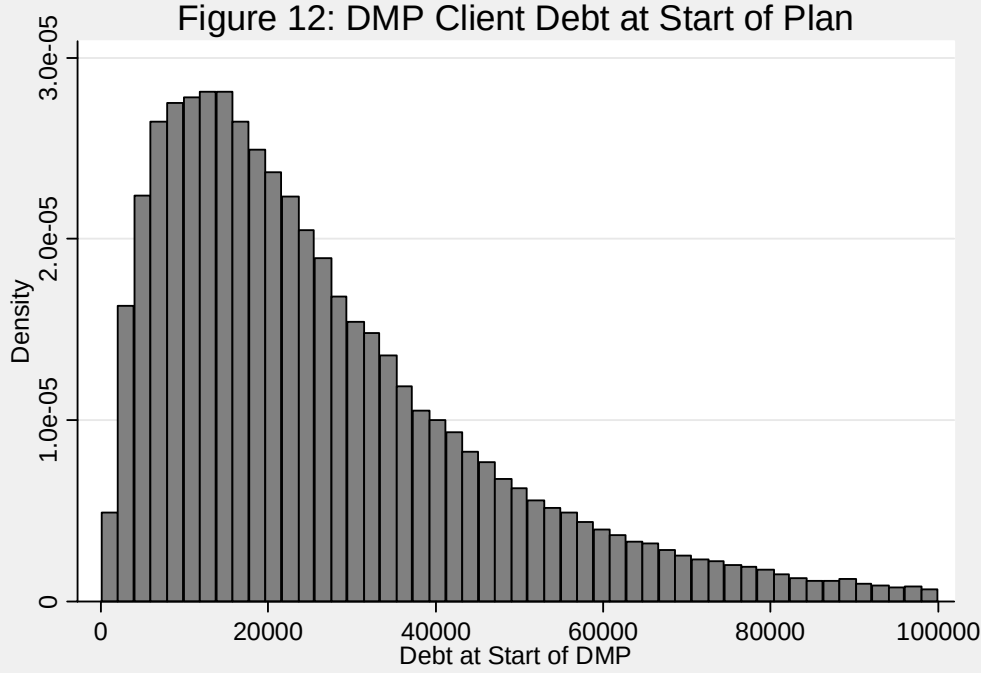


Table 9 compares summary statistics for the characteristics of clients who lapsed on DMP plans before the completion date compared with this that remained on their plans. The data covers all plans beginning in the period January 2004 to November 2008. As such, the length of time over which we observe individuals of plans differs from four year (48 months) to a little over one month. It is not possible from the data to rule out that observations for which we observe a lapse in payment may be due to the client repaying the balance of debts on the DMP by lump-sum, due possibly to the receipt of a windfall payment. Such occurrences are not recorded in the data available to us, though we expect that the prevalence of such occurrences is very small.

Table 9: Characteristics of DMP Clients Lapsing vs Continuing on Plan

	Lapsed Payments Before Completion of Plan	Continued Making Payments on Plan
Age	41.3	43.6
Male	0.44	0.43
Married	0.33	0.39
Co-Habiting	0.12	0.11
Divorced	0.07	0.08
Number of Children	0.86	0.78
Unemployed	0.11	0.09
Self-Employed	0.04	0.04
Retired	0.04	0.06
Monthly Income	£1,285	£1,300
Home Owner	0.18	0.25
Net Worth at Start of DMP	−£13,000	−£10,100
Total Unsecured Debt	£22,400	£26,500
Debt-To-Income Ratio	17.7	20.2
Monthly Contracted payments	£192	£200
Starting Debt on DMP	£23,600	£27,800
DMP Monthly Payment	£190	£200
Number of DMP Debts	7.1	7
Length of DMP (Years)	14.7	17.4

In a comparison of the summary statistics between the two groups, clients who lapse on payments are typically younger, less likely to be married, have more children, less likely to be retired, to have lower monthly income and are less likely to be homeowners. In terms of their financial position, they typically have lower net worth, smaller unsecured debts, lower debt-to-income ratios, and lower monthly required payments. Hence it is not the case, contrary to expectations, that clients with larger unsecured debts (in absolute terms, relative to income or in terms of the implied contractual payments associated with the debt) are those more likely to lapse on a plan. The lower average unsecured debt among the lapsing groups is reflected in the lower DMP starting debt, in monthly payments and in the length of the DMP.

Table 10 presents results from a multivariate analysis of the likelihood of lapsing (taking the same definition of 'lapse' as that used in Table 8). As the dependent variable is in this case binary (1=lapse, 0=continue on plan), a probit model is estimated and marginal effects calculated at the mean values of covariates. The results generally indicate small marginal effects of most individual variables on the probability of lapsing – this may be because some variables, such as income and education, are highly collinear. In addition, as Table 8 shows, the differences between the two groups in the magnitude of many of these variables are small. Nevertheless, there are some variables that have an important effect.

The baseline average predicted probability of lapsing from the probit estimates is 0.24. Among the dummy variable characteristics, those with sizeable magnitudes are being married, being retired and being a homeowner. In each case cases, the marginal effects are negative (-0.12 for married, -0.15 for home-owner and -0.14 for being retired). Evaluated against the baseline probability, marginal effects of the magnitude of combining these three characteristics are equivalent to an approximate 50% decrease in the likelihood of lapsing. These results suggest that there is a sizeable relationship between client characteristics at the origination of the DMP plan (before any changes in client circumstances) and the likelihood of lapsing on payments. Against these strong determinants, the marginal effects on most other characteristics are small. Taking the characteristics described by dummy variables which are positively signed, the increase in likelihood of lapsing associated with being male and divorced is less than an 8% increase on the baseline. Across the financial variables, the magnitudes on the coefficients are also small. For example, an increase in the unsecured debt of a DMP client of £10,000 raises the likelihood of lapsing by only 10%. Many of the financial variables are negatively signed suggesting that, conditional on covariates, higher levels of debt are actually associated with a lower likelihood of lapsing.

Table 10: Probit Estimates for Likelihood of Client Lapsing DMP Payments		
	Coefficient	Marginal Effect
Age	0.005** (0.0005)	0.01
Male	0.09** (0.10)	0.03
Married	-0.04** (0.01)	-0.12
Co-Habiting	-0.08** (0.01)	-0.03
Divorced	0.003 (0.02)	0.001
Number of Children	0.06** (0.01)	0.01
Unemployed	-0.25** (0.01)	-0.07
Self-Employed	-0.16** (0.03)	-0.05
Retired	-0.53** (0.03)	-0.14
Monthly Income	0.00005** (0.00001)	0.00001
Home Owner	-0.56** (0.02)	-0.15
Net Worth at Start of DMP	-8.29e-07** (1.58e-07)	-2.57e-07
Total Unsecured Debt	1.84e-06** (1.07e-06)	-5.70e-07
Debt-To-Income Ratio	0.002** (0.0008)	0.0007
Monthly Contracted payments	-0.0001** (0.00002)	-0.00004
Starting Debt on DMP	-3.22e-07** (6.63e-07)	-9.97e-08
DMP Monthly Payment	-0.00006** (0.00002)	-0.01
Number of DMP Debts	0.02** (0.002)	0.005
Length of DMP (Months)	-0.0002** (0.00002)	-0.00005
N	91257	
LRchi2(21)	17338.61	
Prob>chi2	0.0000	
Pseudo-R2	0.17	
Mean Predicted Ybar		0.24

** indicates p value<0.01

As described earlier, there is much scope for using CCCS DMP client records for a fully-fledged evaluation of the CCCS DMP and client behavior whilst on a plan. The records held by CCCS are particularly rich and would allow for a more developed econometric model. Early results here indicate that the DMP option is a popular choice among clients and that the lapsing rate is comparatively low at below 30%. A comparison of the characteristics of those that lapse payments compared with those that continue payments suggest that there are certain demographic factors which are *ex ante* associated with lapsing. An econometric model which incorporated the additional information provided by client payment histories and changes in characteristics (surveyed at the annual counselling review) would allow the modeling of the impact of such changes on both the likelihood and the timing of lapsing payments. We make suggestions for this further work in Section 7.

7. Recommendations for Future Work

The purpose of this scoping study was, firstly, to investigate the quality, detail and usability of client data held by CCCS and, secondly, to conduct an initial evaluation of whether CCCS client records could be used to monitor the evolution of client overindebtedness and also the performance of clients on a Debt Repayment Plan

The results appear promising: data held by debt advice agencies offers distinct advantages to the researcher compared with other forms of data available relating to consumer indebtedness. CCCS client records contain information on a number of relevant, detailed financial and non-financial characteristics useful for monitoring debt distress. The data held by CCCS can be made available to researchers in a format which allows statistical data analysis, is relatively 'clean' and straightforward to format for analysis, and contains patterns in client characteristics consistent with data held by another debt advice charity.

Initial analysis suggests there is a strong case for utilizing CCCS client records as the source of data for a debt monitoring tool. Use of individual-level repeated cross-section data allows a tracking of both the evolution of the cross-sectional pattern of indebtedness as well as the average level of indebtedness among households. Any analysis of CCCS data has to consider that the sample of CCCS clients is not representative of the population at large, nor necessarily representative of the population of clients seeking debt advice.

Analysis of the longitudinal data held on clients undertaking DMP suggests that the dataset could be used to analyse a number of policy questions relating to DMPs. Initial analysis suggests that there is considerable heterogeneity across client types in the dataset, and the high frequency of observation points also provides a long and growing time series of observations per client. Again, it must be considered that the CCCS DMP is only one repayment plan among many available in the U.K., and that the free-to-client plans with no fee charges and no interest applicable on outstanding debts is not a model followed by the whole sector. Nevertheless, with sufficient proviso the authors are of the opinion that the quality and scope of the dataset warrants further analysis.

We would recommend that, for the New Client Dataset:

- Further updates to CCCS data could be sourced from CCCS and utilized to monitor the future pattern of client over-indebtedness. Data updates could be made available on a quarterly basis.
- Analysis of CCCS New Client data could be conducted and made available to BIS staff working in relevant areas, and added to BIS over-indebtedness monitoring reports as a complement to the aggregate data which forms the basis of the reports
- That further research is conducted into discovering a working definition of over-indebtedness which best describes the levels of unsustainable unsecured debt exhibited by CCCS's client base (or the client base of other debt advice agencies should data become available), and which could be applied to household surveys (given their data limitations) in order to better identify those households at risk of over-indebtedness.

We would also recommend that the DMP Longitudinal Dataset:

- Be updated as further individuals join DMPs and as more observations of performance on DMPs become available for existing clients. This would provide more observations of individuals throughout the lifetime of their plans and would thereby allow a modeling of client non-repayment throughout the lifetime of the plan
- Is further analyzed, utilizing the high-frequency monthly data, and constructed into a data set usable for policy analysis and simulation. As consultations continue on the future regulation of DMPs, a constructed dataset for use in policy analysis would be a valuable tool for simulating the impact of proposed changes to DMPs.

APPENDIX 1: SOURCES OF DATA ON CONSUMER OVERINDEBTEDNESS

The project proposal set out the motivations for using data held by CCCS for understanding consumer overindebtedness. Now that we have been able to access the data and understand more fully the data held by CCCS, we can provide a fuller justification for use of the CCCS data and emphasize its advantages.

Ideally, for the understanding of consumer indebtedness a researcher would use a representative household survey with detailed data on household assets and debts, arrears on debts, incomes and expenditures collected at high-frequency. In an ideal world, these data would also include information on repayment histories and credit limits applied by lenders to give a complete picture of both the household's current financial position and the available credit to the household. As well as this, repeated observations over time for both households with and without debt problems would allow a duration analysis as households are observed to move into and out of debt problems. One could think of more features of the data which might be desired. However, such a dataset as described does not exist and is unlikely to be constructed.

This section, therefore, considers the datasets available to the researcher and their potential usefulness for this project, addressing in turn a) available household survey data, b) data held and made available by lenders, c) aggregate financial data, d) data held by the counselling sector. The summary here is very much informed by consultation with organizations in the financial sector undertaken as part of the authors' previous project with DBERR. It concludes that the CCCS dataset has distinct advantages for the objectives of this project compared to other available data.

Household Survey Data

There are currently two UK household surveys which collect detailed data on household assets and debt, the British Household Panel Survey (BHPS) and Families and Children's Study (FACS). Both the BHPS and FACS and panel surveys which follow a set of respondents (approximately 10,000 individuals in both cases) over time. The new ONS Wealth and Assets survey, a larger cross-sectional survey, is currently in the fieldwork stage. A detailed description of these datasets with particular reference to the information they contain relating to assets and debts is set out in the earlier report Drivers of Overindebtedness by Richard Disney, Sarah Bridges and John Gathergood for the then Department of Business, Enterprise and Regulatory Reform.

The principal advantage of these household surveys is that they collect very detailed data on household demographic, socio-economic and labour market-related information, repeating a common set of questions over the number of years to create long panels (in the case of the BHPS, now in its 18th wave). However, the principal disadvantage of this data is that it is only available with a considerable time lag (a minimum of 18 months) and are typically conducted only at an annual frequency. Furthermore, in the BHPS data on household assets and debts is collected at 5-year intervals and does not include data on values of arrears, limiting the obvious measure of overindebtedness which might be used in a statistical analysis. The FACS does collect data on arrears values, but not on outstanding balances per se, also limiting its usefulness. Also, response rates to questions referring to household debts are markedly lower compared to other topics surveyed. A further limitation of such data is that the proportion of individuals exhibiting arrears is small, typically less than 5%. Hence statistical inference can only be made on the basis of small samples.

Despite these limitations, the panel nature of these household datasets made them most appropriate for an analysis of the drivers of overindebtedness (for which observations of households moving into and out of debt difficulties were essential, as well as data on changes in incomes, labour market and demographic variables, a feature not observed in the CCCS data used here). However, these household surveys are not of great use for the purpose of a regularly-updated debt monitoring dataset, especially given the time-lag between data collection and release.

Data Held By Lenders

Lenders typically hold high-frequency, high-quality financial data on their clients' loan payments and performance, plus a range of demographic and income-related data collected at the time of application both for borrowers who do and do not accept loan offers. The principal advantage of lender data is that it is typically of high frequency and accurate. The main limitation of the data for our purposes is that it refers to one (or in the case of lenders who also offer banking services, a number) of borrowing instruments which most likely form only part of the household's portfolio of assets and debts. Also, while lenders collect a range of information at the point of application for credit in order to make the lending decision, they are typically not able to update their records on key variables, such as client incomes and employment status, unless such information is forthcoming from the borrower. Hence it is uncommon to observe in such data the reason why borrowers have arrears. This is not to say that lender-provided individual level loan data is not useful in addressing a number of questions – such as whether borrowers make optimal use of credit and how borrowers respond to changes in loan terms.

Such data has been utilized for these applications in the economics literature. However, for the purposes of this project such data would present an incomplete picture of households' financial situations and characteristics.

Aggregate Financial Data

An alternative means of enquiry into consumer overindebtedness is to use aggregate data. This takes the form of total value of assets and borrowing across all households in the economy, often constructed in measures relative to aggregate income for comparison. Also, most lenders typically publish data on aggregate levels of loan values, arrears and default, such as the summary data provided on a monthly basis by the Council of Mortgage Lenders. Such data allows a quantification of total new borrowing, debt and arrears in the economy as a whole, and ultimately reflect the patterns in consumer finances research such as this project seeks to address. BIS Debt Monitoring papers mostly draw on these aggregate series. The main source of aggregate financial data is the Bank of England, which produces quarterly financial data on a broad range of variables, including total lending to households disaggregated by secured and unsecured lending, lending by purpose and series of particular interest such as housing equity withdrawal.

Of course, while such data are essential for understanding economy-wide patterns in indebtedness and overindebtedness, they are of limited use for monitoring overindebtedness at anything other than the economy-wide level. Such data cannot inform researchers as to which groups of borrowers are exhibiting high levels of debt or arrears, the distribution of arrears across groups or evolution within groups. Hence from a policy perspective, aggregate data is not informative for policies which seek to target households exhibiting arrears and repayment difficulties. Macroeconomic policy-focused models of financial stability incorporate aggregate measures of private debt, but for the purpose of understanding the vulnerabilities of the financial sector as a whole, not of private borrowers. Therefore aggregate data is not the primary source of data for a debt monitoring tool, but it is of course essential as a means of comparison against the patterns exhibited in individual-level data.

Counselling Sector Data

Organizations providing financial advice typically collect a range of data on their clients demographic, income and financial characteristics for the purpose of providing financial advice. In the U.K., financial advice is available from a large number of fee-charging and non-fee-charging agencies, some of whom

also provide financial services such as the administration of an Individual Voluntary Arrangement (IVA) or Debt Relief Order (DRO).

The main advantage of using counselling sector data is that the counselling agency collects a wide range of socio-economics and financial data at the individual level, providing a complete picture of client assets and debts, in order to inform their advice. Furthermore, clients of counselling organizations have an incentive to reveal true information to debt counselors in order to gain better financial advice. Also, the use of counselling sector data simplifies the issue of identifying overindebtedness or financial distress, as consumers self-identify themselves as requiring advice and are asked in detail about their assets and debts. As well as this, where counselling agencies provide ongoing advice services and 'debt management plans', they typically collect data on the evolution of individual debts and arrears plus repayment behavior.

The principal disadvantage of utilizing counselling sector data is that such data are not representative of the population of a whole and based on a selection of individuals who have sought debt advice. Hence such data lack comparative data on households not reporting debt problems against which one would ideally compare households with debt problems. Also, there are further issues with selection of individuals who are advised onto debt management plans. However, as a source of information about households confronting over-indebtedness, counselling sector data has distinct advantages compared to household survey data. Nonetheless, from a policy perspective, such data sources are concentrated upon the types of individuals which consumer policy seeks to target.

In the U.K. there are three main large-scale debt counselling charities: the Consumer Credit Counselling Service, The Citizens' Advice Bureau (CB) and the National Debtline (ND) (Money Advice Trust). (We have been unable to identify a source of counselling data from fee-paying agencies.) Each of these organizations collects detailed data on clients seeking financial advice. CCCS also offers debt management plan, and collects a range of data over time for individuals who enroll on such a plan. The data collection and holdings of these organizations varies, in part according to the data needs and advice model of each organization. CCCS (who typically interview clients by telephone) collect data electronically and hold this centrally in a data management warehouse. CAB (who typically interview clients in person) collect and hold data held at the individual Bureau level, with some variation in the data collected across bureaus, and do not at present collate this data into a central dataset. ND (who typically interview clients by telephone) collect data which is held by a third party data storage company, who provide reports to ND management and policymakers. Individual-level records are not

held by ND. However, for the purposes of this project the Money Advice Trust have generously made recent reports on client numbers and characteristics available to the researchers. As data needs vary by organization, so data collection and holding practices also differ. For the purposes of this project CCCS data offers the greatest scope and detail.

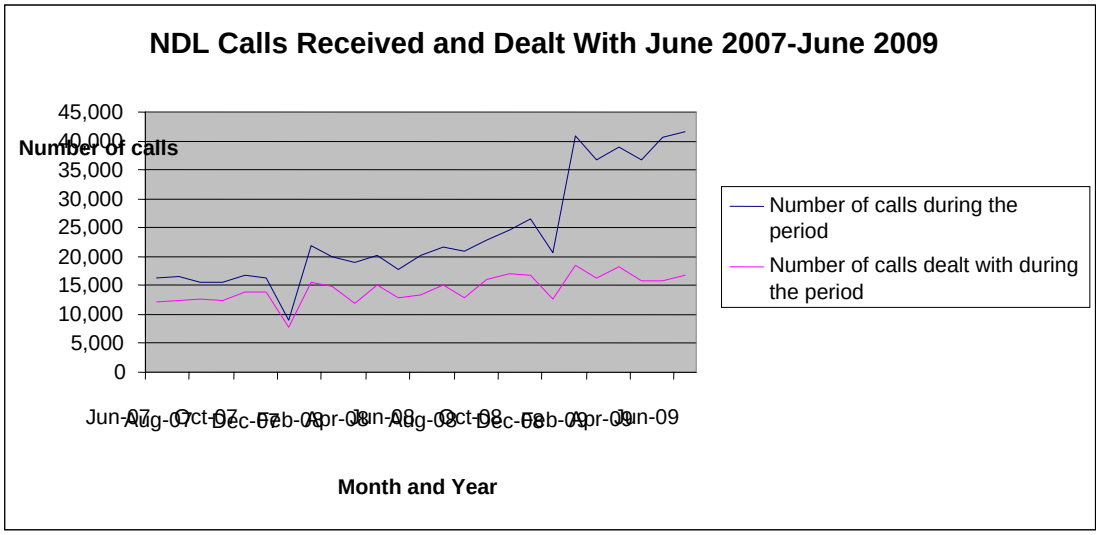
CCCS collect data on client assets and debt, income and expenditures and demographic information for approximately 100,000 individuals per annum who contact the agency and participate in a counselling appointment. This sample size is much larger than that available in a household survey (which typically interviews 10,000 individuals, of which up to 6% might have credit arrears). They also hold records on the origin of the client's enquiry to CCCS (the majority of CCCS clients are referred to the charity by lenders) and the outcome of debt counselling. For individuals who choose to participate in a debt management plan (the typical duration of which is 8 years), CCCS collect and hold data on all payments of debts made under the plan, as well as refresh data on all other variables captured at an annual review. Therefore the CCCS data holding offers potential for both the monitoring of consumer overindebtedness via the flow of clients contacting CCCS for advice, and the persistence of overindebtedness across client groups through those observed on a debt management plan.

As outlined at the beginning of this section, no single data source in the U.K. provides ideal individual level data for the purposes of monitoring and researching consumer overindebtedness. Of the data currently available, the CCCS data provides distinct advantages in terms of the size of the dataset, its detail and its cross-sectional and longitudinal dimensions. All statistical analysis must pay attention to the type of data being utilized and the limitations of statistical inference which can be drawn from the data. The dataset we have constructed using CCCS's data is informative about a particular sample of individuals, with data collected for particular needs. However, on balance we think this source of data is extremely valuable for understanding consumer overindebtedness and the particular questions this project seeks to address.

APPENDIX 2: SUMMARY DATA PROVIDED BY NATIONAL DEBTLINE (MONEY ADVICE TRUST)

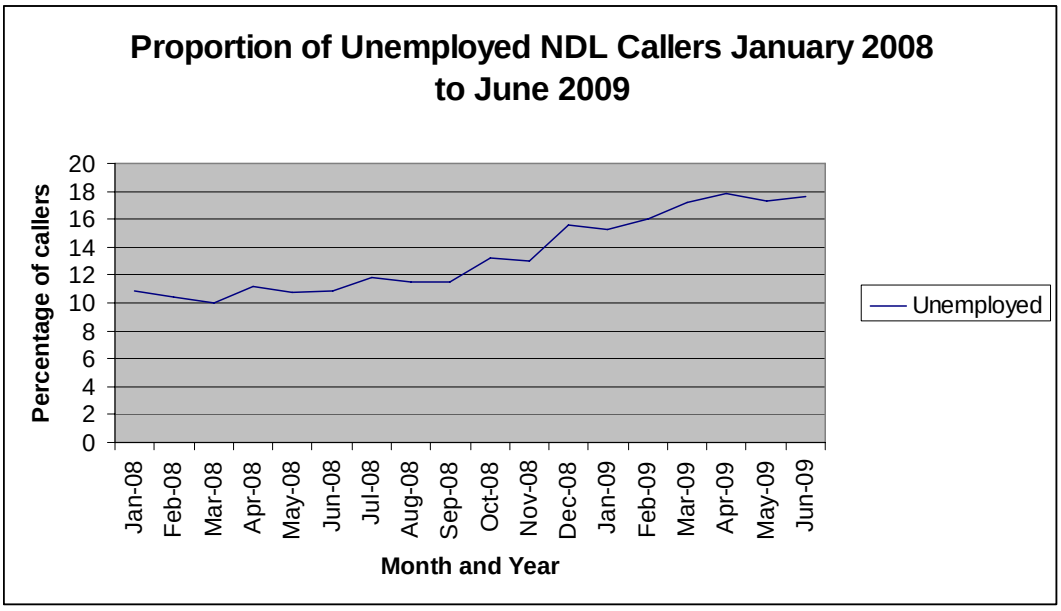
The economic downturn and subsequent recession have had a clear impact on the demand for debt advice. National Debtline (NDL) has seen a 150 per cent increase in calls received, from 16,214 in June 2007 to 41,683 in June 2009 (Chart 1).

Chart 1



The NDL caller profile has also seen changes. In January 2008 10.9 per cent of callers were unemployed, this rose to 17.65 per cent in June 2009 (Chart 2). Commentators on the wider economy remain pessimistic in their predictions regarding future unemployment levels.

Chart 2



The profile of types of debt reported to NDL has also changed, with more callers reporting mortgage and fuel arrears (Charts 3 and 4).

Chart 3

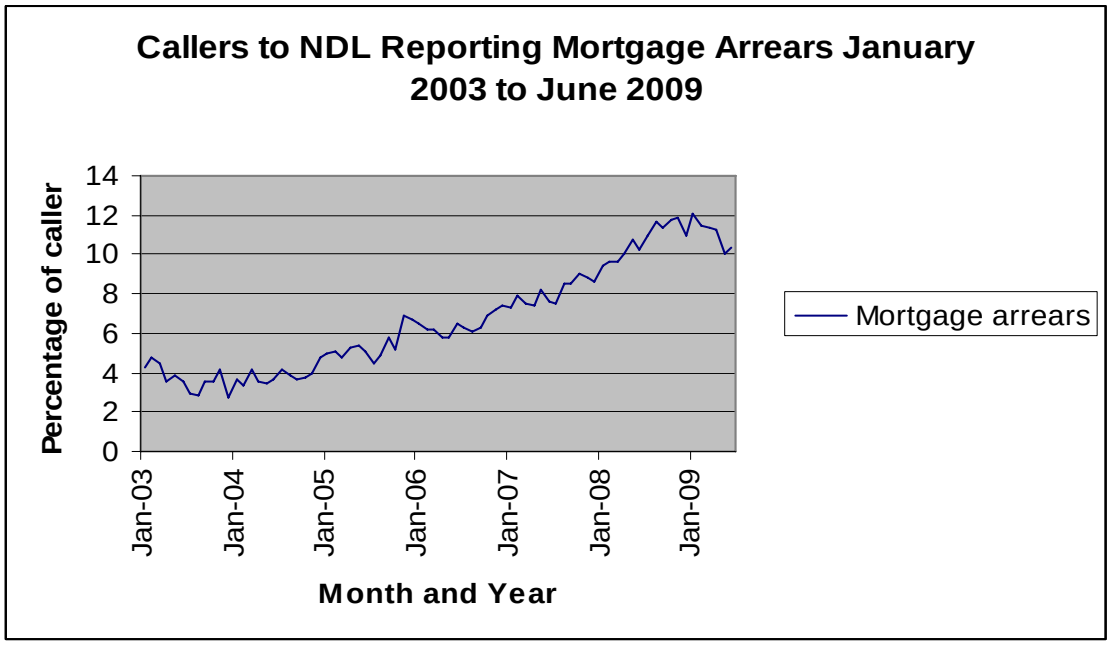
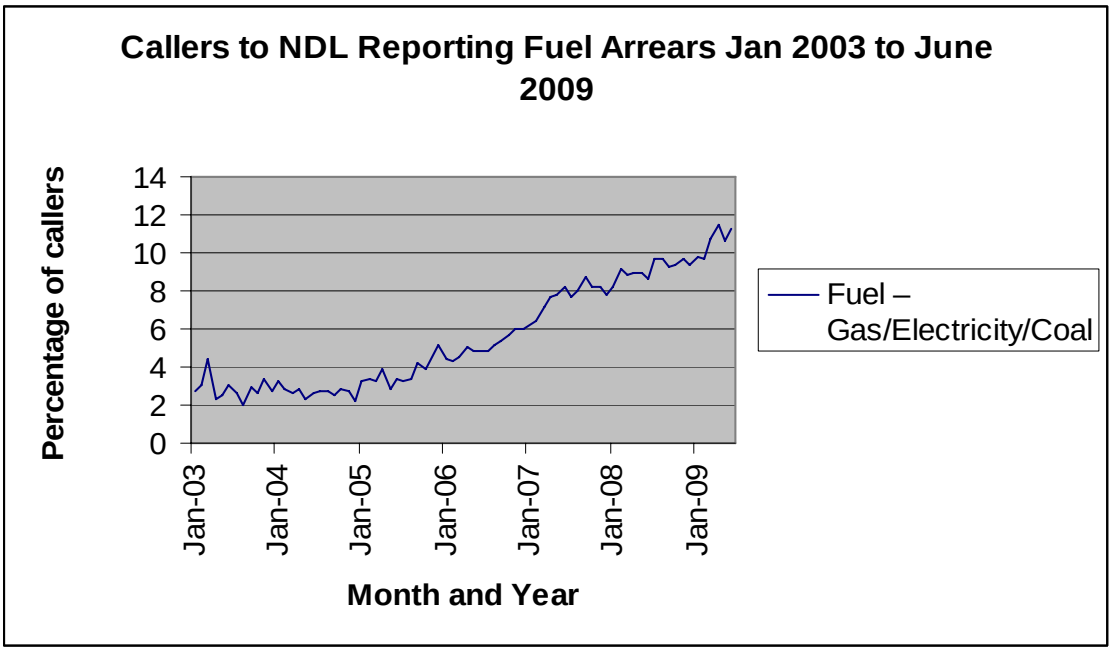


Chart 4


Callers to NDL Reporting Fuel Arrears Jan 2003 to June 2009
Percentage of callers
14
12
10
8
6
4
2
0
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Month and Year
Fuel – Gas/Electricity/Coal