

# Funding debt advice in the UK – A proposed model

Final Report

Prepared by



14 December 2011

The present study was commissioned by the Money Advice Service and funding was provided by the Department for Business, Innovation and Skills.

Authors: Patrice Muller, James Suter and Shaan Devnani

## About London Economics

London Economics is one of Europe's leading specialist economics and policy consultancies and has its head office in London. We also have offices in Brussels, Dublin, Cardiff and Budapest, and associated offices in Paris and Valletta.

We advise clients in both the public and private sectors on economic and financial analysis, policy development and evaluation, business strategy, and regulatory and competition policy. Our consultants are highly-qualified economists with experience in applying a wide variety of analytical techniques to assist our work, including cost-benefit analysis, multi-criteria analysis, policy simulation, scenario building, statistical analysis and mathematical modelling. We are also experienced in using a wide range of data collection techniques including literature reviews, survey questionnaires, interviews and focus groups.

Head Office: 11-15 Betterton Street, London, WC2H 9BP, United Kingdom.

w: [www.londecon.co.uk](http://www.londecon.co.uk) e: [info@londecon.co.uk](mailto:info@londecon.co.uk)

t: +44 (0)20 7866 8185 f: +44 (0)20 7866 8186

## Acknowledgments

The authors thank Professor Sarah Brown from Sheffield University for her suggestions and comments and Dr. John Gathergood from the University of Nottingham for providing the data used in his study on the demand for debt advice.

Wherever possible London Economics uses paper sourced from sustainably managed forests using production processes that meet the EU eco-label requirements.

Copyright © 2011 London Economics. Except for the quotation of short passages for the purposes of criticism or review, no part of this document may be reproduced without permission.

---

# Contents

Page

Glossary	vi
Executive summary	vii
1 Introduction	1
2 The benefits of debt advice	2
2.1 Benefits to individuals or households receiving debt advice	2
2.2 Benefits to credit providers	5
2.3 Benefits to other businesses	6
2.4 Benefits to the Exchequer	7
2.5 Societal benefit	7
3 The demand for debt	9
3.1 Consumer debt data sources	9
3.2 Which total household debt data to use?	16
3.3 Forecasting model of household debt	16
3.4 Model of total household debt	19
3.5 Model of secured household debt	26
3.6 Unsecured household debt	31
3.7 Forecasts of outstanding household debt	32
4 Micro data on debt by type of debt	37
4.1 Overview of survey data	37
4.2 Definition of the total demand for debt advice	45
4.3 Existing literature on the demand for debt advice	45
4.4 Proposed approach for deriving estimates of the total demand for debt advice	47
4.5 Proposed approach for deriving estimates of the total demand for debt advice	51
4.6 Evolution of the total and actual demand for debt advice over time	55
4.7 Forecasting the total demand for debt advice and the actual demand for debt advice	58
5 Model for allocating the Money Advice Service debt advice costs	61
5.1 General considerations	61
5.2 Option 1: The OFT Credit Register	61
5.3 Option 2: The FSA funding blocks	62
5.4 Non-lending creditors	64
5.5 Which option to use to establish the tariff base?	65
5.6 Tariff base for allocation of cost of debt advice services from Money Advice Services across the FSA fee-blocks	65
References	69
Annex 1 Estimates of secured and unsecured lending with and without effects of securitisation and loan transfers – Bank of England data	73
Annex 2 Comparison of the estimates of the demand for debt advice from the BIS/YouGov survey and the Bank of England/NMG survey	74

---

## Contents

*Page*

Annex 3	Split between secured and unsecured debt by type of financial stress experienced by households	75
Annex 4	Composition of unsecured debt	78
Annex 5	Additional stationarity tests	79
Annex 6	Econometric estimation of the actual demand for debt advice	81



---

## Tables, Figures & Boxes

Page

Table 1: Bank of England Bankstats data	10
Table 2: Total lending (amount outstanding) to households in BoE data - 31 Dec. 2010	11
Table 3: Total secured and unsecured lending (amount outstanding) to households in BoE data - 31 Dec. 2011	12
Table 4: ONS data	13
Table 5: Comparison of ONS and Bank of England household debt estimates – 2009 (£billion)	14
Table 6: Studies focusing on UK household debt over time or presenting macro debt data	16
Table 7: Variables used to model household debt (ONS and Bank of England series identifiers in parentheses)	17
Table 8: Test statistics for KPSS tests for stationarity	19
Table 9: Long-run models of quarterly change in total outstanding debt	21
Table 10: KPSS test results for stationarity of residuals from long-run model of change in total debt	22
Table 11: Values of the second-order Akaike Information Criterion for ECMs with alternative lag orders (total debt)	23
Table 12: Two-step error correction model of change in total outstanding household debt	24
Table 13: Outstanding household debt (£bn): Actual data and in-sample dynamic projection	25
Table 14: Long-run models of quarterly change in outstanding secured debt	27
Table 15: KPSS test results for stationarity of residuals from long-run model of change in secured debt	27
Table 16: Values of the second-order Akaike Information Criterion for ECMs with alternative lag orders (secured debt)	28
Table 17: 2-step error correction model of change in outstanding secured debt	29
Table 18: Outstanding household debt (£bn): Actual data and in-sample projection	30
Table 19: Fifth order autoregressive model results for change in unsecured debt	32
Table 20: Household debt forecasts (end of calendar year, £bn)	34
Table 21: Unsecured debt owed by households in Great Britain 2006-08	38
Table 22: BIS/YouGov survey: types of unsecured credit commitments and average debt (£), 2009/10	40
Table 23: Types of debt held by GB households	42
Table 24: Comparison of the macro debt figures implied by different surveys and debt figures published by the Bank of England (£ billion)	43
Table 25: Share of arrears in total household debt (secured, unsecured and arrears of more than 3 months)	44
Table 26: Estimate of the demand for debt advice 2006-2010, number of individuals in 000s	45
Table 27: Correlation coefficient between the quarterly actual demand for free-to-client debt advice (in terms of number of individuals) and various economic variables	46
Table 28: Comparison of potential indicators of over-indebtedness in the BIS/YouGov surveys	48
Table 29: Number of households having sought debt advice from more than one service provider and total number of households having sought advice from service provider	54
Table 30: Error of projection of total and actual demand for debt advice (in terms of % of households) using last data point or average in 2008-09 BIS/Gov survey	58

---

## Tables, Figures & boxes

Page

Table 31: Correlation between consumer interest rates and total and actual demand for debt advice	59
Table 32: Components of FSA Fee-Block A	63
Table 33: Total secured and unsecured lending (amount outstanding) to households in BoE data - 31 Dec. 2011	64
Table 34: Total lending (amount outstanding) to households in BoE data - 31 Dec. 2010	66
Table 35: Shares of secured and unsecured debt in total debt owed by households defined as having a demand for debt advice (latent or actual) or having sought debt advice	67
Table 36: Secured and unsecured lending with and without effects of securitisation and loan transfers (MFIs)	73
Table 37: Difference in household shares of type of debt (secured and unsecured) between households having sought debt advice and all households defined as having a demand for debt advice	76
Table 38: Percentage difference in average debt levels by debt type between households having sought debt advice and all households defined as having a demand for debt advice	77
Table 39: Test statistics for KPSS tests for stationarity	79
Table 40: Results of Augmented Dickey-Fuller unit-root tests	80
Table 41: Data sources used for construction of demand for debt advice time-series	81
Table 42: Correlation matrix for demand for debt advice and its drivers	82
Table 43: Estimation results of demand for debt advice	83
Table 44: Actual and forecast demand for debt advice, number of households	87
Figure 1: Household debt - Bank of England <sup>1</sup> and ONS <sup>2</sup> data (£ billion)	14
Figure 2: Household debt – Other accounts payable (£ billion)	15
Figure 3: Household debt – Other accounts payable in % of total household debt	15
Figure 4: Outstanding household debt (£bn)	18
Figure 5: Outstanding household debt: Actual data and in-sample dynamic projection (£bn)	26
Figure 6: Outstanding secured household debt: Actual data and in-sample projection (£bn)	30
Figure 7: Annual household consumption expenditure and change in unsecured debt (£m)	31
Figure 8: Actual change in unsecured debt and fitted values from AR(5) model	32
Figure 9: Forecast of total outstanding household debt (£bn)	34
Figure 10: Household debt forecasts (end of calendar year, £bn)	35
Figure 11: Forecast of outstanding secured household debt (£bn)	35
Figure 12: Forecast of outstanding unsecured household debt (£bn)	36
Figure 13: Level and shares of various unsecured debt – WAS	39
Figure 14: Share of different types of debt in total unsecured debt	41
Figure 15: Main types of arrears (as a percentage of total arrears)	44
Figure 16: Actual and forecasted demand for the free-to-client debt advice sector, 2010Q1 – 2011Q1	46
Figure 17: Forecast of the quartely demand for free-to-client debt advice 2010Q4- 2015Q4	47
Figure 18: Distribution of households by type of financial situation they face (% of total number of households)	50

---

## Tables, Figures & Boxes

Page

Figure 19: Number and share of households with demand for debt advice by degree of severity of financial stress	51
Figure 20: Distribution of households having sought debt advice by type of financial stress	53
Figure 21: Actual and latent demand for debt advice by type of financial stress experienced by households	55
Figure 22: Demand (actual+latent) for debt advice, % of households	56
Figure 23: Actual demand for debt advice, % of households	57
Figure 24: Ratio of the actual demand for debt advice to the total demand for debt advice, July 2008 = 100	57
Figure 25: Forecast of total demand for debt advice - percentage of households	60
Figure 26: Forecast of actual demand for debt advice - percentage of households	60
Figure 27: Composition of household debt (secured and unsecured) by type of financial stress reported by households (all households defined as having a demand for debt advice (latent or actual))	75
Figure 28: Composition of household debt (secured and unsecured) by type of financial stress reported by households (only households having sought debt advice)	75
Figure 29: Composition of household debt (secured and unsecured) by type of financial stress (and average debt level in £) reported by all households defined as having a demand for debt advice (latent or actual)	76
Figure 30: Composition of household debt (secured and unsecured) by type of financial stress (and average debt level in £) reported by all households having sought debt advice	77
Figure 31: Shares of different debt types in total unsecured debt – all households having a demand for debt advice (actual and latent)	78
Figure 32: Shares of different debt types in total unsecured debt – households having sought debt advice	78
Figure 33: Demand for debt advice and mortgage standard variable rate, Q12005-Q12010	85
Figure 34: Actual and forecast demand for debt advice	86

## Glossary

AIC	Akaike Information Criterion
BIS	Department for Business, Innovation and Skills
CAB	Citizens Advice Bureau
CCCS	Consumer Credit Counselling Service
CPI	Consumer Prices Index
ECM	Error correction model
FSA	Financial Services Authority
GB	Great Britain
GDP	Gross Domestic Product
MAS	Money Advice Service
MFI	Monetary Financial Institutions
NDL	National Debtline
OBR	Office for Budget Responsibility
OECD	Organisation for Economic Co-operation and Development
OFT	Office of Fair Trading
ONS	Office for National Statistics
WAS	Wealth and Assets Survey



## Executive summary

### Introduction

London Economics were commissioned to undertake this study with the core objective of developing a model that could be used to set, for each type of credit provider, the appropriate share of future fees in support of the debt advice activities of the Money Advice Service. Currently the Money Advice Service is funded through a levy on the financial services industry, collected through the Financial Services Authority. This is an attempt to explore a potentially 'fairer' allocation of debt advice service costs across a wider spectrum of creditors.

### The benefits of debt advice

The literature shows that the provision of debt advice has many benefits for individuals receiving advice, financial institutions providing credit, Government, and society at large.

Numerous studies show that key potential benefits to individuals who receive debt advice include improved financial well-being, reduction in debt levels, increased income and maintained employment and wages. Individuals also benefit from better relationships and family stability, and avoid homelessness and criminality. Furthermore, debt advice can help individuals to avoid mental health issues and the costs of court and recovery action.

Credit providers benefit because debt advice results in a larger share of the amounts owed being recovered.

The Exchequer benefits as debt advice contributes to alleviate mental health issues, reduces re-offending by ex-prisoners and boost tax revenues as debt advice seekers are more likely to stay in employment.

Moreover, some studies highlight the fact that debt also has costs to the wider society, preventing Government from achieving objectives such as tackling child poverty, promoting social inclusion, removing barriers to work, and encouraging appropriate saving and investment.

### The demand for debt

The study considers available data sources before going on to construct a model of the stock of household debt in the UK. Data can be obtained from the Bank of England and the Office of National Statistics (ONS). Comparing the two data sources, we found that the Bank of England data is most appropriate for the purpose of the model, since the ONS debt measure covers households and non-profit institutions serving households and also includes debt owed to overseas lenders (to whom it would be very difficult to administer a levy).

Three time-series-based econometric models of secured household debt, unsecured household debt and total (secured + unsecured) household debt are developed. A principle of the modelling strategy was to aim to use as explanatory variables in the various models only variables which are forecasted by the Office for Budget Responsibility (OBR) in its Economic and Fiscal Outlook. This is in order to minimise the future forecasting burden on the Money Advice Service.

The variables included in the models are: private sector investment in dwellings, average earnings per employee, unemployment rate, CPI and the short term interest rate. In order to assess the accuracy of the models, they are estimated over a shortened period and the projected path of outstanding debt is checked against realised values. This shows that the projected values are close to the actual values (within 0.5% after 1 year).

Finally, the models are used to forecast outstanding total, secured and unsecured debt two years ahead. Total debt and secured debt are forecast to remain broadly flat over the next couple of years, whereas unsecured debt is projected to further decline in 2012 and 2013. However, the pace of decline will slow markedly.

## **Micro data on debt by type of debt**

Various surveys (the Wealth and Assets Survey, BIS surveys, and the Bank of England survey) provide measures of the shares of households with secured and unsecured debt, ranging from 33% to 40% for secured debt, and from 48% to 58% for unsecured debt. Two surveys show that the most common type of unsecured debt is credit card debt (25%-27% of households, depending on the survey), although personal and cash loans are highest in terms of amount owed (at 41% according to the WAS). There is limited overlap between secured and unsecured debt (the latest Bank of England survey put the share of households carrying both at 21%). Finally, high-cost debt types, such as pay-day loans and similar, are carried by at most 2% of households.

Of all the surveys reviewed in the present report, the BIS/YouGov is the best at the present time in terms of sample size, timeliness and information provided about the debt, debt types, pressures faced by debtors and actions taken. For these reasons, we strongly recommend to use the BIS survey results. In order to ensure the availability of similar information in the future, it would also be necessary to ensure the continued running of this survey in the future

## **The total demand for debt advice (actual and latent)**

For the purpose of the present study, the total demand for debt advice is defined as comprising:

- The actual demand for debt advice from individuals or households who actually sought some form of debt advice; and
- The potential demand for debt advice from individuals and households who are struggling to meet their financial obligations and would benefit from obtaining debt advice.

There exist no data on the overall demand for debt advice (based on this definition), so it is necessary to use proxies or indicators of the total demand. Therefore, for the purpose of deriving an estimate of the total demand for debt advice, we assume that households have an actual or potential demand for debt advice if they are:

- “keeping with all bills and commitments, but it is a constant struggle”; or
- “falling behind with some bills or credit commitments”; or
- “having real financial problems and have fallen behind with many bills or credit commitments”.

Further, households that they are “keeping up with all bills and commitments but it is a struggle from time to time” and sought debt advice are also included in the total demand for debt advice. Based on these criteria, according to the latest BIS/YouGov survey, the total demand for debt advice is 26.1% of households, or 5.3 million households. Of these 5.3 million households, 16.6% (0.9 million) sought some form of debt advice and 83.4% (4.4 million) did not, implying that the latent demand for debt advice is substantial.

At present, the BIS/YouGov survey provides eight data points over time. Overall, the share of households defined as having a demand for debt advice fluctuated between 21% and 25% from July 2008 to July 2009, hit a peak of 28% in the third quarter of 2009, and thereafter fluctuated between 18% and 25% to the fourth quarter of 2010. The lack of a long time series is a major challenge for developing a forecasting model of the demand for debt advice. The best forecast that can be made at this stage is to assume that the forecast values of the demand for debt advice are equal to the average of the observed values in the BIS/YouGov surveys conducted to date.

### **Model allocating the Money Advice Service debt advice costs**

In order to establish the best way forward for determining a levy base which is “fair” and transparent, two options were explored, namely the use of the OFT Credit Register and the FSA fee blocks. In addition, the issue of arrears to utilities, phone companies, housing associations, local authorities, etc, was also examined in detail.

With regards to the arrears, an in-depth analysis of the results of the 2009-2010 BIS/YouGov Debt Tracker survey shows that the arrears debt accounts for less than 1% of the debt of all households reporting having debts, less than 1% of the debt of the households reporting having debt problems but not seeking debt advice and less than 1% of the debt of households seeking debt advice. As the collection of information on arrears from a very large number of creditors (that are not lenders) would be very resource intensive, costly to pursue and complex, and would not change materially the overall picture, we recommend to exclude arrears from the base on which the levy would be charged.

The OFT Credit register contains a long list of entities and individuals who are entitled to engage in lending or undertake a credit/debt related activity.<sup>1</sup> However, the register does not provide any information on the volume of credit extended and, thus, the levy base would be the credit licence if the OFT Credit Register were to be used for establishing the level base. We recommend against using such an approach currently, as it would not be fair as small credit providers would be required to pay the same levy as large credit providers. Moreover, many non-credit providers would also be subject to the levy. However, subject to improvements to address the various issues noted above, it is potentially a route that might be pursued in the future.

---

<sup>1</sup> A credit licence is required for selling goods on credit, hiring or leasing out goods for more than three months, lending money, arranging credit for others, offering hire purchase terms, collecting debts, helping people with debt problems, advising on people’s credit standing, administering agreements (but do not collect debts) on behalf of creditors (in the case of consumer credit) or owners (in the case of consumer hire), and helping individuals to locate (and possibly also correct) records about their financial standing held by credit information agencies (see OFT “Do you need a credit licence? An introduction to consumer credit licensing” downloaded from <http://www.oft.gov.uk/OFTwork/credit-licensing/do-i-need/> on 16-11-2011).

Finally, as some of the FSA fee blocks<sup>2</sup> match to a very large extent the provision of unsecured and secured credit to households, we recommend using the FSA fee block system as the basis for the levy. More details on how to proceed are provided below.

Bank of England data on lending to households show that:

- In the case of secured lending, monetary financial institutions (MFIs) account for 84% of the total secured household debt owed to UK-based lenders whereas specialist lenders accounted for 15%. All the UK-based mortgage activity is included in the FSA fee-blocks A.2 “Home finance providers and administrators” and potentially FSA fee-block A.18 “Home Finance providers, advisers, and arrangers”.
- In the case of unsecured lending, MFIs account for 59% of the total unsecured household debt while other lenders account for 41%. In the case of unsecured lending, only the MFIs are subject to the FSA fee and are included in the FSA fee block A1 “Depositor acceptors”.

In total, the institutions included in FSA fee blocks A.1 and A.2 cover 94% of total household debt to UK-based lenders. Of this latter household debt, 90% can be allocated to fee-block A.2 and 10% to fee-block A.1.

---

<sup>2</sup> See FSA (2011) for a detailed discussion of the FSA fee block system.

# 1 Introduction

London Economics were commissioned by the Money Advice Service (MAS) to undertake this study with the core objective of developing a model of the demand for debt advice that could be used to determine, transparently and equitably, the share of fees to be paid by the various types of credit providers for funding the debt advice activities of the Money Advice Service.

In undertaking the work required for addressing the core objective of the study, the project should also provide answers to the following questions:

- What is the scale of over-indebtedness in the UK and how does it break down by creditor type, including non-financial services creditors?
- How does the breakdown of creditor type vary over time?
- How is the extension of credit distributed across the financial services sector by FSA fee-block and type of consumer credit licence?
- How could a funding model be implemented that is fair to all creditors – including non-financial services creditors - and what are the practicalities of raising the funds?
- What data is required to create an accurate, user-friendly predictive model for a future funding requirement? In particular the work may need to evaluate the value of readily available macroeconomic data as compared with firm specific data required through regulatory returns and household level data held by CRAs.
- What would be the appropriate data architecture for the model?
- What are the benefits to individuals, creditors and society of debt advice? A levy is only justified in the public interest so while this information would provide useful context it could not form the basis of an argument for fair distribution of a creditor levy.

In order to meet the core objective and answer the questions above, the study comprises of five elements:

- A literature review examining the benefits of debt advice to individuals receiving the advice, credit providing institutions and wider society;
- Development of a model of the demand for household debt, including secured, unsecured and total (secured + unsecured) debt, which can be used to forecast future levels of debt;
- Examination of available micro data on debt by type of debt, including breakdowns of unsecured debt by type (credit card, cash loans, etc), and breakdowns of secured debt by type (debt secured on property vs. other secured debt), and non-financial services arrears debt;
- Examination of the evolution of the demand for debt advice and forecasting the demand for debt advice; and
- Development of a model for allocating the levy to be raised to fund the Money Advice Service debt advice activities.

The following chapters address each of these elements in turn.

## 2 The benefits of debt advice

The provision of debt advice to individuals or households with high debt burdens or struggling with their debt repayments has numerous benefits for the individuals receiving the advice, the financial institutions providing credit, other businesses, Government, and society at large. Below, we review the evidence relating to the benefits of debt advice for these different types of beneficiaries.

### 2.1 Benefits to individuals or households receiving debt advice

The key potential benefits to individuals or households who receive debt advice are identified in various studies. These are:

- Improving financial well-being
- Maintaining relationships and family stability
- Avoiding mental health issues
- Maintaining employment and wages
- Avoiding criminality
- Avoiding homelessness
- Increasing income
- Avoiding the costs of court and recovery action

Clearly, many of the benefits of debt advice depend on the success of the advice in reducing the debt burden. In this regard, Williams and Sansom (2007) found that, for the population in general, face-to-face advice is linked with a 56% probability of debt becoming manageable, and Pleasence and Balmer (2007) found that telephone advice achieves 47%. In contrast, according to LSE (2011), only around a third of problem debt may be resolved without any intervention.

The provision of debt advice is not the only key contributing factor to the achievement of these benefits. The other two key factors are a) the production of a realistic and achievable debt plan by the debt advice provider and b) the successful completion by the debt advice seeker of the debt plan recommended by the debt advice service provider.

Evidence in the literature relating to each of the benefits listed above is discussed in the following subsections.

#### 2.1.1 Improving financial well-being

To the extent that it helps individuals to reduce their debt burden, debt advice can improve household budgets and help them to make ends meet since disposable income (after debt and interest repayments) is higher. The link between debt and financial hardship is discussed in a number of studies, such as Edwards (2003) and Harris et al (2009).

For example, Orton (2008) found evidence of repayments taking a very high proportion of household income, in some cases more than a quarter of disposable income. In another case, Harris et al (2009) note the example of a family with an income of £225.75 per week who was left £53.13 below the Government poverty line after meeting repayments on their credit commitments.

Research does suggest that debt advice helps reduce individual's debt burdens. For example, Pleasance et al (2007) found that twelve months after receiving debt advice the recipients owed £7,585 less on average (down from £18,780 to £11,195), and a higher proportion of those who received advice reported that their financial situation had improved relative to a control group.<sup>3</sup> Pleasance et al (2007) also found some evidence that those who were offered advice were more likely to have concentrated on tackling 'priority' debts (defined as debts for which creditors can take possession of homes, seek orders of imprisonment, cut-off utilities or seize goods) relative to the control group.<sup>4</sup>

The evaluation of the money advice outreach pilots by Smith and Patel (2008) found that debt was written off for 9% of clients (equivalent to 7.6% of recorded debt during the 12-month reference period). Finally, interviews undertaken for the study by Day et al (2008) highlighted the potential for debt advice to help individuals break cycles of debt and poverty, including examples where respondents said the advice assisted them to eliminate financial barriers that held back other aspects of their lives, such as employment which is discussed below.

### **2.1.2 Maintaining relationships and family stability**

Numerous studies have found that relationships are negatively affected by debt. For example, 18% of Citizens Advice Bureau debt clients surveyed for the study by Edwards (2003) reported arguments with their partner, relationship breakdown and disputes within their wider family circle due to their debt problems. Respondents interviewed for the study by Turley and White (2007) also reported that a major impact of debt problems had been the breakdown of relationships with family and friends. Pleasance et al (2007) found that almost half (45%) of debt advice recipients believed debt problems had had an adverse impact on their relationship with their partner.

Similarly, a number of studies, such as Gillespie et al (2007), Pleasance et al (2007) and Illuminas (2008), report that people's relationships are improved following debt advice. For example, in the study by Pleasance et al (2007), a third of recipients of debt advice said that their relationships had improved, with 70% ascribing the improvements directly to advice. Qualitative research from the same study indicates that resolving money problems helps recipients of advice to generally re-engage with other people.

### **2.1.3 Avoiding mental health issues**

Research has shown a connection between debt and mental health problems. For example, Skapinakis et al (2006) found that individuals with financial difficulties are at a higher risk of suffering from an episode of common mental disorder, based on data from the 2000 Psychiatric Morbidity Survey (conducted by the ONS). In the study, financial difficulties include being behind

---

<sup>3</sup> A random control trial was used to examine whether the circumstances of a group of people with debt problems would be improved by an offer of debt advice, relative to a similar 'control' group to whom the offer was not made. The trial involved 402 participants, all with on-going debt problems about which they had not obtained formal advice, of which 205 were randomly allocated to receive an offer of advice from National Debtline.

<sup>4</sup> Priority debts are those relating to mortgages, rent, taxes, court fines, maintenance, utilities and hire-purchases.

with bills and debts, as well as other indicators of financial stress such as utility disconnection and reducing the use of utilities.<sup>5</sup>

The study found that those who initially have no mental health problems but experience financial difficulties over a 12-month period are 33% more likely to develop a mental health problem. The link between financial difficulties and depression (as opposed to other forms of mental disorder) is found to be especially strong. In particular, those who initially suffer from depression and also face financial difficulties are more than four times as likely to suffer persistence or recurrence of their mental health issue.

Furthermore, improved mental wellbeing leads to benefits in other areas, such as higher employee productivity (see McCrone et al, 2008) which results in financial benefits for both the employee and employer (see below).

#### **2.1.4 Maintaining employment and earnings**

Research suggests that alleviating debt helps individuals to remain in work. This is related to the detrimental effects of debt on mental health, since mental health problems have in turn been shown to impact on the likelihood that an individual is employed. Furthermore, improved mental health is linked to higher employee productivity, and economic theory implies that higher productivity results in higher wages.

For example, McCrone et al (2008) found that, in 2007, lost earnings from depression-related unemployment amounted to £5.82bn, or £4,694 per person with depression. For unemployment related to anxiety disorders, the figure was £7.7bn, or £3,377 per person with an anxiety disorder.<sup>6</sup> As discussed above, Skapinakis et al (2006) demonstrate a particularly strong relationship between financial difficulties and the likelihood of suffering from depression.

A study from the Sainsbury Centre for Mental Health (2007) suggests that losses from reduced on-the-job productivity may be several times larger than the losses from sickness absence, although the report does acknowledge that measurement of this impact is difficult. Adapting international evidence to the UK context, the study estimates that impaired performance at work (or 'presenteeism') attributable to mental health problems causes 1.5 times as much working time lost as absenteeism. On this basis, the study estimates the annual costs of presenteeism caused by mental health problems to be £15.1 billion for the UK in total (these cost are also born by employers, discussed in section 2.3 below).

#### **2.1.5 Avoiding criminality**

According to Williams (2004), evidence from the Prisons Inspectorate indicates that debt can be a factor in criminality since 50% of prisoners had financial problems when entering custody. Further, an experiment in giving debt advice to prisoners released on probation suggests that this results in a reduced risk of re-offending.

---

<sup>5</sup> More specifically, an individual with financial difficulties was defined as someone who had: been seriously behind in paying bills, credit card debts, mortgage repayments and loans; disconnected by a utility company; used water, gas, electricity or the telephone less because they could not afford it; or borrowed money from unofficial sources in order to pay for their everyday needs.

<sup>6</sup> See Table 14 on page 118 of McCrone et al (2008).



In addition, Evans and McAteer (2011) argue that advice for low-income households who are excluded from mainstream financial services would result in crime-reduction benefits in the form of reduced illegal money lending activities.

### **2.1.6 Avoiding homelessness**

As noted above, Pleasance et al (2007) found evidence that individuals who were offered advice were more likely to have focussed on tackling 'priority' debts (such as debts relating to mortgages and rent) for which creditors can take possession of homes, thus reducing the risk of homelessness.

### **2.1.7 Increasing income**

Since debt advisers also instruct clients on how to maximise their incomes, higher income can be another benefit of receiving debt advice. Often, the extra income is in the form of benefits to which the debt advice recipient is entitled but was not previously claiming. This is mentioned in a number of studies, such as Gillespie et al (2007), Pleasance et al (2007), Day et al (2008), Smith and Patel (2008) and Dayson et al (2009). In some cases, recipients of advice found that they are entitled to back payments of unclaimed benefits. Debt advice can also help to boost disposable income as a result of changing energy suppliers and switching to cheaper payment methods (Dayson et al, 2009).

### **2.1.8 Avoiding the costs of court and recovery action**

Pleasance et al (2007) found that 12 months on from receiving debt advice more than half of recipients (54%) believed that the advice had helped them to avoid or curtail legal action, whilst 30% felt it had assisted them to avoid a County Court judgement.

Research also suggests that debt advice can help prevent recipients from losing their homes, although there is wide variation between studies regarding the extent to which this is the case. For example, Pleasance et al (2007) found that just under a third had avoided eviction due to receiving advice, whereas Smith and Patel (2008) put it at just 5%.

Other studies citing avoidance or mitigation of legal or recovery action as a benefit to individuals in receipt of debt advice are Day et al (2008) and Orton (2010). For example, Orton (2010) found that debt advisors occasionally help clients with representation in court, reflecting the breadth of activities taken on by debt advisors.

## **2.2 Benefits to credit providers**

Debt advice helps creditors to recover a larger share of the amounts owed. Wells, Leston and Gostelow (2010) modelled the impact of credit advice on the recovery rates of distressed debt for credit providing institutions. The model uses the volume of debt advice provision at the time, and the profile of the debt of customers using such services. It compares the theoretical rate of recovery realised by creditors under two scenarios: a) where individuals in arrears receive independent debt advice, and b) where the same individuals do not receive such advice.

The model results indicate that, when individuals receive debt advice, creditors recover 51% of the debts owed, on average, relative to only 46% when advice is not received. Based on an estimated

volume of debt advice in 2010, this is equivalent to a total recovery of £12.6bn versus a total recovery of £11.3bn. Thus, the value of extra debt recovered by institutions from debtors having received debt advice in 2010 is about £1.3bn. It should, however, be recognised (as the authors do) that the model was built using limited data and incorporating a number of assumptions.

In addition, there are other studies which provide some evidence that receiving advice is linked with individuals clearing their debts. For example, Pleasance et al (2007) conducted a small quantitative study showing that 83% of people who received advice ended their debt problems, relative to 70% of those who had not had advice, although this does not necessarily imply that their debts had been repaid in full.

Illuminas (2008) found that 20% of National Debtline advice recipients had no outstanding debts after two years, and this increased to over 25% four years after the advice was provided. These findings should be treated with caution, however, because of the attrition rates in the follow-up stages of the study and small sample sizes.

Repayment strategies put into place after the provision of debt advice often appear to be relatively successful in terms of individuals sticking to the arrangements. For example, the evaluation by Day et al (2008) found it uncommon for individuals to fall behind on repayments that were negotiated by advisers from money advice outreach pilots.<sup>7</sup>

### **2.3 Benefits to other businesses**

Other businesses benefit from debt advice through improved health of their employees. As discussed above, Skapinakis et al. (2006) demonstrate a link between debt and mental health issues, and McCrone et al. (2008) show that these health issues can lead to lost earnings from periods of unemployment amounting to £4,694 and £3,377 per case of depression and anxiety respectively.

HM Treasury (2008) cites research which estimated that debt-related stress problems lead to 8.7 million lost working days in 2004, with a cost to employers of £497 million, and noted that more than a quarter of a million people were absent from work for more than one month because of money worries.

Furthermore, a report from the Sainsbury Centre for Mental Health (2007) found reduced on-the-job productivity causes losses several times larger than the losses from sickness absence. Based on international evidence adapted to the UK context, the study estimates that mental health problems lead to impaired performance at work costing £15.1 billion annually to the UK in total, whereas absenteeism and staff turnover related to mental ill health were found to result in annual costs of £8.4 billion and £2.4 billion respectively.

---

<sup>7</sup>The Legal Services Commission (LSC) piloted different methods of money advice outreach in England and Wales, with funding from HM Treasury's Financial Inclusion Fund for a three-year period from 2005 to 2008. The LSC awarded contracts to establish money advice outreach pilot projects to 22 organisations ranging from Sure Start Children's Centres, to housing support services, to credit unions, to local authority customer service centres.

In other examples, Pleasance et al. (2007) found that 19% of debt advice clients reported that they had had to take time off work due to financial difficulties, and Illuminas (2008) found that a quarter of users of National Debtline had taken time off because of stress.

Finally, Evans and McAteer (2011) cite research illustrating the benefits to local businesses of financial inclusion activities and debt advice services in poorer areas where residents are often excluded from mainstream financial services, since it helps to keep wealth within the area that would otherwise be lost through extortionate interest rates and unclaimed benefits. In particular, the study found that the £1.1 million invested specifically in debt advice services delivered a £4 million return for the region.

## 2.4 Benefits to the Exchequer

Research suggests that benefits arise for the exchequer in the form of lower health service costs, since it has been shown that debt leads to a higher rate of mental health issues, lower re-offending rates by former prisoners and higher tax revenues as debtors stay in work.

As noted above, research by Skapinakis et al. (2006) found that financial difficulties increase the likelihood that an individual will develop a mental health problem, and this link is especially strong in the case of depression problems. In another study, McCrone et al. (2008) found that the cost to the health service of depression and anxiety disorders, per case in 2007, was £1,355 and £544 respectively.<sup>8</sup>

The LSE (2011) study modelled the cost-effectiveness of various types of debt advice services based on a range of funding scenarios with alternative assumptions about the share of the costs borne by creditors. In particular, the study examined the impact of debt-related mental health issues on NHS costs (as well as other costs – the overall results are discussed in section 2.5 below). The study found that, under a scenario where two-thirds of the costs are borne by creditors with the rest paid for by the NHS, the return to the NHS per £1 spent by the NHS is £0.34 within 0-5 years.

Other evidence comes from Pleasance et al. (2007), who found that debt problems result in costs to the NHS of £20 per case, rising to £50 for 'difficult to solve' cases; and Whyley (2010), who cites two studies which found that debt increases the burden on health services: the first found that one in three users of National Debtline had visited a doctor because of debt-related stress, while the other found that a similar share of those with disabilities had visited their GP for help in managing the stress of being in debt.

## 2.5 Societal benefit

Some studies (e.g. Whyley, 2010; and BIS, 2009) highlight the fact that debt also has costs to the wider society. For example, according to BIS (2009), over-indebtedness is a barrier to achieving objectives across Government, including tackling child poverty, promoting social inclusion, removing barriers to work, and encouraging appropriate saving and investment.

---

<sup>8</sup> See Table 14 on page 118 of McCrone et al (2008).

Since many studies (such as those discussed above) have shown that debt advice does succeed in reducing debt burdens, it will also have benefits for the wider society. The BIS (2009) study acknowledges that many of these costs, such as personal distress and relationship breakdown, are hard to quantify but does cite the recent study by Pleasance et al. (2007) which estimated the costs linked to debt problems to be greater than £1,000 per debt problem.

As mentioned above (section 2.4), the LSE (2011) study modelled the cost-effectiveness of debt advice services under a range of funding scenarios. The study estimates the pay-offs from debt advice arising across society, including pay-offs for the NHS, other public sector bodies and non-public sector impacts. In a situation where two-thirds of the costs are borne by creditors with the rest paid for by the NHS, the returns (within 0-5 years) per £1 spent by the NHS are: £0.34 to the NHS, £0.58 to 'other' public sector bodies, and £2.63 to the non-public sector.

Social landlords (housing associations, local authorities, etc) can also realise social and economic benefits from addressing financial inclusion and reducing the debt of their residents (Evans and McAteer, 2011). These benefits include the avoidance or a reduction in rent arrears, and court and eviction costs. Moreover, with lower turnover in tenancy, social landlords also make administrative and operational savings.

Evans and McAteer (2011) cite research which found that increasing marginalised households' access to affordable financial services would save each household between £800 and £1,000 each year through lower borrowing costs, reduced bills, lower charges and access to cheaper deals. This is in turn likely to help prevent rent arrears and eviction rates among low income social housing tenants.

## 3 The demand for debt

This section reviews potential sources of data on total consumer debt and presents the estimation results of a few models which can be used to forecast the level of consumer debt.

### 3.1 Consumer debt data sources

Data on total household indebtedness can be obtained from two different sources, namely the Bank of England and the Office of National Statistics (ONS). The data available from these two sources are presented below together with a discussion of their usefulness for the development and estimation of the funding model.

#### 3.1.1 Bank of England data

The Bank of England, in its Bankstats database, provides data on the liabilities of households (and housing associations serving households) to (see Table 1):

- monetary financial institutions (MFIs) (in Table A4.1, M4 lending and Table A4.3 M4 lending excluding the effects of securitisations and loan transfers). Monetary financial institutions include UK-resident banks and UK resident building societies;
- all lenders (Table A5.2). All lenders include, in addition to MFIs, non-bank, non building society UK credit grantors, specialist mortgage lenders, retailers, central and local government, public corporations, insurance companies and pension funds.<sup>9</sup>

---

<sup>9</sup> See Bank of England, *Explanatory Notes - Total lending to individuals*, downloaded from <http://www.bankofengland.co.uk/mfsd/iadb/notesiadb/ltoi.htm>. on 17/9/2011.

<b>Table 1: Bank of England Bankstats data</b>			
	<b>Breakdown of data available</b>	<b>Potential use</b>	<b>Missing information</b>
Table A4.1 M4 lending	lending to households (including housing associations serving households) -secured on dwellings -consumer credit, of which - credit card debt - other  monthly + quarterly	Modelling of aggregate debt /net credit extension to households	Securitised loans, loan transfers Lending by non-MFIs Debt to councils, utilities, etc Debt to non-UK based lenders
Table A4.3 M4 lending excluding the effects of securitisations and loan transfers	lending to household (including housing associations serving households) -secured on dwellings -consumer credit, of which - credit card debt - other	Modelling of aggregate debt /net credit extension to households	Lending by non-MFIs Debt to councils, utilities, etc Debt to non-UK based lenders
Table A5.2 total amount outstanding – lending to households (including housing associations serving households)	MFIs other lenders Total - secured on dwellings - consumer credit		Securitised loans, loan transfers Debt to councils, utilities, etc Debt to non-UK based lenders

*Source: Bank of England Bankstats*

In short, the household debt figures produced by the Bank of England provide information on outstanding household debt from the perspective of lenders carrying out their activities from the UK.

Thus, household debt owed to non-lenders (such as family, friends, utilities, etc) and / or lenders based outside the UK (including the Channel Islands and the Isle of Man from January 1998 onwards) is not included in the Bank of England household debt data.

The household debt measure from Bank of England Table A5.2 would be the most relevant one for the purpose of the development of the funding model as it is the most comprehensive measure in terms of coverage of lenders.

Unfortunately, the debt data provided in Bank of England Table A5.2 are net of any securitisation or sales of household debt to non-lenders in the UK<sup>10</sup> or overseas organisations. Thus, the data

<sup>10</sup> Sales of loan portfolios between lenders do not have impact on total amount owed by liabilities as they simply involve a shift of ownership of this debt within the lender group.

from Table A5.2 may further underestimate the total debt owed by households if the acquirers of the securitised household debt or the household debt portfolios are non-lenders.

However, the debt data from Bank of England Table A4.1 and A4.3 can be used to estimate the impact of securitisations and debt portfolio sales on total household liabilities to MFIs. A comparison of the debt figures reported in the two tables shows that the difference is small. At the end of 2010, secured household debt in Bank of England Table A4.1 (i.e. net of the effects of securitisation and loan portfolio sales) is 0.02% lower in the case of secured debt and 0.3% lower in the case of unsecured consumer credit (see Annex 1).

While the factors described above result in an underestimation of the true level of household debt, the fact that the Bank of England household debt figures also include the liabilities of housing associations results in an overestimation of the household debt.

It is not possible to back out from the total debt owed by individuals the debt owed by housing associations to MFIs in the published seasonally adjusted data as no seasonally adjusted data are available for the housing debt. However, the Bank of England publishes data on not-seasonally-adjusted housing association debt. These data show that as of 31<sup>st</sup> December 2011, the debt owed by housing associations was relatively small, accounting for only 3.7% of the amount owed by households (and housing associations) to MFIs and other lenders in the UK. Thus, the fact that the seasonally adjusted household debt figure includes housing association debt will not distort the overall picture.

The Table A5.2 from the Bank of England provides a break-down of household debt into secured lending and unsecured lending. The data reported in Table 2 show that secured lending accounts for the bulk (£1,238 billion or 85.3%) of the total household<sup>11 12</sup> debt owed to UK lenders at the end of 2010.

Table 2: Total lending (amount outstanding) to households in BoE data - 31 Dec. 2010		
Type of credit	Amount	Percentage of total
Secured lending (on dwellings)	£ 1 238 029 million	85.3%
Unsecured lending (consumer credit)	£ 213 560 million	14.7%
Total	£ 1 451 589 million	100%

Source: Bank of England Bankstats Table A5.2

Bank of England Tables A5.3 and A5.6 provide a breakdown of secured lending and unsecured consumer credit between MFIs and other lenders. The table below shows that:

- In the case of secured lending, MFIs accounted for 84% of the total secured household debt owed to UK-based lenders whereas specialist lenders accounted for 15%.
- In the case of unsecured lending, MFIs account for 59% of the total unsecured household debt while other lenders account for 41%. Unfortunately, no information is provided on

<sup>11</sup> And housing associations serving households.

<sup>12</sup> According to the FSA data on secured and unsecured residential lending to individual, at the end of 2010, 2.95% of the residential loans (in value) to individuals were in arrears.

the various lenders included in “other lenders”. However, by definition these are non-MFIs.

**Table 3: Total secured and unsecured lending (amount outstanding) to households in BoE data - 31 Dec. 2011**

Type of institution	Amount (£ million)	Percentage of debt category	Percentage of total household debt
<b>Lending secured on dwellings</b>			
By MFIs	1,044,117	84%	72%
By specialist lenders	186,349	15%	13%
By other lenders	7,466	1%	1%
<b>Total</b>	<b>1,238,029</b>	<b>100%</b>	<b>85%</b>
<b>Unsecured lending</b>			
By MFIs	126,534	59%	9%
By other consumer credit lenders	87,123	41%	6%
<b>Total</b>	<b>213,560</b>	<b>100%</b>	<b>15%</b>
<b>Total (secured + unsecured)</b>	<b>1,451,589</b>		<b>100%</b>

Source: Bank of England Bankstats Tables A5.3 and A5.6

### 3.1.2 ONS data

The second source of data on total household debt is the household balance sheet produced by the ONS as part of the sectoral balance sheets produced with the annual national accounts.<sup>13</sup> This household debt information differs from that produced by the Bank of England in a number of aspects (see Table 4):

- First, the ONS debt measure covers households and non-profit institutions serving households<sup>14</sup> and not households (and housing associations serving households) alone.

<sup>13</sup> The latest data point is for 2009. Typically, the annual accounts are published by the ONS in late spring. However, this year, due to a number of changes being implemented by the ONS, the national accounts will be published only in October. Thus, figures for 2009 are presented in the report.

<sup>14</sup> According to the ESA95 definitions, the non-profit institutions serving households include the following main kinds of organisations and institutions which provide non-market goods and services to households: trade unions, professional or learned societies, consumers' associations, political parties, churches or religious societies (including those financed but not controlled by governments), and social, cultural, recreational and sports clubs, charities, relief and aid organisations financed by voluntary transfers in cash or in kind from other institutional units.

(see <http://circa.europa.eu/irc/dsis/nfaccount/info/data/esa95/en/een00092.htm#0002c532>).



This reduces the usefulness of this debt series for the purpose of the development of the funding model as the services for which the Money Advice Service will administer a levy relate only to debt advice to individuals and households.

- Second, the ONS debt measure includes household debt owed to overseas lenders. Again, this reduces the usefulness of this debt series for the purpose of the development of the funding model as it would be difficult to administer a levy on lenders located overseas.
- Third, the ONS household liabilities measure includes a category “other accounts payable”. This could be useful information as it provides information on debt due as a result of late or non-payment of bills such as utilities bills, council taxes, etc. Unfortunately, it includes such debts of both households and non-profit institutions serving households, and the publicly available data do not provide any breakdown of this debt category. Thus, it is not possible to back out the latter group’s debt from the total.

**Table 4: ONS data**

	<b>Breakdown of data available</b>	<b>Potential use</b>	<b>Missing information</b>
Blue Book – annual national accounts, Table 6.1.9 Households and non-profit institutions serving households-financial balance sheet at end year, liabilities	Short-term loans - Loans by UK monetary financial institutions, excluding loans secured on dwellings & financial leasing - Loans by rest of the world monetary financial institutions - Loans secured on dwellings by UK MFIs - Other long-term loans by UK residents  - other accounts payable	Modelling of aggregate debt /net credit extension to households	Annual data only, last observation 2009 (2010 available later in October)  Other drawbacks: - more than household sector - includes lending by non UK-based institutions

*Source: ONS, National Accounts Bluebook 2010, Table 6.1.9 Financial balance sheet of households and non-profit institutions serving households*

Table 5 provides a comparison of the two debt measures and their components. While the data are not exactly identical in terms of the precise debt figures for the various components of the total household debt, they are consistent in terms of relative importance of secured and unsecured lending in total household debt. A similar picture emerges from the longer time series provided in Figure 1.

At the present time, the ONS does not provide separate assets and liabilities estimates for households and non-profit institutions serving households as many items of the combined balance sheet of the households and non-profit institutions serving households are derived residually (see ONS(2011)).

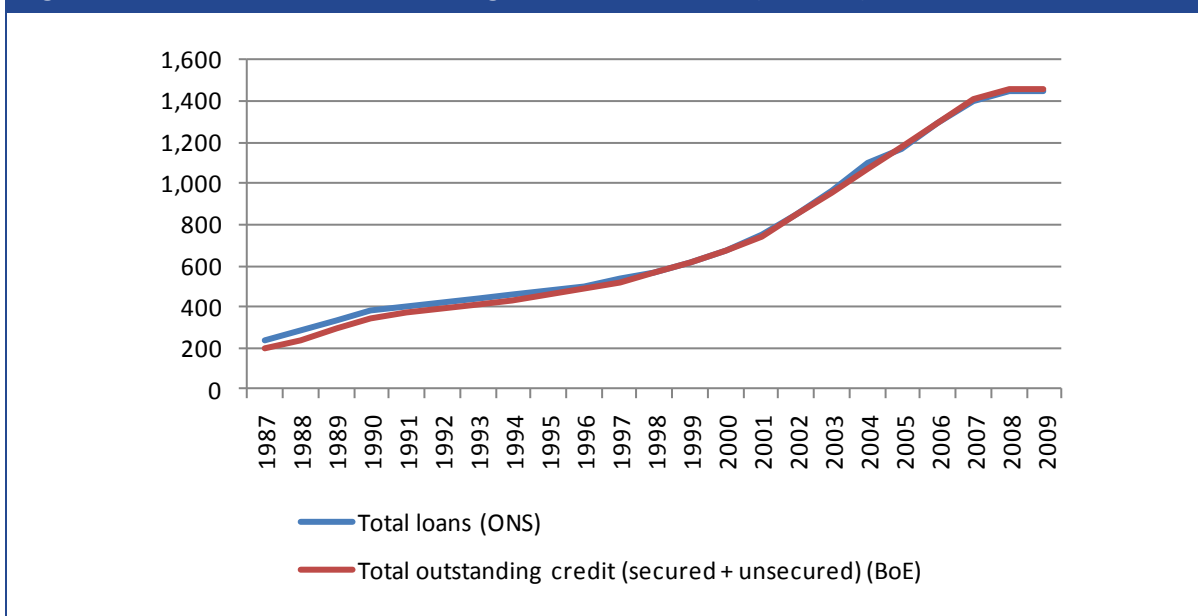
Of note is also the fact that, in the ONS data, the “other accounts payable” debt owed by households and non-profit organisations serving households is small, accounting for only 5% of the total debt. Moreover, the share of the total household debt accounted for by this category of debt has almost steadily declined since 1987.

**Table 5: Comparison of ONS and Bank of England household debt estimates – 2009 (£billion)**

Debt item	ONS	BoE
Securities other than equities	7.6	
Loans by UK monetary financial institutions, excluding loans secured on dwellings & financial leasing	181.1	227
Loans by rest of the world monetary financial institutions	27.9	
Loans secured on dwellings by UK MFIs	1,191.6	1,234.1
Other long-term loans by UK residents	43.9	
Total loans	1,444.5	1,460.7
Other accounts payable	79.2	
Total	1,531.1	

Source: Bank of England Bankstats Tables A5.2, A5.3 and A5.6 and ONS, National Accounts Bluebook 2010, Table 6.1.9 Financial balance sheet of households and non-profit institutions serving household

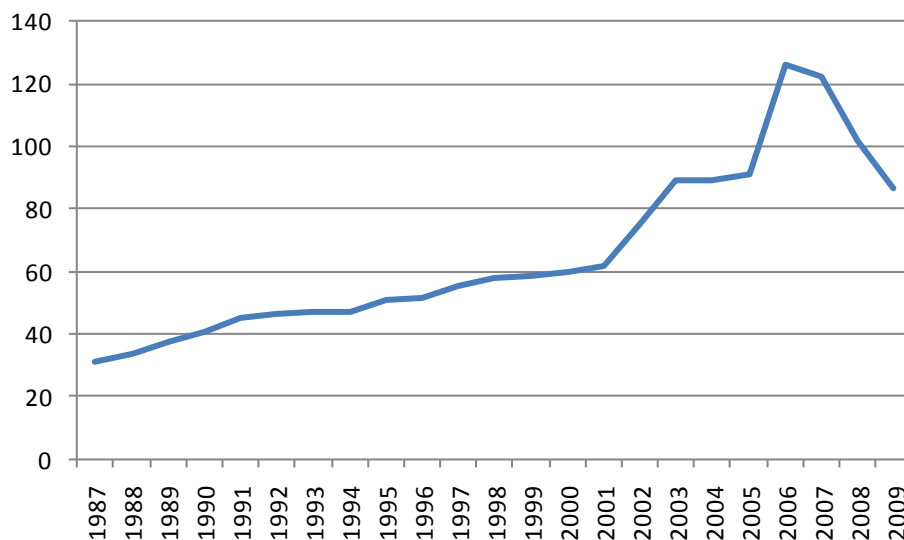
**Figure 1: Household debt - Bank of England<sup>1</sup> and ONS<sup>2</sup> data (£ billion)**



Notes: (1) Bank of England debt figures include debt of housing associations serving households and (2) ONS debt figures include debt of non-profit institutions serving households.

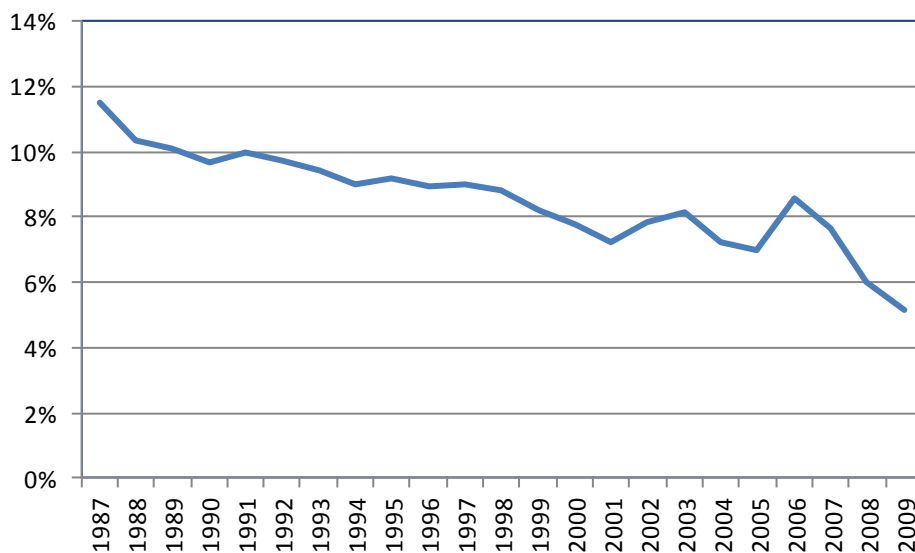
Source: Bank of England Bankstats Table A5.2 and ONS, National Accounts Bluebook 2010, Table 6.1.9. Financial balance sheet of households and non-profit institutions serving households

Figure 2: Household debt – Other accounts payable (£ billion)



Source: ONS, National Accounts Bluebook 2010, Table 6.1.9 Financial balance sheet of households and non-profit institutions serving households

Figure 3: Household debt – Other accounts payable in % of total household debt



Source: ONS, National Accounts Bluebook 2010, Table 6.1.9 Financial balance sheet of households and non-profit institutions serving households

## 3.2 Which total household debt data to use?

A review of the literature of studies focusing on the level of UK or GB household indebtedness shows that both data sources have been used to analyse trends in the level of indebtedness at the macro level (see Table 6 below).

Table 6: Studies focusing on UK household debt over time or presenting macro debt data	
Debt data	Study
<b>Bank of England household debt data</b>	
Secured debt: net lending to individuals, secured on dwellings (amounts outstanding, (Table A5.2) Credit card debt: credit card borrowing (Table A5.6) adjusted for the proportion of credit card debt not bearing interest Other unsecured debt: other consumer credit (Table A5.6)	Redwood, V. And Tudela, M. (2004), "From tiny samples do mighty populations grow? Using the British Household Panel Survey to analyse the household sector balance sheet", Bank of England Working Paper No. 239
Secured, unsecured and net total sterling lending (table A5.2)	Oxera (2004), "Are UK households over-indebted?" Report prepared for APACS BBA FLA and CCA
Secured, unsecured, total (from Table A5.2)	Waldron, M. And Zampolli, F. (2010), "Household debt, house prices and consumption in the United Kingdom: a quantitative theoretical analysis", Bank of England Working Paper No, 379, March
<b>ONS household debt data</b>	
Total liabilities in sectoral balance sheets from the national accounts	Girouard, N., Kennedy, M. And André, C. (2006), "Has the Rise in Debt Made Households More Vulnerable?", OECD Economics Department Working Papers No. 535
Secured and unsecured credit in sectoral balance sheets from the national accounts	Kempson, E. (2002), Over-indebtedness in Britain, A Report to the Department of Trade and Industry
Total liabilities and secured lending in sectoral balance sheets from the national accounts	Tudela, M. And Young, G. (2005), "The determinants of household debt and balance sheets in the United Kingdom", Bank of England Working Paper, No. 226

Source: London Economics

The empirical model of UK household debt presented in the next sub-section uses the Bank of England debt data.

## 3.3 Forecasting model of household debt

### 3.3.1 General considerations

This subsection presents three time-series-based econometric models of secured household debt, unsecured household debt and total (secured + unsecured) household debt.

In the first subsection, the data and data sources are outlined, and the results from tests for stationarity covering all the relevant variables are presented. Such tests are undertaken to ensure that a proper econometric estimation procedure is adopted.

In the second and third subsections, error correction models are estimated for total debt and secured debt respectively. In each case this involves three steps:

- Estimation of a long-run equilibrium model
- Testing the residuals of the long-run equilibrium model for stationarity
- Estimation of an error correction model

In the fourth subsection, an autoregressive model is estimated for unsecured debt.

Finally, total outstanding household debt is forecast out two years ahead in the last subsection.

In order to minimise the future forecasting burden on the Money Advice Service, a key principle guiding the modelling strategy was to aim to use as explanatory variables in the various models only variables which are forecasted by the Office for Budget Responsibility (OBR) in its Economic and Fiscal Outlook, which appears in spring (alongside the Budget) and autumn.

The forecast paid is limited to 2 years because this is the forecasting horizon of the OBR.

### 3.3.2 Data

The data used to model household debt come from the Bank of England (debt data) and the ONS (other economic data).

The variables used during the modelling process are listed in Table 7 (with unique ONS and Bank of England identifiers), and the three variables to be modelled are charted over time in Figure 4. Complete data for all the variables are available quarterly from 1993Q2 until at least 2011Q1.

**Table 7: Variables used to model household debt (ONS and Bank of England series identifiers in parentheses)**

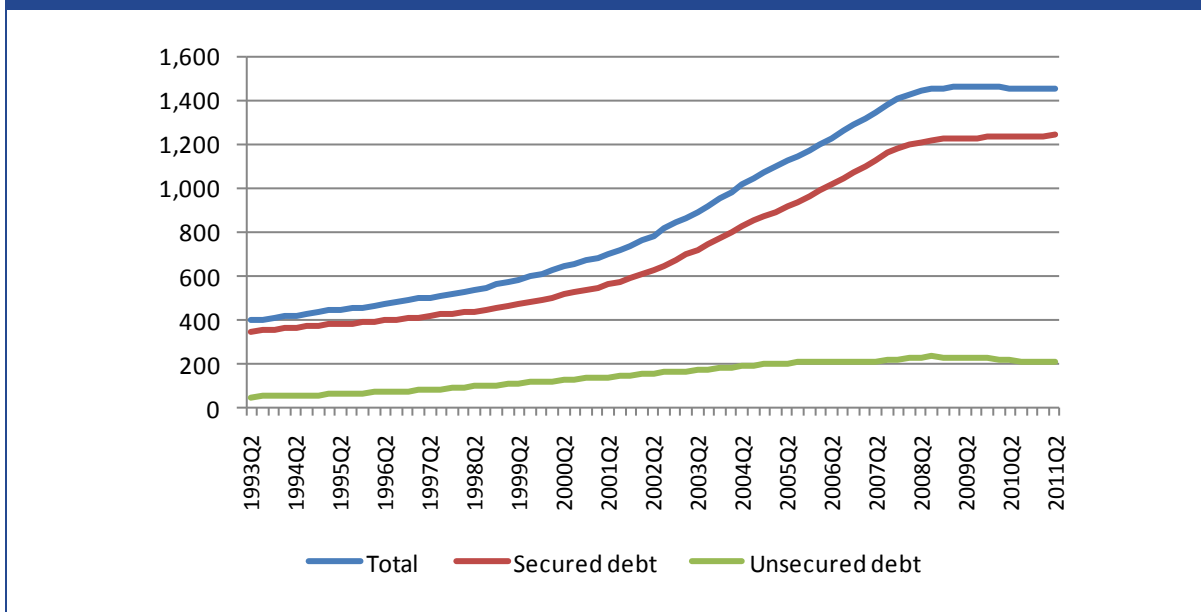
Variable	Source	Available until <sup>1</sup>
Total outstanding net lending to individuals (VTXC)	Bank of England	2011 Q2
Outstanding secured net lending to individuals (VTXK)	Bank of England	2011 Q2
Outstanding secured net lending to individuals (VZRI)	Bank of England	2011 Q2
Gross Domestic Product (ABMI)	ONS	2011 Q2
Private sector investment in dwellings (DFEA)	ONS	2011 Q1
Employment level (thousands aged 16+) (MGRZ)	ONS	2011 Q2
Unemployment rate (% aged 16+) (MGSX)	ONS	2011 Q2
Average earnings per employee <sup>2</sup>	ONS	2011 Q1
CPI level (2005=100) (D7DT)	ONS	2011 Q2
Treasury Bills 3-month yield (interest rate) (AJRP)	ONS	2011 Q2
Household population (thousands aged 16+) (MGSL)	ONS	2011 Q2

Note: 1. Availability correct as of 15/10/2011.

2. Average earnings per employee = (Total compensation of employees – Employers social contributions)/(Number employed – Number self employed). ONS identifiers: Total compensation of employees: DTWM. Employers social contributions: ROYK. Number employed: MGRZ. Number self employed: MGRQ.

Source: Bank of England and ONS

Figure 4: Outstanding household debt (£bn)



Source: Bank of England Bankstats Table A5.2

Forecasts of all variables used in the model are provided by the OBR.<sup>15</sup>

### 3.3.3 Tests for stationarity

As a preliminary step to the analysis, each of the variables in Table 7 was tested for stationarity using the KPSS (Kwiatkowski–Phillips–Schmidt–Shin) test. Results from KPSS tests for trend and level stationarity using different numbers of lags of the residuals as explanatory variables<sup>16</sup> are presented in Table 8.<sup>17</sup> The Schwert criterion is used to select the maximum number of lags included in the tests (i.e. 11 lags).<sup>18</sup>

Since the test statistics are larger than the critical values, the tests show that all the variables are either trend or level non-stationary up to at least five lags. Therefore, in the next subsections (3.4 and 3.5) where models of total and unsecured household debt are developed, the variables in the long-run equilibrium equations are tested for cointegration.

<sup>15</sup> See the 'supplementary economy table' at: <http://budgetresponsibility.independent.gov.uk/economic-and-fiscal-outlook-march-2011/>

<sup>16</sup> The KPSS test tests whether the long term variance is zero - if it is, then it implies that the data are stationary. When estimating the long-term variance a number of lags of the residuals are used as explanatory variables. In choosing how many lags to include there is a trade-off between the strength of the test and whether it is distorted. The test may be distorted if too few lags are used but the strength of the test is not as high if too many lags are used.

<sup>17</sup> Additional results KPSS stationarity tests of the variables of interest in first difference and ADF stationarity tests of the variables in levels and first differences are presented at Annex 5.

<sup>18</sup> The Schwert criterion is the default method used by statistical programmes such as STATA.

**Table 8: Test statistics for KPSS tests for stationarity**

Variable	Test lag order:											
	0	1	2	3	4	5	6	7	8	9	10	11
Test for trend stationarity: Critical value at 5%: 0.146												
GDP	1.19	0.62	0.42	0.33	0.27	0.24	0.21	0.19	0.18	0.17	0.16	0.16
Investment in dwellings	0.67	0.36	0.25	0.20	0.16	0.14	0.13	0.12	0.11	0.11	0.11	0.10
Employment level	1.28	0.66	0.46	0.35	0.29	0.25	0.23	0.21	0.19	0.18	0.18	0.17
Unemployment rate	1.67	0.86	0.59	0.45	0.37	0.32	0.28	0.25	0.23	0.22	0.20	0.19
Average earnings	0.41	0.22	0.16	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08	0.08
CPI	1.36	0.72	0.50	0.39	0.32	0.28	0.24	0.22	0.20	0.19	0.18	0.17
T-Bill 3 month yield	0.55	0.29	0.20	0.16	0.14	0.13	0.12	0.11	0.11	0.10	0.10	0.10
Population	1.76	0.91	0.62	0.48	0.39	0.33	0.29	0.26	0.24	0.22	0.21	0.19
Total debt	1.27	0.65	0.44	0.34	0.28	0.24	0.21	0.19	0.17	0.16	0.15	0.14
Secured debt	1.45	0.74	0.50	0.38	0.31	0.27	0.23	0.21	0.19	0.18	0.16	0.16
Unsecured debt	1.05	0.55	0.39	0.30	0.25	0.22	0.20	0.18	0.17	0.16	0.15	0.15
Test for level stationarity: Critical value at 5%: 0.463												
GDP	7.07	3.60	2.43	1.85	1.50	1.27	1.10	0.98	0.88	0.80	0.74	0.69
Investment in dwellings	2.53	1.32	0.91	0.70	0.58	0.50	0.44	0.40	0.37	0.35	0.33	0.31
Employment level	7.10	3.62	2.45	1.86	1.51	1.27	1.11	0.98	0.89	0.81	0.75	0.69
Unemployment rate	2.84	1.46	1.00	0.77	0.63	0.54	0.47	0.43	0.39	0.36	0.34	0.32
Average earnings	7.24	3.69	2.49	1.90	1.54	1.30	1.13	1.00	0.90	0.82	0.76	0.71
CPI	6.85	3.53	2.41	1.84	1.50	1.28	1.12	1.00	0.90	0.83	0.77	0.72
T-Bill 3 month yield	4.01	2.08	1.43	1.12	0.93	0.81	0.72	0.66	0.61	0.57	0.54	0.52
Population	7.19	3.67	2.48	1.89	1.53	1.30	1.13	1.00	0.90	0.83	0.76	0.71
Total debt	7.26	3.68	2.48	1.88	1.52	1.28	1.11	0.98	0.88	0.81	0.74	0.69
Secured debt	7.17	3.63	2.45	1.86	1.50	1.27	1.10	0.97	0.88	0.80	0.74	0.68
Unsecured debt	7.26	3.68	2.48	1.88	1.52	1.28	1.11	0.98	0.88	0.81	0.74	0.69

Note: H0: residual is trend (level) stationary.

Source: London Economics analysis of ONS and Bank of England data

### 3.4 Model of total household debt

Rather than aiming to explain the total stock of outstanding debt, the model aims to predict the *change* in outstanding debt over each quarter. This is consistent with using variables such as GDP, investment in dwellings and employee earnings as explanatory variables since these are also quarterly or annual flow variables. In addition, change in employment level and change in population over each quarter are used as explanatory variables.

A general-to-specific approach was used to obtain a parsimonious long-run equilibrium model. The initial full model regresses the change in total outstanding debt over each quarter on eight explanatory variables, namely:

- 1) Gross domestic product
- 2) Private sector investment in dwellings
- 3) Average earnings per employee
- 4) Change in employment

- 5) Unemployment rate
- 6) Consumer Price Index level
- 7) Interest rate (Treasury Bill 3-month yield)
- 8) Change in population

These variables were selected on the basis of a review of the literature on the demand for secured and unsecured credit and the rationale for including these variables in the model is provided below.

In the general-to-specific approach, the least significant variable in the full model is dropped and the model is then re-estimated. This is repeated until all remaining variables are significant at the 10% level.

Table 9 reports the results for the Full Model and the Final Model where all the explanatory variables are significant. The full model includes GDP at constant prices investment in dwellings, the absolute change in employment, the unemployment rate, average earnings per employee, the T-bill 3-month yield, the absolute change in population and a constant. GDP at constant prices and the changes in employment and in population are not included in the Final Model, which serves as our long-run equilibrium model.

The results of the Final Model are intuitive since we might expect that:

- Increased investment in dwellings lead to an increase in total debt.
- Higher earnings would encourage individuals to take on more credit as confidence improves.
- Higher unemployment and higher prices reduce confidence and hence lower borrowing.
- Higher interest rates make borrowing more expensive and therefore lower borrowing.



**Table 9: Long-run models of quarterly change in total outstanding debt**

Explanatory variables	Full Model		Final Model	
	Coefficient	p-value	Coefficient	p-value
GDP	0.1241	0.502	(Dropped)	(Dropped)
Investment in dwellings	3.8261	0.000	4.4147	0.000
Change in employment	5.9003	0.283	(Dropped)	(Dropped)
Unemployment rate	-1977.3	0.012	-2615.2	0.000
Average earnings per employee	8.9001	0.200	12.163	0.000
CPI level	-1914.7	0.000	-1848.0	0.000
T-bill 3-month yield	-1423.0	0.011	-1424.2	0.008
Change in population	16.410	0.772	(Dropped)	(Dropped)
Constant	98567	0.001	111635	0.000
R-squared	0.9229		0.9204	
Adj R-squared	0.9130		0.9143	
Root MSE	3188.2		3163.3	

Note: For both models the number of observations is 71.

Source: *London Economics analysis of ONS and Bank of England data*

Next, the residuals from the long-run model are calculated and tested for stationarity in order to establish whether the variables are cointegrated and if it is appropriate to use an error correction model. Results from KPSS tests for trend and level stationarity of the residuals are reported in Table 10. Since the test statistics are smaller than the critical values, the tests show that the residuals are stationary.

**Table 10: KPSS test results for stationarity of residuals from long-run model of change in total debt**

Test for trend stationarity			Test for level stationarity		
Critical values:	10%:	0.119	Critical values:	10%:	0.347
	5% :	0.146		5% :	0.463
	2.5%:	0.176		2.5%:	0.574
	1% :	0.216		1% :	0.739
Lag order	Test statistic		Lag order	Test statistic	
0	0.0791		0	0.0790	
1	0.0700		1	0.0699	
2	0.0637		2	0.0637	
3	0.0582		3	0.0582	
4	0.0544		4	0.0544	
5	0.0532		5	0.0532	
6	0.0542		6	0.0542	
7	0.0547		7	0.0547	
8	0.0559		8	0.0560	
9	0.0591		9	0.0592	
10	0.0622		10	0.0624	
11	0.0663		11	0.0665	

Note: H0: residual is trend (level) stationary.

Source: London Economics analysis of ONS and Bank of England data

As the residuals of the long-run model are stationary, we estimate an error correction model (ECM) using the 2-step procedure proposed by Engle and Granger (1987). The first step is to estimate the long-run model and calculate the residuals from this model (equal to the actual values less the fitted values of the dependent variable).

In the second step, the first difference of the dependent variable from the long-run model (i.e. change in outstanding debt) is regressed against the lagged residuals and the first differences of the explanatory variables from the long-run model.

Lags of the first differences of the explanatory variables can also be included in the ECM, so we use the second-order Akaike Information Criterion ( $AIC_C$ ) in order to specify the appropriate number of lags to use.<sup>19</sup> Values of  $AIC_C$  for alternative versions of our ECM, including up to 8 lags, are presented in Table 11. According to these results three lags should be included (smaller values of  $AIC_C$  indicate a more appropriate lag structure).

<sup>19</sup> The second-order Akaike Information Criterion ( $AIC_C$ ) rather than the standard Akaike Information Criterion (AIC) should be used for small sample sizes. Smaller values of  $AIC_C$  indicate a better lag structure. The equation is:  $AIC_C = -2(\text{model log-likelihood}) + 2k + 2k(k+1)/(n-k-1)$ , where k is the number of parameters in the model and n is the number of observations.

**Table 11: Values of the second-order Akaike Information Criterion for ECMs with alternative lag orders (total debt)**

Lag order of ECM	Observations (n)	Parameters (k)	Log-likelihood	AIC <sub>c</sub>
0	70	7	-647.53	1310.87
1	69	13	-636.58	1305.78
2	68	19	-624.87	1303.57
3	67	25	-610.19	1302.08
4	66	31	-596.32	1313.00
5	65	37	-579.75	1337.64
6	64	43	-567.18	1409.56
7	63	49	-539.13	1553.19
8	62	55	-504.97	2146.61

Note:  $AIC_c = -2(\text{model log-likelihood}) + 2k + 2k(k+1)/(n-k-1)$ . The smallest value of  $AIC_c$  indicates the best model among all those specified.

Source: London Economics analysis of ONS and Bank of England data

### 3.4.1 Model results and in-sample projection

The results of the 2-step ECM using three lags are presented in Table 12, showing that the coefficient on the error correction term (i.e. the coefficient on the residuals from the first step regression) is statistically significant.

**Table 12: Two-step error correction model of change in total outstanding household debt**

		Coefficient	P-value
<b>1<sup>st</sup>-Step regression</b> (Dependent variable: Change in outstanding debt)			
Investment in dwellings		4.4147	0.000
Unemployment rate		-2615.2	0.000
Average earnings per employee		12.163	0.000
CPI level		-1848.0	0.000
T-bill 3-month yield		-1424.2	0.008
Constant		111635	0.000
<b>2<sup>nd</sup>-Step regression</b> (Dependent variable: First difference of change in outstanding debt)			
Long-run model residual	L1. <sup>1</sup>	-0.62094	0.029
Investment in dwellings	D1. <sup>2</sup>	2.56674	0.005
Unemployment rate	D1.	-1457.43	0.603
Average earnings per employee	D1.	19.1580	0.164
CPI level	D1.	-888.398	0.293
T-bill 3-month yield	D1.	1093.06	0.270
Change in total debt	LD. <sup>3</sup>	-0.12511	0.626
	L2D. <sup>4</sup>	0.03429	0.869
	L3D. <sup>5</sup>	-0.05614	0.738
Investment in dwellings	LD.	1.23954	0.310
	L2D.	1.18077	0.266
	L3D.	-0.22970	0.792
Unemployment rate	LD.	-3436.29	0.220
	L2D.	-953.023	0.721
	L3D.	2101.87	0.355
Average earnings per employee	LD.	17.7807	0.205
	L2D.	3.28691	0.813
	L3D.	-31.4122	0.018
CPI level	LD.	523.457	0.597
	L2D.	-816.793	0.401
	L3D.	-834.280	0.379
T-bill 3-month yield	LD.	-640.696	0.590
	L2D.	-1379.62	0.236
	L3D.	-408.252	0.717
Constant		189.748	0.918

Note: Estimated using Engle Granger 2-step procedure.

1. L1 signifies one lag.

2. D1 signifies first difference.

3. LD signifies first difference lagged once.

4. L2D signifies first difference lagged twice.

5. L3D signifies first difference lagged three times.

Source: *London Economics*

The ECM was then re-estimated over a shorter period ending in 2009Q1 in order to be able to generate a within-sample dynamic projection of the path of total outstanding debt which can then be compared to the actual values of outstanding debt between 2009Q2 and 2011Q1 (i.e. over 8 quarters).

The values projected by the model and the actual values of total outstanding debt are compared in Table 13 and also illustrated in Figure 5. Over this period, the model performs well, only slightly under-predicting the level of outstanding debt:

- After 1 year, the projected value of total outstanding debt is 0.5% lower than the actual value.
- After 2 years, the projected value of total outstanding debt is 2.5% lower than the actual value.

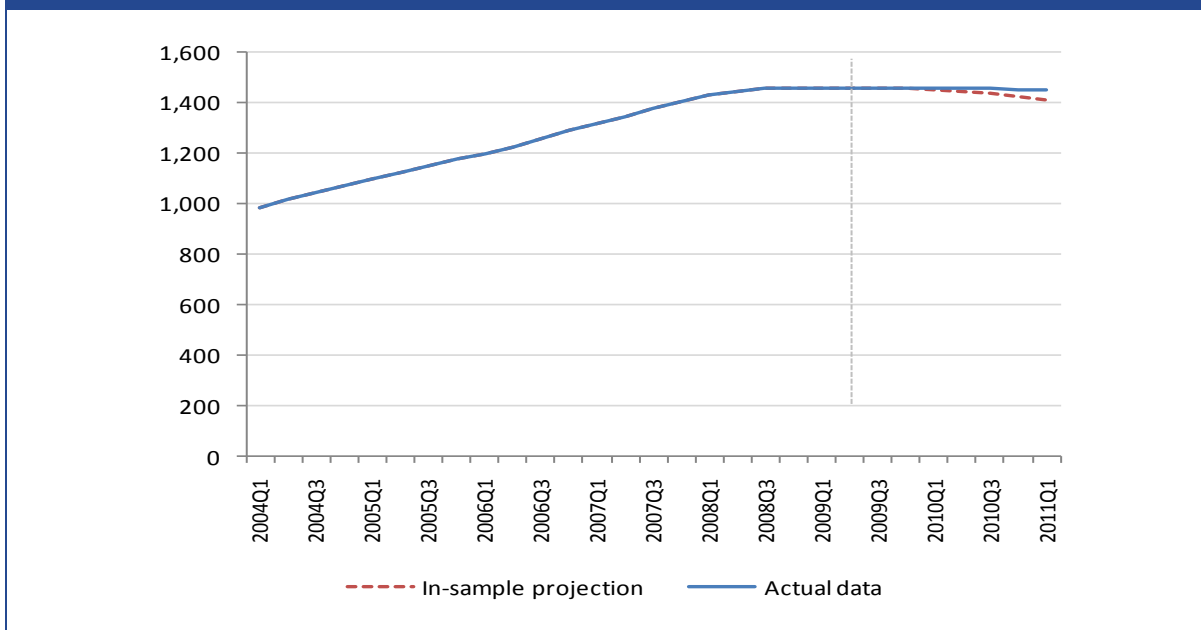
The root mean square forecast error over the 8 quarters within sample projection is 1.7%.

**Table 13: Outstanding household debt (£bn): Actual data and in-sample dynamic projection**

Period	Actual data	In-sample projection	Difference
2009Q2	1,459	1,459	0.0%
2009Q3	1,460	1,461	0.0%
2009Q4	1,461	1,458	0.2%
2010Q1	1,460	1,453	0.5%
2010Q2	1,457	1,446	0.8%
2010Q3	1,457	1,438	1.3%
2010Q4	1,452	1,428	1.6%
2011Q1	1,452	1,415	2.5%

Source: *London Economics*

Figure 5: Outstanding household debt: Actual data and in-sample dynamic projection (£bn)



Note: In-sample projection from 2009Q2 onwards using model estimated to 2009Q1.

Source: London Economics analysis

### 3.5 Model of secured household debt

As for total debt in the previous subsection, for secured debt the change in outstanding debt over each quarter is analysed (rather than the stock of debt). Again, a general-to-specific approach is used in order to find a parsimonious long-run equilibrium model, starting with the same eight variables set out in subsection 3.4.

The results for the Full Model and Final Model are presented in Table 14. GDP, the change in employment and the change in population are dropped following the general-to-specific process, meaning that the final long-run equilibrium model includes the same explanatory variables as the model for total debt, with the same (intuitively correct) signs on the coefficients.

Further, as expected, the model shows a slightly stronger relationship between investment in dwellings and change in secured debt than we saw between investment in dwellings and change in total debt (i.e. when comparing the coefficients on “Investment in dwellings” for the Final Model in Table 14 vs. Table 9).

The results of KPSS tests for trend and level stationarity of the residuals from the Final Model are shown in Table 15. The small test statistics imply that the residuals are stationary, and therefore a 2-step ECM is estimated.

The  $AIC_c$  criterion is again used to specify the right number of lags to use in the ECM. Values of  $AIC_c$  for alternative versions of the ECM are shown in Table 16, and a three-lag structure is identified as most appropriate.

**Table 14: Long-run models of quarterly change in outstanding secured debt**

Explanatory variables	Full model		Final model	
	Coefficient	p-value	Coefficient	p-value
GDP	0.1270	0.474	(Dropped)	(Dropped)
Investment in dwellings	3.9172	0.000	4.5222	0.000
Change in employment	5.8252	0.269	(Dropped)	(Dropped)
Unemployment rate	-851.52	0.251	-1662.6	0.000
Average earnings per employee	7.3294	0.271	11.853	0.000
CPI level	-1734.9	0.000	-1697.8	0.000
T-bill 3-month yield	-1825.2	0.001	-1787.8	0.001
Change in population	53.812	0.325	(Dropped)	(Dropped)
Constant	77079	0.004	90874	0.000
R-squared	0.9107		0.9055	
Adj R-squared	0.8992		0.8983	
Root MSE	3060.3		3074.8	

Note: For both models the number of observations is 71.

Source: *London Economics*

**Table 15: KPSS test results for stationarity of residuals from long-run model of change in secured debt**

Test for trend stationarity			Test for level stationarity		
Critical values:	10%:	0.119	Critical values:	10%:	0.347
	5% :	0.146		5% :	0.463
	2.5%:	0.176		2.5%:	0.574
	1% :	0.216		1% :	0.739
Lag order	Test statistic		Lag order	Test statistic	
0	0.0841		0	0.0842	
1	0.0655		1	0.0655	
2	0.0595		2	0.0596	
3	0.0532		3	0.0532	
4	0.0493		4	0.0494	
5	0.0486		5	0.0487	
6	0.0496		6	0.0497	
7	0.0513		7	0.0514	
8	0.0549		8	0.0551	
9	0.0598		9	0.0601	
10	0.0655		10	0.0659	
11	0.0718		11	0.0724	

Note: H0: residual is trend (level) stationary.

Source: *London Economics*

**Table 16: Values of the second-order Akaike Information Criterion for ECMs with alternative lag orders (secured debt)**

Lag order of ECM	Observations (n)	Parameters (k)	Log-likelihood	AIC <sub>c</sub>
0	70	7	-640.20	1296.20
1	69	13	-626.62	1285.86
2	68	19	-615.65	1285.13
3	67	25	-593.17	1268.05
4	66	31	-580.50	1281.35
5	65	37	-567.59	1313.32
6	64	43	-549.24	1373.69
7	63	49	-508.98	1492.89
8	62	55	-481.25	2099.16

Note:  $AIC_c = -2(\text{model log-likelihood}) + 2k + 2k(k+1)/(n-k-1)$ . The smallest value of AIC<sub>c</sub> indicates the best model among all those specified.

**Source:** *London Economics analysis*

Table 17 presents the results of the ECM using three lags. Again there is a statistically significant coefficient on the error correction term (i.e. the coefficient on the residuals from the first step regression).



**Table 17: 2-step error correction model of change in outstanding secured debt**

		Coefficient	P-value
<b>1<sup>st</sup>-Step regression</b> (Dependent variable: Change in outstanding debt)			
Investment in dwellings		4.5222	0.000
Unemployment rate		-1662.6	0.000
Average earnings per employee		11.853	0.000
CPI level		-1697.8	0.000
T-bill 3-month yield		-1787.8	0.001
Constant		90874	0.000
<b>2<sup>nd</sup>-Step regression</b> (Dependent variable: First difference of change in outstanding debt)			
Long-run model residual	L1. <sup>1</sup>	-0.5818	0.019
Investment in dwellings	D1. <sup>2</sup>	1.6449	0.030
Unemployment rate	D1.	672.35	0.760
Average earnings per employee	D1.	29.181	0.006
CPI level	D1.	-1.4555	0.998
T-bill 3-month yield	D1.	385.52	0.615
Change in total debt	LD. <sup>3</sup>	0.3382	0.149
	L2D. <sup>4</sup>	-0.0276	0.883
	L3D. <sup>5</sup>	0.2938	0.135
Investment in dwellings	LD.	0.5756	0.574
	L2D.	0.3975	0.644
	L3D.	0.0331	0.962
Unemployment rate	LD.	-3676.0	0.096
	L2D.	798.04	0.698
	L3D.	707.33	0.706
Average earnings per employee	LD.	14.590	0.157
	L2D.	4.7310	0.651
	L3D.	-43.392	0.000
CPI level	LD.	1211.9	0.152
	L2D.	-242.13	0.760
	L3D.	-927.51	0.219
T-bill 3-month yield	LD.	-687.32	0.469
	L2D.	-695.56	0.403
	L3D.	-517.92	0.529
Constant		-459.06	0.749

Note: Estimated using Engle Granger 2-step procedure.

1. L1 signifies one lag.

2. D1 signifies first difference.

3. LD signifies first difference lagged once.

4. L2D signifies first difference lagged twice.

5. L3D signifies first difference lagged three times.

Source: London Economics analysis of ONS and Bank of England data

As for the model of total debt in the previous subsection, the ECM is re-estimated over the period up to 2009Q1 so that an in-sample projection of outstanding secured debt can be made and compared with the actual data for 2009Q2 to 2011Q1.

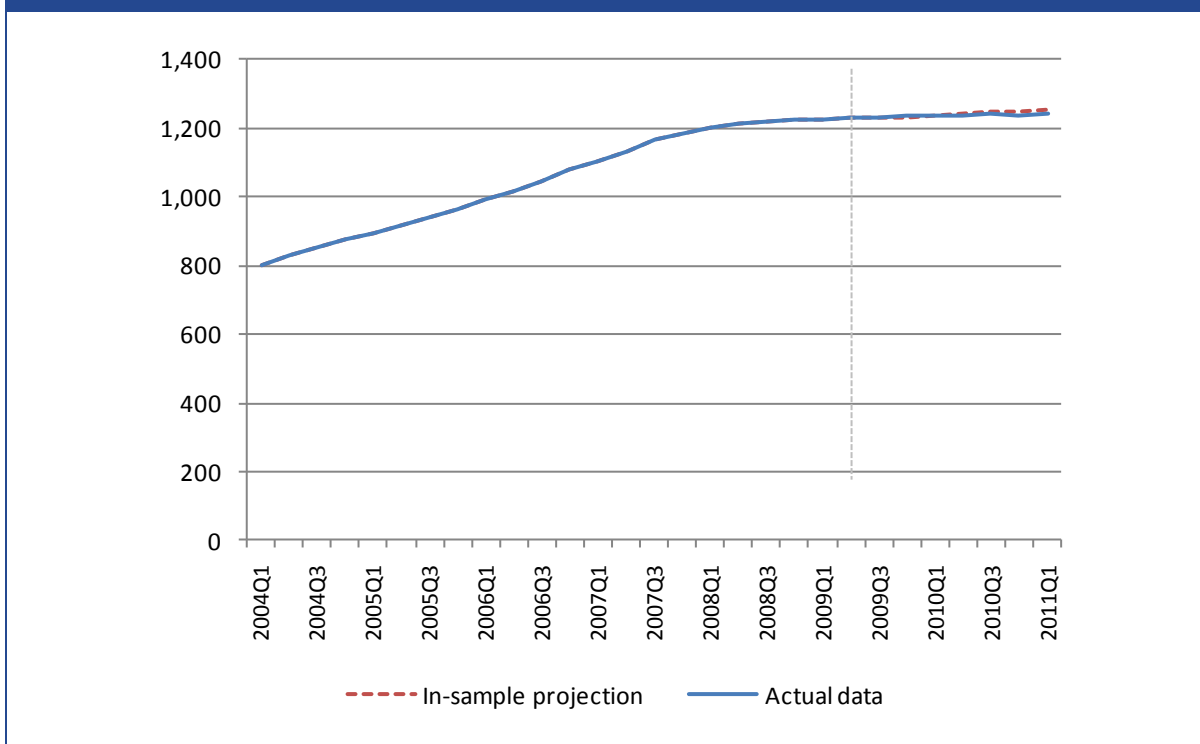
The in-sample projection is compared to the realised values of outstanding secured debt in Table 18 (and also in Figure 6). The projected value of outstanding secured debt is 0.1% lower than the actual value after 1 year, but 1% higher than the actual value after 2 years. The RMSE over the within-sample projection period is 0.5%.

**Table 18: Outstanding household debt (£bn): Actual data and in-sample projection**

Period	Actual data	In-sample projection	Difference
2009Q2	1,228	1,229	0.0%
2009Q3	1,231	1,230	-0.1%
2009Q4	1,234	1,233	-0.1%
2010Q1	1,238	1,237	-0.1%
2010Q2	1,239	1,241	0.2%
2010Q3	1,241	1,246	0.5%
2010Q4	1,238	1,250	1.0%
2011Q1	1,240	1,253	1.0%

Source: London Economics analysis of ONS and Bank of England data

**Figure 6: Outstanding secured household debt: Actual data and in-sample projection (£bn)**



Note: In-sample projection from 2009Q2 onwards.

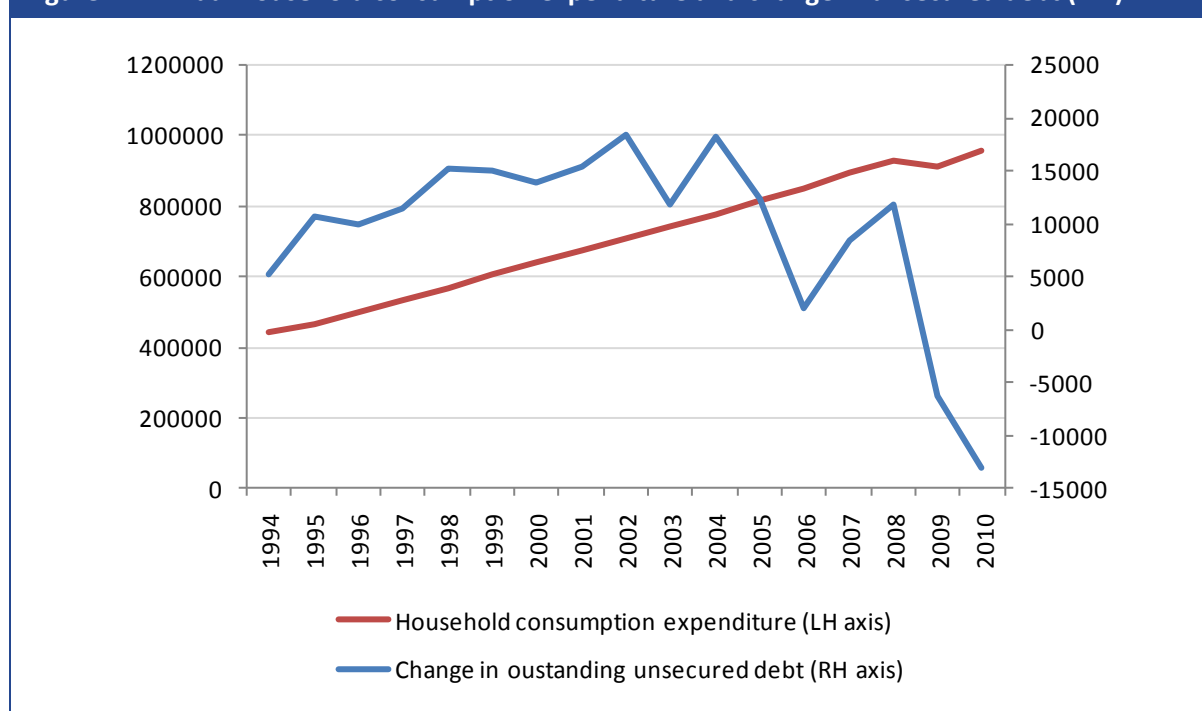
Source: London Economics analysis of ONS and Bank of England data

### 3.6 Unsecured household debt

For unsecured household debt, an autoregressive model is estimated (i.e. a model based exclusively on past values of the dependent variable). The reason is that on a quarterly basis the change in debt over each quarter is much more volatile, making it difficult to develop a long-run structural model with good explanatory power.

For example, it could be expected that a key driver of unsecured debt would be consumption spending by households. However, although these two variables followed a similar trend for almost a decade until 2002, since 2004 they have diverged with the annual change in outstanding unsecured debt falling and becoming negative following the recession (Figure 7).

**Figure 7: Annual household consumption expenditure and change in unsecured debt (£m)**



Note: Household consumption expenditure ONS identifier: RPQM.

Source: London Economics analysis of ONS and Bank of England data

End-of-year data on the stock of unsecured debt are available until December 2010. For the modelling, the data series is extended to the end of 2011 based on the average monthly change in the stock of debt between December 2010 and the latest monthly data-point in 2011.

Several autoregressive models of the annual change in unsecured household debt were estimated using different lag orders (up to 5 lags). A two-lag structure was chosen since it has a better  $AIC_c$  than a one-lag model, and because for models with more than two lags the coefficients on the lagged variables sum to more than one.

The model equation is:

$$\text{Change in debt}_t = \text{Constant} + \text{Change in debt}_{t-1} + \text{Change in debt}_{t-2}$$

The results of the model are presented in Table 19. Actual changes in unsecured debt between 1996 and 2011 and the corresponding fitted values from the autoregressive model are plotted in Figure 8.

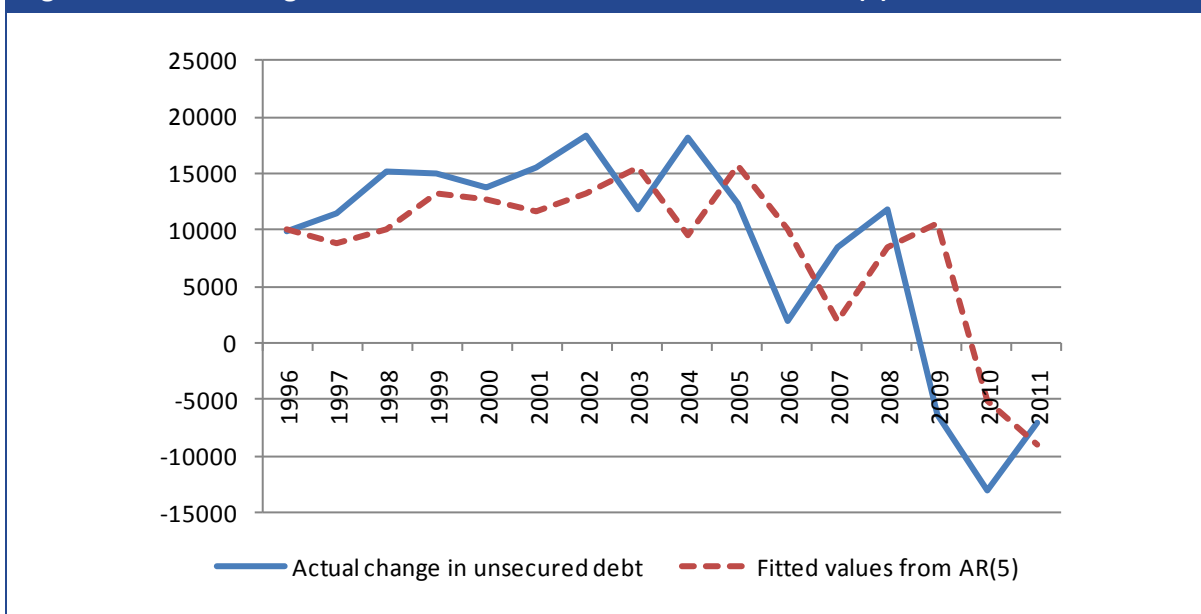
Unsecured household debt is forecasted using the model in the following subsection.

**Table 19: Fifth order autoregressive model results for change in unsecured debt**

	Coefficient	P-value
Change in unsecured debt <sub>t-1</sub>	0.8489	0.008
Change in unsecured debt <sub>t-2</sub>	-0.1013	0.789
Constant	1446.7	0.695
R-squared	0.5251	
Adj R-squared	0.4520	
Root MSE	7078.3	

Source: London Economics analysis of Bank of England data

**Figure 8: Actual change in unsecured debt and fitted values from AR(5) model**



Source: London Economics analysis of Bank of England data

### 3.7 Forecasts of outstanding household debt

In this subsection, forecasts of outstanding total, secured and unsecured debt are provided two years ahead.

### 3.7.1 Forecast of total outstanding debt

The model of total household debt (presented in Table 12) is used to forecast two years ahead from the last available data-point (i.e. from 2011Q2). The forecast is presented alongside the OBR's forecast of household debt from the March 2011 Economic and Fiscal Outlook (Figure 9).<sup>20</sup>

The OBR forecast is a forecast of the ONS household debt series<sup>21</sup>, which differs slightly from the Bank of England series. Therefore, in order to make a comparison between the OBR's forecast and the model forecast, the OBR series is adjusted according to the ratio between the ONS series and the bank of England series at the last available data-point.

It should be noted that the OBR's approach to forecasting household debt is very different to that used in this study. The OBR uses an accounting approach where household debt is driven by projections of the difference over time between household disposable income and its uses.

The OBR forecast debt to rise in coming years since they expect households to try to protect their standard of living in the face of weak income growth, with the shortfall being made up through borrowing.<sup>22</sup>

Combined forecasts are often used in order to obtain more reliable estimates, so the average of the OBR forecast and the model forecast is provided in Table 20 and also illustrated in Figure 10.

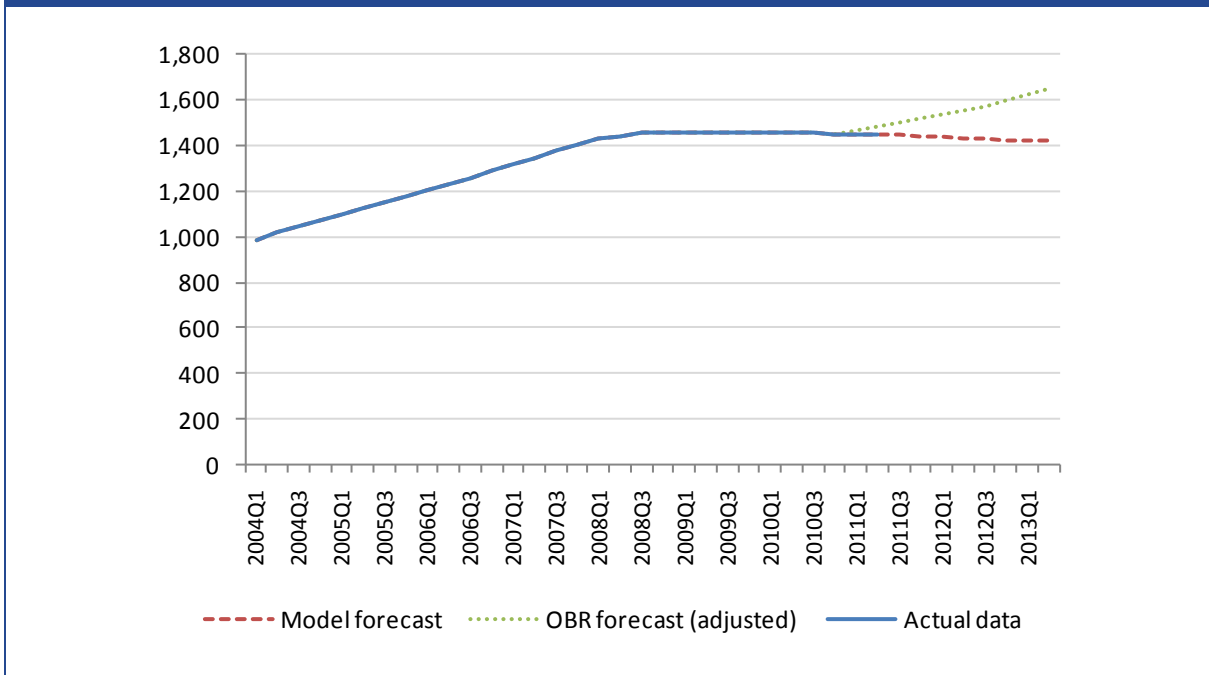
---

<sup>20</sup> The OBR forecast is available at: <http://budgetresponsibility.independent.gov.uk/economic-and-fiscal-outlook-march-2011/>

<sup>21</sup> ONS identifier NNPP.

<sup>22</sup> See the OBR's explanatory note on how they forecast household debt available on their website at: <http://budgetresponsibility.independent.gov.uk/wordpress/docs/household%20debt%20paper%20formatted.doc1.pdf>

Figure 9: Forecast of total outstanding household debt (£bn)



Note: The OBR forecast is provided on an annual basis for the end of each calendar year, so quarterly figures have been interpolated. The OBR forecast is available at: <http://budgetresponsibility.independent.gov.uk/economic-and-fiscal-outlook-march-2011/> The adjustment is made since the OBR forecast is a forecast of the ONS household debt series (ONS identifier NNPP), which differs slightly from the Bank of England series forecasted by the model.

Source: London Economics analysis of ONS and Bank of England data. OBR

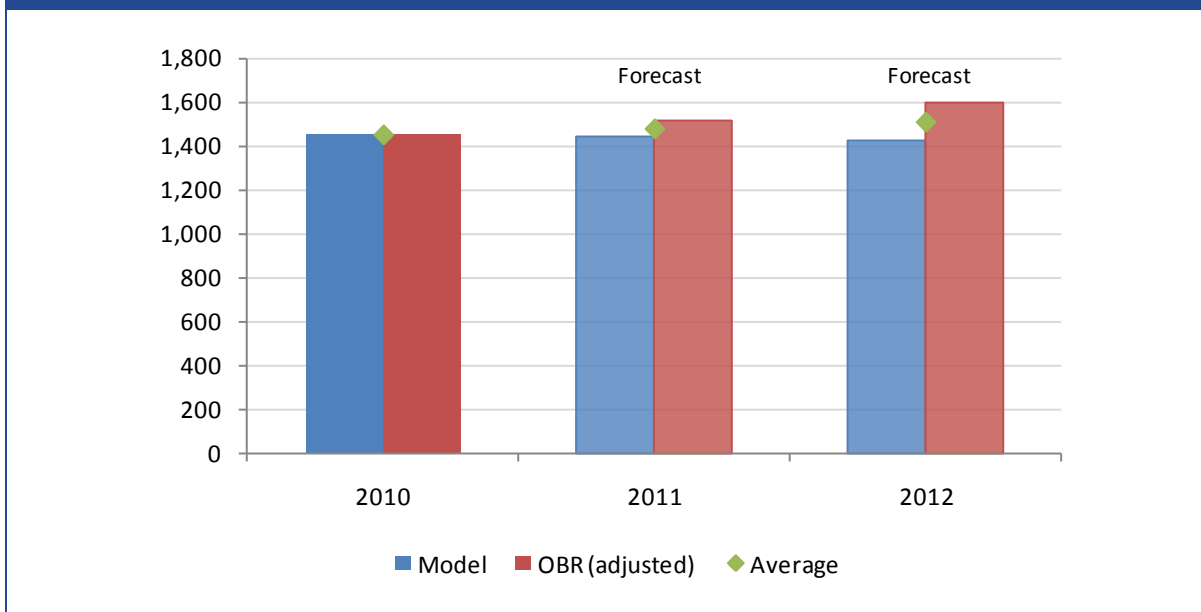
Table 20: Household debt forecasts (end of calendar year, £bn)

Year	OBR	OBR (adjusted)	Model	Average
2010	1,560	1,452	1,452	1,452
2011	1,628	1,515	1,442	1,478
2012	1,712	1,593	1,424	1,508

Note: The OBR forecast is available at: <http://budgetresponsibility.independent.gov.uk/economic-and-fiscal-outlook-march-2011/> The adjustment is made since the OBR forecast is a forecast of the ONS household debt series (ONS identifier NNPP), which differs slightly from the Bank of England series forecasted by the model.

Source: London Economics analysis of ONS and Bank of England data. OBR

Figure 10: Household debt forecasts (end of calendar year, £bn)



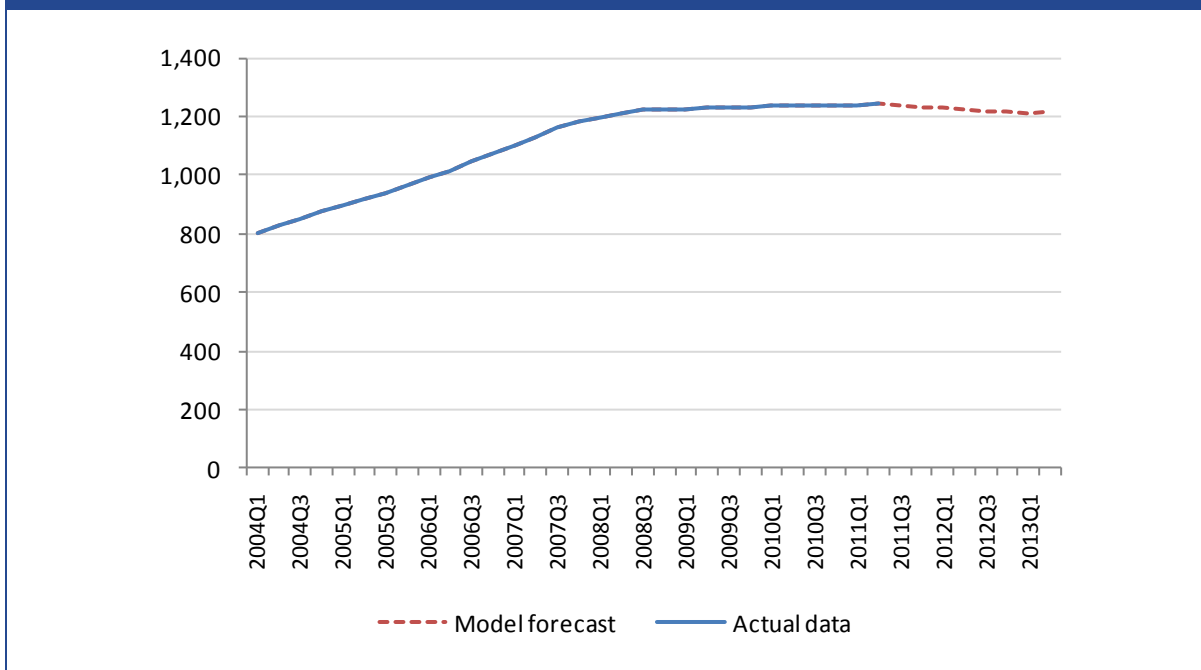
Note: The OBR forecast is available at: <http://budgetresponsibility.independent.gov.uk/economic-and-fiscal-outlook-march-2011/> The adjustment is made since the OBR forecast is a forecast of the ONS household debt series (ONS identifier NNPP), which differs slightly from the Bank of England series forecasted by the model.

Source: London Economics analysis of ONS and Bank of England data. OBR

### 3.7.2 Forecast of outstanding secured debt

The model forecast of outstanding secured debt is shown in Figure 11. Secured debt is expected to remain broadly flat for the next few years.

Figure 11: Forecast of outstanding secured household debt (£bn)

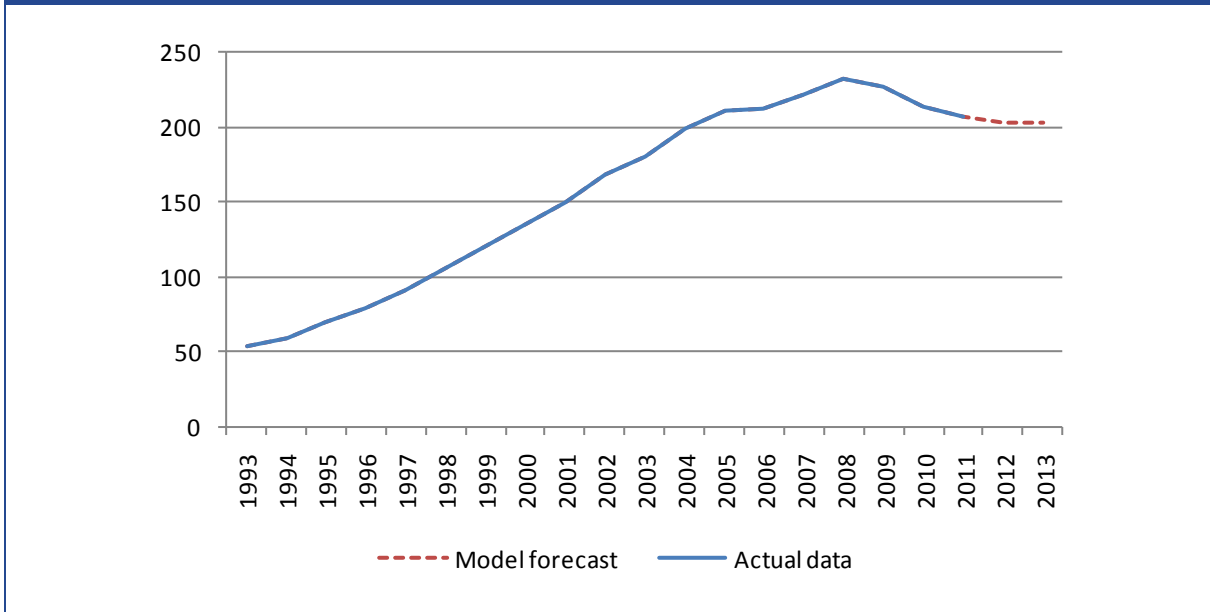


Source: London Economics analysis of ON, Bank of England data and OBR

### 3.7.3 Forecast of outstanding unsecured debt

The model forecast of outstanding unsecured debt is shown in Figure 12. Unsecured debt is projected to further decline in 2012 and 2013 but the pace of decline will slow markedly.

**Figure 12: Forecast of outstanding unsecured household debt (£bn)**



Source: London Economics analysis of ONS, Bank of England data and OBR



## 4 Micro data on debt by type of debt

There exists no comprehensive time series providing information on the breakdown of total household debt by type of debt beside the high-level breakdown of the Bank of England debt data described in the previous section.

However, a number of surveys provide relevant information for selected years. These surveys are:

- The Wealth and Assets Survey
- The surveys undertaken at various points in time for the Department of Business, Innovation and Skills (and its predecessors)
- The annual survey undertaken for the Bank of England

Below, we provide more information on each of the surveys. As well, we provide a brief overview of the British Household Panel Survey and its successor, the Understanding Society longitudinal survey.

Each of the surveys are reviewed and assessed as to their usefulness for the purpose of deriving an estimate of the demand for debt advice and the development of a funding model.

### 4.1 Overview of survey data

#### 4.1.1 The Wealth and Assets Survey

The Wealth and Assets Survey (WAS) is a longitudinal survey, which commenced with a first wave of interviews carried out over two years from July 2006 to June 2008. Consenting responding households from Wave 1 were approached for a Wave 2 interview two years on from their initial interview. The 2006-2008 WAS sampled all private households in Great Britain. This means that people in residential institutions, such as retirement homes, nursing homes, prisons, barracks or university halls of residence, and also homeless people are not included in the sample. The second wave covers the period July 2008 - June 2010 and the third wave covers the period July 2010 - June 2012.

Currently, only Wave 1 is available from the UK Data Archive.

According to the WAS, during the period July 2008 – June 2009:

- 38% of Great Britain households had a mortgage on their main residence (average mortgage debt of £87,700) and 4% had a mortgage on another property or properties (average mortgage debt of £130,400)
- In total, 40% of Great Britain households had one or several mortgage debt
- 48% of Great Britain households had one or several unsecured debts (47% excluding student loans)
- There was only a moderate degree of overlap between non-mortgage borrowing and mortgage borrowing
  - 54% of households with non-mortgage debt also had mortgage debt
  - 65% of households with mortgage debt also had non-mortgage debts

- The average owed by the 48% of Great Britain households with non-mortgage debt was £7,200 in 2006-08 (£6,800 excluding student loans)
- The most frequent unsecured debt is outstanding balances on credit and charge card debt. 25% of households hold such debt and the average outstanding balance is £3,200.

**Table 21: Unsecured debt owed by households in Great Britain 2006-08**

Type of debt	Percentage of total Great Britain households	Average amount owed (£)
Credit card and charge card (excluding cards not in use or fully settled each month)	25	3,200
Overdrafts in use	17	1,300
Personal and cash loans	15	9,300
Hire purchase	14	5,100
Mail order	9	500
Store cards and charge accounts	5	500
Student loans	3	7,700
Any non-secured credit debt	48	7,200
Any non-secured credit excluding overdrafts	44	7,300
Any non-secured credit excluding student loans	47	6,800

Source: ONS (2009)

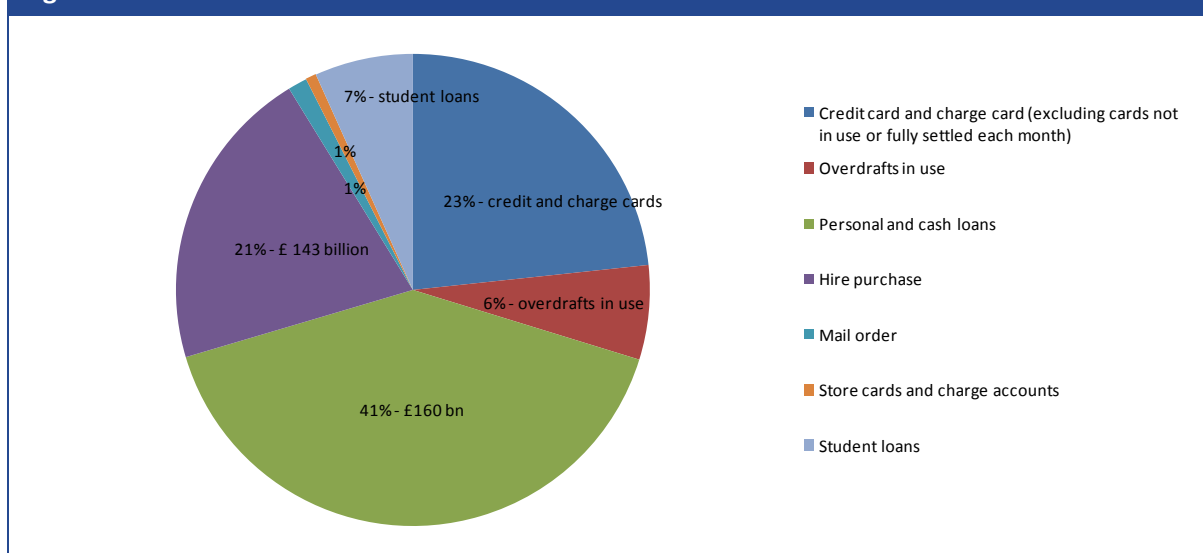
The total amount of debt owed by GB households in 2006-08 that is implied by the WAS is £772.3 billion in the case of debt secured on dwellings and £69 billion in the case of unsecured debt, a substantial underestimation of the total secured debt of £1,132 billion and the total unsecured debt of £219 billion over this period.<sup>23</sup>

A breakdown of the total unsecured debt is provided in the figure below. It shows that, in the WAS, personal and cash loans are by far the most important in the category of unsecured debt accounting for the 41% of the total unsecured debt owed by GB households.

The other two major debt categories are debt owed on credit and charge cards (23% of the total debt) and hire purchase loans (21% of the total debt). These three debt categories, together with student loans (7% of the total debt) and overdrafts (6%), account for 99% of the total debt.

<sup>23</sup> The total secured and unsecured debt estimates were derived by applying for each type of debt the percentages of GB households to the average number of GB households (from the ONS) over the period July 2006 – June 2008, multiplying the latter figure by the average amount owed and finally adding the resulting amounts owed for each type of debt.

Figure 13: Level and shares of various unsecured debt – WAS



Note: Credit card and charge card debt figure excludes cards not in use or fully settled each month.

Source: London Economics based on ONS (2009)

While the WAS provides information on the various types of secured and unsecured debt, it does not provide any information on the type of lender (MFIs or other type of lender) having provided the credit.

Thus, the information from the WAS, while highly interesting in itself, is not useful for allocating the cost of Money Advice Service across different creditor types.

#### 4.1.2 Surveys undertaken for the Department of Business, Innovation and Skills (and its predecessors)

A number of surveys focusing on household debt and over-indebtedness have been undertaken by Mori and subsequently YouGov for the Department (see, for example, DTI 2005 and BIS 2010 and 2011). The survey collects information from households on the level of their mortgage debt and unsecured debt by type of unsecured credit.

The latest survey was over the period November 2009 - October 2010 and its main results for the funding model are presented below.

According to the survey:

- 37% of GB households had one or several secured debt and the average amount per household owing such debt was £99,000 (a figure lower than in the WAS)
  - 36% had a mortgage debt
  - 4% had some other type of secured debt
- 58% of GB households had one or several unsecured debt and the average unsecured debt owed by these households was £10,000 (a figure lower than in the WAS)
- The overlap between secured and unsecured debt is limited

- 30% of GB households do not have any debt
- 25% of GB carry only secured debt
- 33% of GB households carry only unsecured debt
- 25% of GB households carry both secured and unsecured debt
- The most common unsecured debt is credit cards (not usually paid in full) (27% of all GB households), followed by authorised overdrafts (22%), store cards (16%), student loans (16%), unsecured personal loans (15%)
- High-cost debt types such as home-collected credits, pay-day loans, pawnshops/cash converters and similar debt types carried each by at most 2% of households.

**Table 22: BIS/YouGov survey: types of unsecured credit commitments and average debt (£), 2009/10**

	% of survey participants	Average amount owed by households with the particular type of debt
Credit card account	62	
Credit card (not usually paid in full & amount outstanding)	27	4,400
Authorised overdraft	22	1,400
Student loan	16	11,200
Unsecured personal loan	15	7,700
Mail order catalogue	10	700
Car finance loan	9	5,400
Loan from friends and family	9	3,700
Store card account	16	
Store card (not usually paid in full & amount outstanding)	5	800
Hire purchase agreement	4	3,000
Home collected credit	1	1,200
DSS/Social Fund loan	1	400
Pay day loan	1	2,800
Credit Union loan	1	1,700
Pawnbroker / cash converter loan	0	400
Any non-mainstream: home collected, payday, pawnbroker	2	
Other	1	10,600

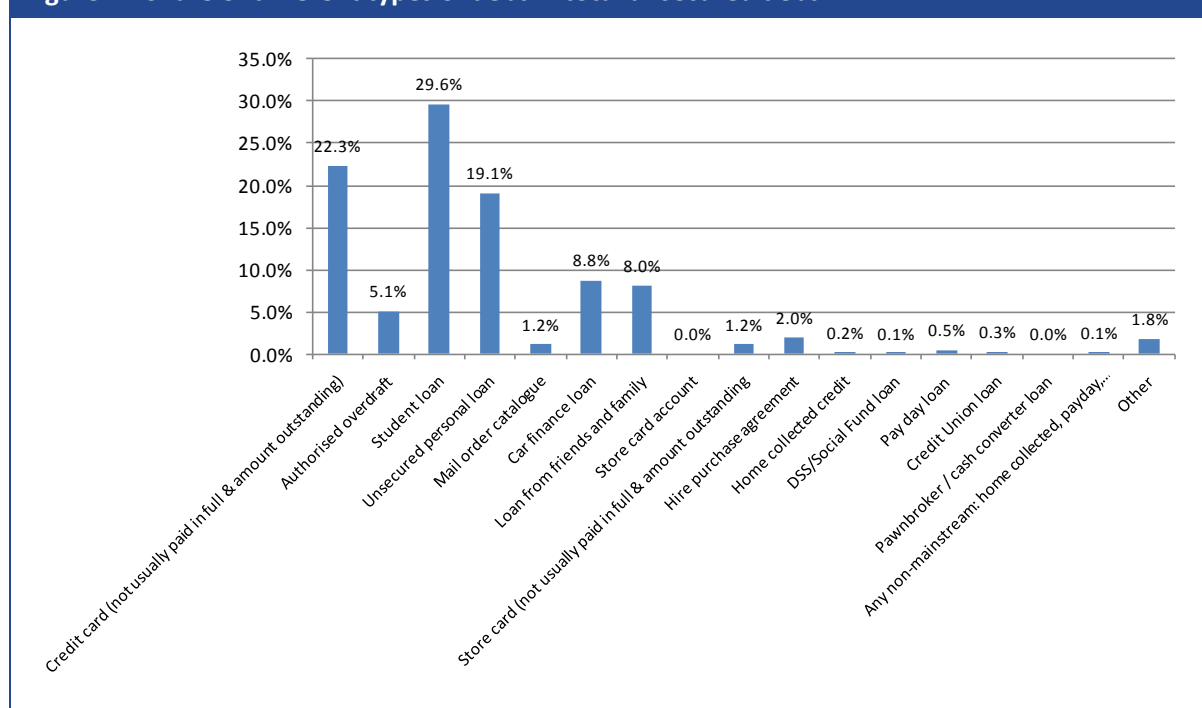
Source: BIS, *Credit, Debt & financial Difficulty in Britain, 2009/10, June 2011*

Student loans account for the largest share of the total unsecured debt owed by GB households (£35.6 billion or 29.6% of the total unsecured debt) followed by credit cards (not usually paid in full and amount outstanding) (£22.5 billion or 22.3%), unsecured personal loans (£23.6 billion or 19.1%).

A major difference relative to the WAS survey is the large amount of student loans reflecting, in part, the growing number of households with individuals having had to pay the higher fees introduced in 2004. However, the percentages of households owing such debt are so different in

the two surveys (3% in the WAS and 16% in the BIS survey) that sampling differences may also be contributing to this.

**Figure 14: Share of different types of debt in total unsecured debt**



Source: London Economics analysis of data in BIS, *Credit, Debt & financial Difficulty in Britain, 2009/10, June 2011*

Total secured and unsecured debt implied by the mean debt figures and the percentage of respondents stating that they owed the various types of debt in the survey for BIS are respectively £747.5 billion and £123.6 billion (only 60% and 58% of Bank of England estimates of total secured and unsecured debt owed by individuals to UK-based lenders)<sup>24</sup>.

Overall, the BIS/YouGov survey provides useful information about the types of debt held by households, including arrears with bills, the debt pressure they face and whether debt advice was sought. Of all the various surveys reviewed in this section, it is the one with provides the richest information.

#### 4.1.3 The Bank of England survey

This survey, undertaken regularly by NMG for the Bank of England<sup>25</sup> provides information on the types of debt held by households, based on the following categories listed in the table and some aggregate debt figures:

<sup>24</sup> In April-June 2010, there were 20,407,000 households in Britain. ONS, *Working and workless households*, 1 September 2011.

<sup>25</sup> See, for example, Nielsen, M. et al. (2010).

The latest survey, run in late September 2010, shows that:

- 32.5% of GB household carried a mortgage debt and the average amount owed was £90,000
- 52% of GB households held one or several unsecured debts and the average unsecured debt held by households owing such debt is £5,620
- As in the case of the previous 2 surveys, the overlap between secured and unsecured debt is limited
  - 38% of GB households do not have any debt
  - 12% of GB carry only secured debt
  - 29% of GB households carry only unsecured debt
  - 21% of GB households carry both secured and unsecured debt.

**Table 23: Types of debt held by GB households**

Type of debt	% of GB households
Secured debt	32.5% (average amount: £90,000)
Unsecured debt	52% (average amount: £5,620)
Credit card	21.1
DSS social funds	2.3
Hire purchase	9.4
Mail order purchase	4.7
Overdraft	10.9
Personal loans	14.5
Store card	5.4
Student loan	6.1
Other	1.8

*Source: London Economics of Bank of England data in nmgsurvey2010.xls*

Total secured and unsecured debt implied by the mean debt figures and the percentage of respondents stating that they owed the various type of debt in the survey for Bank of England are respectively £602 billion and £51 billion (only 60% and 58% of Bank of England estimates of total secured and unsecured debt owed by individuals to UK-based lenders).

Because, the Bank of England survey does not provide any information on whether debtors sought debt advice when they had debt problems and on arrears with bills, it is less useful for our purposes than the BIS/YouGov survey. Moreover, its sample is much smaller than the BIS/YouGov survey.

#### 4.1.4 The British Household Panel Survey (BHPS)

The BHPS began in 1991 and is a longitudinal survey following the same representative sample of individuals (the panel). Survey data are available for the years 1991 -2008. The BHPS includes a question about the total amount of mortgage debt owed by households and occasionally questions about the level and types of unsecured debt (wave 5 – 1995, wave 10 – 2000 and wave 15 – 2005). Even though the BHPS is a very rich data source and allows one to undertake detailed micro-analysis of the drivers of debt take-up (see, for example, Brown et al. (2005), Brown and Taylor (2007), Del-Rio and Young (2005), May and Tuleda (2005)), it is not a useful data source for the purpose of the development of the funding model as it lacks up-to-date information.

After the 2008 wave, the BHPS was rolled into the new and broader longitudinal survey *Understanding Society* and the *Wave 2* of this survey was run over the period January 2010 - March 2011. Unfortunately, it does not include any questions about household debt.

#### 4.1.5 Implications of the review of the micro-debt databases for the development of the funding model

Each of the three survey sources that could potentially be used for tracking the different types of debt held by GB households yield aggregate debt figures which underestimate by a significant amount the aggregate household debt figures published by the Bank of England and the ONS (Table 24).

Moreover, two of the surveys (the WAS and the Bank of England NMG survey) overestimate by 7 to 8 percentage points the share of secured debt in total household debt. However, the BIS/YouGov survey yields a secured/unsecured debt split which is very similar to the one showed in the Bank of England

**Table 24: Comparison of the macro debt figures implied by different surveys and debt figures published by the Bank of England (£ billion)**

Source	Secured debt	Unsecured debt	Total	Share of secured debt in total debt
Bank of England data (end of 2010)	1,238	214	1,452	85%
<i>Surveys</i>				
WAS	772	69	841	93%
BIS	748	124	872	86%
Bank of England - NMG	602	51	653	92%

Source: London Economics analysis of various surveys listed in the table

#### 4.1.6 Arrears or debt not linked to contractual credit arrangements

The BIS/YouGov Debt Tracker survey also provides information on the amount of debt households carry because they are at least 3 or months in arrears (the only quantitative information on arrears sought from survey participants). The survey collects information on arrears with respect to the following bills: gas, electricity, oil, water, rent, Council taxes, mobile phone contracts, landline/broadband/TV.

Two points are worth noting.

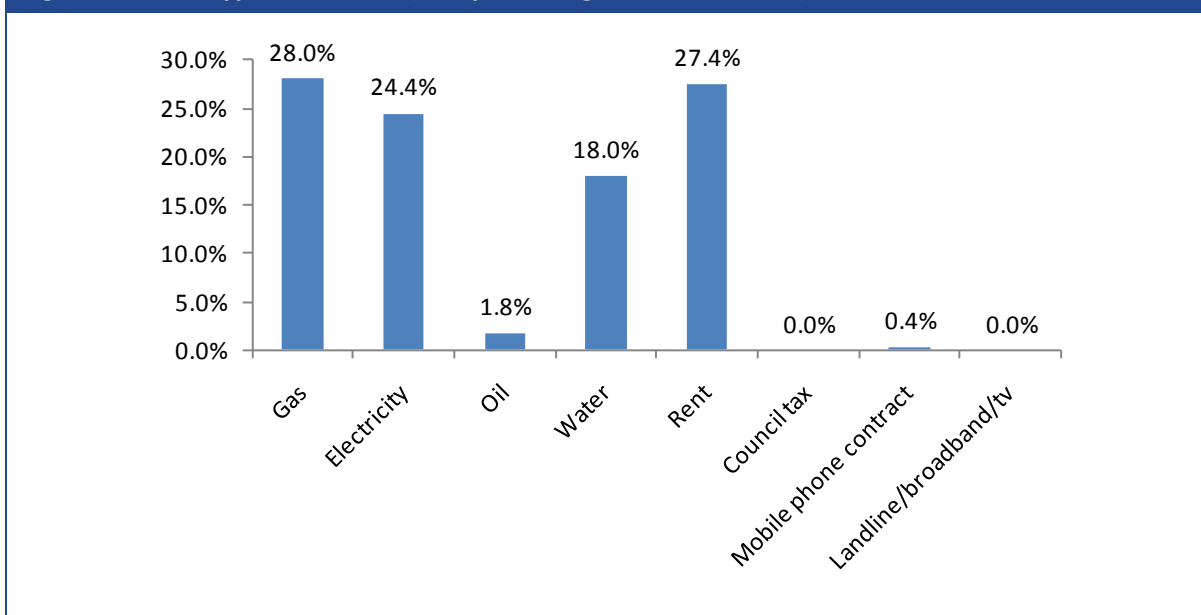
- First, the debt related to arrears accounts for less than 1 percentage point of the total debt carried by households (Table 25).
- Second, arrears on payments for gas, electricity, water and rent account for almost all arrear debt (97.9%)

**Table 25: Share of arrears in total household debt (secured, unsecured and arrears of more than 3 months)**

Types of households	Share of arrears debt in total debt
All households	0.10%
Households which are sometimes or often falling behind on their financial commitments	0.29%
Households which sought debt advice	0.24%

Source: London Economics analysis of BIS/YouGov Survey 2009-10

**Figure 15: Main types of arrears (as a percentage of total arrears)**



Source: London Economics analysis of BIS/YouGov Survey 2009-10



## 4.2 Definition of the total demand for debt advice

For the purpose of the present project, the total demand for debt advice is defined as comprising:

- 1) the actual demand for debt advice from individuals or households who actually sought some form of debt advice; and
- 2) the potential demand for debt advice from individuals and households who are struggling to meet their financial obligations and would benefit from obtaining debt advice. Such individuals and households may want to seek debt advice.

The reason for adopting such a broad definition is that it provides Money Advice Service with an indication of the demand which may materialise with increased consumer awareness of the benefits of debt advice, greater use of signposting, etc.

## 4.3 Existing literature on the demand for debt advice

As far as we are aware, there exists only one UK study (Gathergood, 2010 and 2011) which provides an empirical analysis of the demand for debt advice.

This study first derives quarterly estimates of the total demand for debt advice by drawing on data on the number of individuals advised by CCCS, Citizens Advice, Payplan and NDL (the 4 largest free-to-client debt advice providers which account for about 90% of the market for free-to-client debt advice).

Next, the study combines the information on the demand for debt advice from the 4 free-to-client debt advice providers with data from the WAS to derive an estimate of the demand for debt advice from the fee-paying sector<sup>26</sup> and, thus, an estimate of the total actual demand for debt advice (the latter is shown in the table below).

Sector	2006	2007	2008	2009 <sup>P</sup>	2010 <sup>P</sup>
Free-to-client sector	1,046	980	1,122	1,455	1,251
Total (free-to-client sector and fee paying sector)	2,453	2,181	2,303	2,972	2,554

Note: The estimates for 2009 and 2010 are predictions as the WAS results for this period are not yet available.

Source: Gathergood (2010)

Next, it computes the correlation between various potential drivers of the demand for free-to-client debt advice and the actual quarterly demand for free-to-client debt advice and finds that, among the factors considered by the study, the unemployment rate and the quoted £10,000 mortgage rate show the highest positive correlation with the total actual free-to-client demand for

<sup>26</sup> Essentially, the study computed from the WAS the ratio of the total demand for debt advice (in terms of the number of individuals seeking debt advice) to the demand for debt advice from the free-to-client market segment and applied this ratio to the estimated demand for the free-to-client debt advice derived from the data from CCCS, Citizens Advice, PayPlan and NDL. The WAS covered the year 2006-2008

debt advice while growth in average earnings shows the largest negative correlation (see Table 27).

**Table 27: Correlation coefficient between the quarterly actual demand for free-to-client debt advice (in terms of number of individuals) and various economic variables**

Economic variable	Estimated correlation coefficient
Unemployment rate <sup>(1)</sup>	0.90
Quoted £10,000 Loan Rate	0.68
GDP	-0.21
House Price growth	-0.42
Quoted mortgage rate	-0.48
Average earnings growth	-0.85

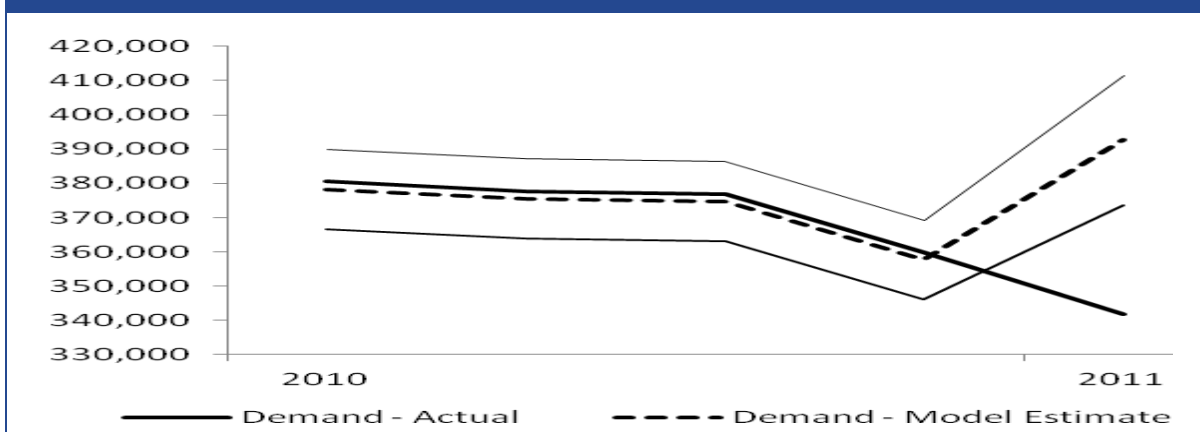
Note: (1) ILO definition.

Source: Gathergood (2010)

Finally, the study estimates a multivariate model relating the quarterly demand for actual debt advice from the free-to-client sector to the various economic variables shown in the table above over the period 2005Q1 – 2010Q2. Unfortunately, the detailed estimation results are not reported in the study. Thus, it is not possible to assess to what extent each of the economic variables listed above contributes to demand for debt advice.

However, the study and a recent update (Gathergood, 2011) provide forecasts of the demand for free-to-client debt advice. Figure 16 below shows that the model tracks very well the quarterly demand for free-to-client debt advice in 2010. However, in 2011Q1 the estimated model overestimates the demand by about 12% with actual demand continuing to decline in 2011Q4 after having posted a decrease in 2010Q4 while predicted demand is rebounding.

**Figure 16: Actual and forecasted demand for the free-to-client debt advice sector, 2010Q1 – 2011Q1**

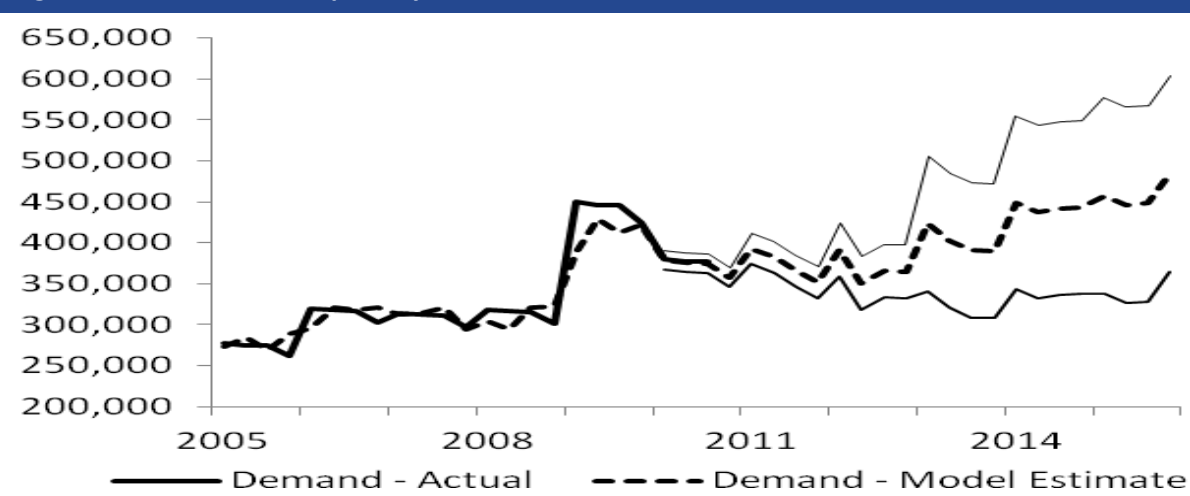


Source: Gathergood (2011)

Based on the forecasted values for the different drivers of the demand for free-to-client debt advice shown in the November 2010 economic projections, the author projects that demand for free-to-client debt advice will increase from 2013 onwards to more than 450,000 (at quarterly rate) by the 4<sup>th</sup> quarter of 2015, thus exceeding the peak observed in 2009.

The rise in the number of individuals seeking debt advice from the free-to-client sector is caused by a projected rise in interest rates which are assumed in the OBR projection to revert from their currently abnormally low levels to their long-run average.

**Figure 17: Forecast of the quarterly demand for free-to-client debt advice 2010Q4- 2015Q4**



Source: Gathergood (2011)

While this study provides very useful insights into the determinants of the demand for debt advice, unfortunately it does not present any empirical analysis of the overall demand for debt advice (actual and potential).

However, it notes that the proportion of households who “*exhibit non-payment of their debts (arrears on consumer credit or mortgage debt)... might be considered a ‘hard’ measure of problem debt if non-payment of debt is taken as indicative of an inability to pay*” (Gathergood (2010) p. 31).

Moreover, it also notes that households reporting that their debts are a “heavy burden” in the various surveys on consumer finances and indebtedness “*might need debt advice to address this very issue of their perception of their indebtedness*” (Gathergood (2010), p. 32).

Thus, the overall demand for debt advice (actual and potential) could be defined as the sum of individuals or households in arrears on their financial commitments or finding that their debt is a heavy burden. Obviously, some individuals/households may meet both criteria.

#### 4.4 Proposed approach for deriving estimates of the total demand for debt advice

As is implied by the discussion of the review above of the Gathergood study, there exist no data on the overall demand for debt advice. Surveys such as the WAS survey and the BIS/YouGov survey only ask survey respondents to indicate whether they have sought advice or help because of debt.<sup>27</sup>

<sup>27</sup> Of note is the fact that the Bank of England/NMG survey does not include “seeking advice or help” in the series of potential actions households are asked to identify as having been taken to deal with their debt problem

Thus, in order to quantify the total demand for debt advice services, it is necessary to use proxies or indicators of the total demand.

Recent studies on over-indebtedness<sup>28</sup> clearly highlight the fact that there exists no single measure of over-indebtedness. The most frequently used objective and subjective indicators of over-indebtedness in the UK are:

- Being in arrears with at least one bill or credit payment (one-month arrear, three-month arrear)
- Repayment on debt exceed a set proportion of income (50% for total debt, 25% for unsecured debt)
- Having several unsecured credit outstanding
- Feeling that repayments are a heavy burden

The table below shows that the incidence of a number of commonly used objective and subjective indicators of over-indebtedness can vary markedly.

For example, 14% of households indicated in the 2009-10 BIS survey that repayments were a heavy burden and 13% of households noted that they were at least behind 1 month on at least 1 bill while only 9% of households reported that they were more than 3 months behind on some or all of their bills.

**Table 28: Comparison of potential indicators of over-indebtedness in the BIS/YouGov surveys**

	2002 % of households	2004 % of individuals	2006 % of households	2008/09 % of households	2009/2010 % of households
Structural arrears	13	4	7	9 (more than 3 months behind) 14 (currently behind)	9 (more than 3 months behind) 13 (at least 1 month behind with 1 bill)
repayments on unsecured borrowing are more than 25% of income	5	8	3	8	
Repayments a heavy burden	n/a	4	13	15	14
4 or more unsecured credits	7	6	11	11	8

*Source: BIS, Over-indebtedness in Britain: Second follow up report, March 2010 and BIS, Credit, Debt & financial Difficulty in Britain, 2009/10, June 2011*

<sup>28</sup> See, for example, BIS (2011), Bryan et al. (2010), BEER (2007), Disney et al. (2008), DTI (2004).

It is well-known by now that the various indicators of over-indebtedness listed above do not overlap in the sense that a particular individual or household may meet only one or some of the over-indebtedness criteria.

Moreover, a number of studies have found that often individuals' perception of their financial situation is usually worse than their actual financial position.<sup>29</sup>

For the purpose of the present study, it is important to note that one cannot necessarily equate "potentially or actually seeking debt advice" with "being over-indebted" as consumers with high levels of debt, but not necessarily being over-indebted, may also benefit from receiving debt advice. Therefore, in our view, one would need to use a broader indicator of the demand for debt advice.

The best such indicator is one reflecting the ease with which households are able to meet their financial obligations. If they are struggling or unable to occasionally or systematically meet their financial obligations, they clearly would benefit from some debt advice to improve the management of their financial situation.

Both the BIS/YouGov survey and the Bank of England/NMS surveys collect such information. Each survey asks participating individuals whether the household:

- is keeping up with all bills and commitments without any difficulties
- is keeping up with all bills and commitments, but it is a struggle from time to time
- is keeping with all bills and commitments, but it is a constant struggle
- is falling behind with some bills or credit commitments
- is having real financial problems and have fallen behind with many bills or credit commitments
- has no bills or credit (BIS/YouGov survey only).

At issue is which of the household situations listed above should be considered as being indicative of a need for debt advice. Clearly, households which are either "falling behind with some bills or credit commitments" or "having real financial problems and have fallen behind with many bills or credit commitments" would benefit from debt advice.

In addition, households who respond that they are "keeping up with all bills and commitments, but it is a constant struggle" would also in all likelihood benefit from debt advice (or perhaps money management advice).

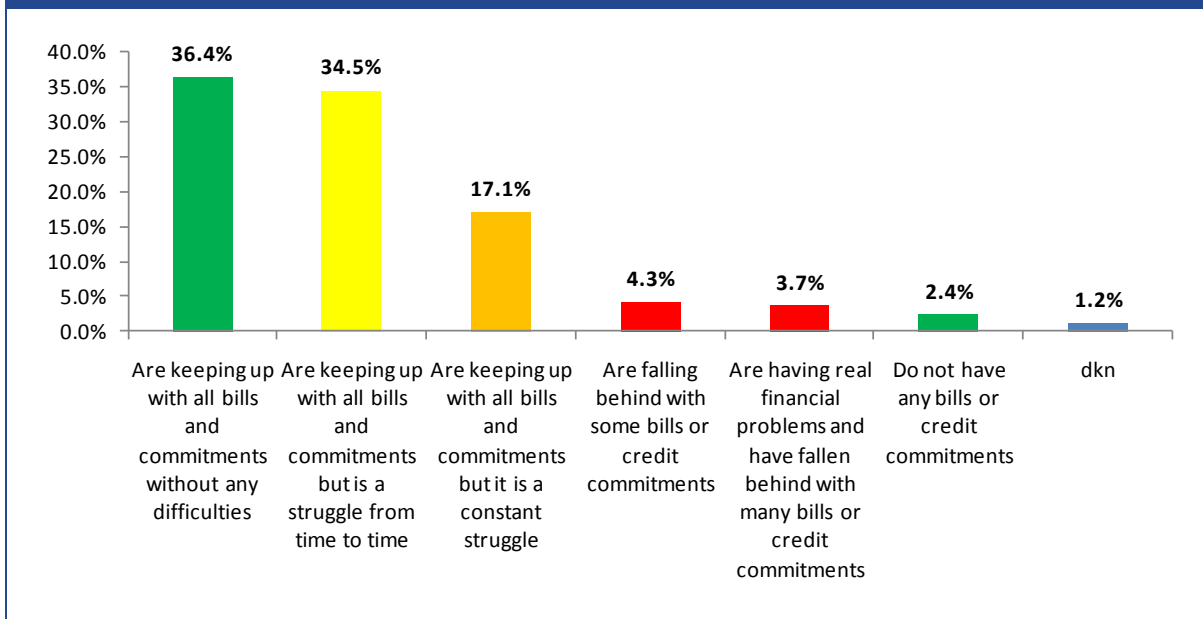
Thus, for the purpose of deriving an estimate of the total demand (actual and potential) for debt advice, we assume that all the households which either are keeping up with all bills and commitments, but it is a constant struggle or are falling behind with some bills or credit commitments or are having real financial problems and have fallen behind with many bills or credit commitments have an actual or potential demand for debt advice.

---

<sup>29</sup> See, for example, discussion in BIS (2011) pp.52-53.

According to the latest BIS/YouGov survey, 25.1% of participating households met one of the 3 financial stress categories over the period of November 2009 to October 2010 (Figure 18).

**Figure 18: Distribution of households by type of financial situation they face (% of total number of households)**



Source: London Economics analysis of BIS/YouGov survey of 2009-2010

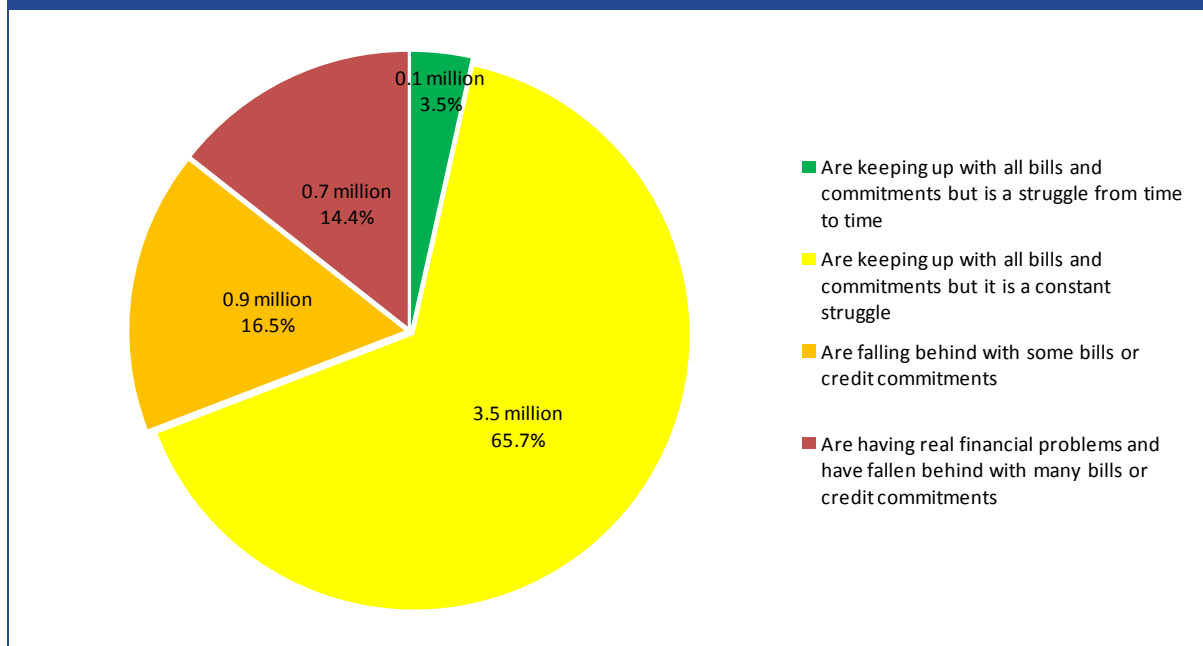
In addition, as some of the households keeping up with all bills and commitments but struggling from time to time noted in the survey that they sought debt advice, we propose to expand the definition of the demand for debt advice to include the actual demand of such households as well. However, we assume that their latent demand is nil as it is impossible to determine on the basis of the survey results how many of the households within this particular financial stress category would benefit from debt advice.

This latter category of demand for debt advice adds almost another 1 percentage to the previous estimate of 25.1%, raising the total demand for debt advice (actual and latent) to 26.1% of all GB households, or 5.3 million.

The most important demand segment consists of households who are keeping up with all their bills and financial commitments but constantly struggle to do so (3.5 million households or 65.7% of all households with a demand (actual or latent) for debt advice) (Figure 19). The households with more substantial financial stress, i.e. the households which are sometimes or always behind on their financial commitment, total 1.6 million or 30.8% of all households with a demand (actual or latent) for debt advice.



**Figure 19: Number and share of households with demand for debt advice by degree of severity of financial stress**



Source: Source: London Economics analysis BIS/YouGov survey of 2009-2010

It should be noted that the unit of analysis is the household. The BIS/YouGov survey yields some information on the composition of the household (number of adults, number of children, etc). However, they do not provide any information on the number of household members seeking debt advice. Thus, it is not possible to provide an estimate of the number of individuals that have an actual or latent demand for debt advice.

It is only possible to note that, on average in the BIS/YouGov, 3 adult individuals lived in households in which the survey participant reported having sought debt advice or about 15 million individuals in total.

Deriving estimates of the number of individuals seeking debt advice from the number of survey participants indicating that they did is fraught with problems. First, the answer of a respondent responsible for the household's finances and managing its budget may be different from that of a member of the same household but not responsible for the household's financial affairs. Second, a household member may hide debts from other household members and, if one of the other household members answers the survey, the household debt will be under-reported and so will be the household's debt advice seeking activity.

#### 4.5 Proposed approach for deriving estimates of the total demand for debt advice

In total, according to the BIS/YouGov 2009-10 survey, 4.3% of households (0.9 million) sought debt advice in the 6 months preceding the day during which they participated in the BIS/YouGov 2009-

10 survey. As is shown in Figure 23 on page 57, the proportion of households having sought debt advice has not changed much in recent years – it fluctuates between 3% and 5%.

The 4.3% figure is also very close to the percentage of individuals reporting having at any point during the year preceding the survey sought help or advice because of debt in the Wealth and Assets Survey (WAS) Wave 1. This percentage stood at 4.2% in 2006, 3.8% in 2007 and 4.0% in 2008.

Both the BIS/YouGov and the WAS survey ask the respondent to indicate whether they sought debt advice. It is not clear, however, whether the survey participant is answering on her/his behalf alone or that of the household. As in the BIS/YouGov survey, this question about seeking debt advice is preceded by a number of questions about the secured and unsecured debt of the respondent and her/his partner, we assume that the survey participant answers the question about seeking debt advice on behalf of the household.

But, it is possible that in some cases the answer is on behalf of the survey participant alone. This is an issue which will need to be urgently explored in future surveys on indebtedness and debt advice seeking as the figures of the total demand and actual demand for debt advice will be vastly different if the unit of reference is the household or the individual. According to the ONS, the number of households stood at 20.574 million in April-June 2011 in the UK while the UK adult population<sup>30</sup> reached 50.7 million in 2011.

Thus, the use of either the population or the household figure will yield vastly different estimates of the demand for debt advice. For example:

- applying the proportion of 4.3% of individuals/households having sought debt advice to the population figure would yield an estimate of 2.18 million of individuals having sought debt advice in 2011
- in contrast applying the figure of 4.3% to the household figure yields an estimate of 0.9 million of households..

Among this group of households reporting having sought debt advice in the BIS/YouGov survey:

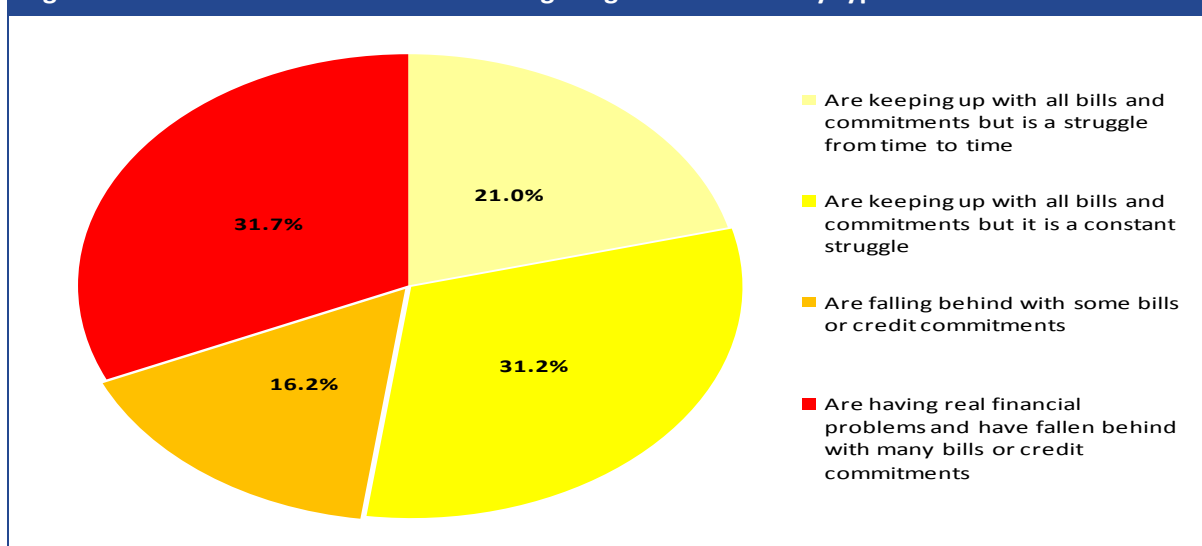
- those having real financial problems and having fallen behind with many bills or credit commitments accounted for 31.7% of the total number of households having sought debt advice;
- those having fallen behind with some bills or credit commitments accounted for 16.2% of the total number of households having sought debt advice;
- those keeping up with all the bills and commitments but constantly struggling to do so accounted for 31.2% of the total number of households having sought debt advice; and,
- those keeping up with all the bills and commitments but are struggling from time to time to do so accounted for 21.0% of the total number of households having sought debt advice.

---

<sup>30</sup> This is the population aged 16 and more.



Figure 20: Distribution of households having sought debt advice by type of financial stress



Source: London Economics of BIS/YouGov survey of 2009-2010

The next figure shows that the actual proportion of households having sought debt advice is low across all financial stress categories.

For example, only 37% of households having real financial problems and having fallen behind with many bills or credit commitments actually reported having sought debt advice during the 6-months period preceding their participation in the BIS/YouGov 2009-10 survey (Figure 21). Moreover, only 16% of households falling occasionally behind with some bill or credit commitments did seek debt advice.

The figure 0.9 million households having sought debt advice is much lower than the average 2009-2010 figure of 2.763 million individuals having sought debt advice estimated by Gathergood (2010).

However, before comparing these two figures, it is important to note that a number of households indicating in the BIS/YouGov survey that they sought debt advice, did so from more than one advice provider. In total the number of advices sought by households is 44% higher than the number of households indicating that they had sought debt advice (see data in Table 29). In other words, on average, a household reporting having sought debt advice did so from 1.4 advice provider.

Thus, in the BIS/YouGov survey, the total number of debt advices sought by households is 1.3 million.

A second major difference may be caused by the household/individual issue. At this stage it is not possible to determine to what extent this is a major factor. However, the discussion on the previous page showed that it may account for a major part of the difference.

Survey sampling and survey channel may also be a source of differences, especially if financially more fragile populations are underrepresented. However, as the WAS and BIS/YouGov surveys yield similar results, it is unlikely that these two factors are a major source explaining the difference between the estimates of the debt advice seekers.

**Table 29: Number of households having sought debt advice from more than one service provider and total number of households having sought advice from service provider**

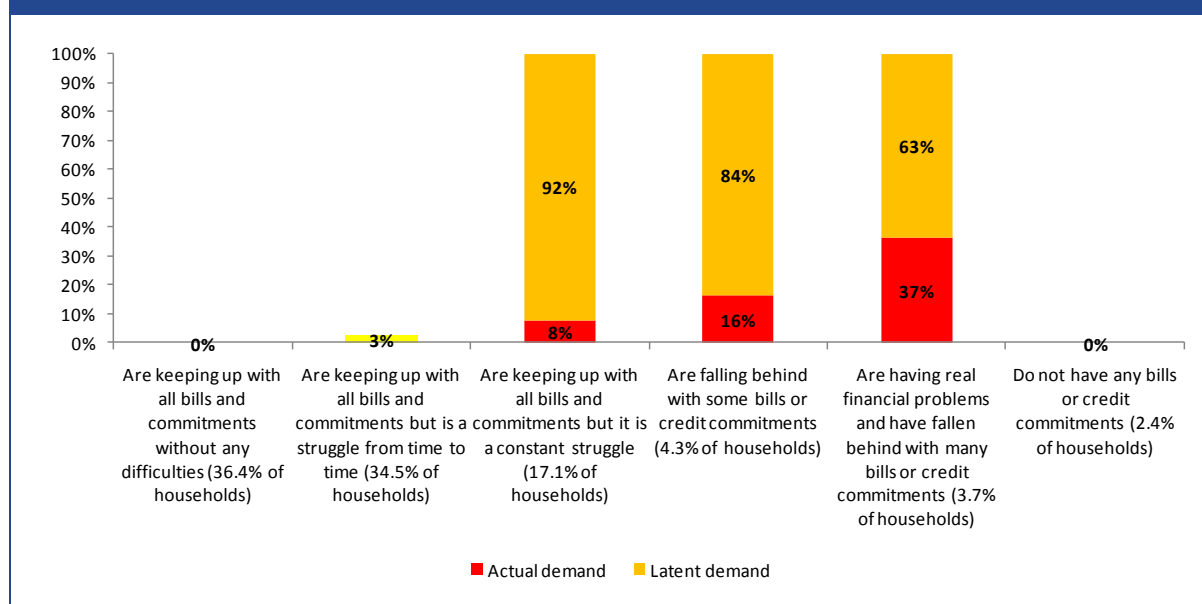
	Money Advice Service	National Debtline	Professional insolvency practitioners (e.g. Accountants or lawyers)	Citizens Advice Bureau	Insolvency Service	Consumer Credit Counselling Service	Mortgage provider	Payplan	Other creditors	Bank	Other advice centre	Other	Total number of households having sought advice from debt advice provider
Money Advice Service	--	5	0	3	2	3	4	4	3	6	1	0	33
National Debtline		--	1	24	2	15	4	4	4	10	5	0	58
Professional insolvency practitioners (e.g. Accountants or lawyers)			--	4	5	3	1	0	1	2	0	0	18
Citizens Advice Bureau				--	8	20	8	12	7	16	4	7	140
Insolvency Service					--	6	1	3	3	3	0	2	25
Consumer Credit Counselling Service						--	5	10	5	15	2	3	111
Mortgage provider							--	3	2	9	2	0	26
Payplan								--	4	7	2	0	42
Other creditors									--	9	1	0	19
My bank										--	9	0	72
Other advice centre											--0	2	26
Other												--	38
Don't know													4
Prefer not to answer													20
Total													632
<i>For memo: number of households having indicated that they sought debt advice</i>													439

Source: London Economics of BIS/YouGov survey of 2009-2010

Overall, of the 5.3 million households having been identified in the BIS/YouGov survey as having an actual or latent demand for debt advice, 16.6% (0.9 million) sought some form of debt advice and 83.4% (4.4 million) did not.

Thus, based on our definition of the total demand for debt advice, the latent demand<sup>31</sup> for debt advice is substantial, even in the case of households having real financial problems and having fallen behind with many bills or credit commitments.

**Figure 21: Actual and latent demand for debt advice by type of financial stress experienced by households**



Source: London Economics of BIS/YouGov survey of 2009-2010

## 4.6 Evolution of the total and actual demand for debt advice over time

Unfortunately, the BIS/YouGov survey started in 2008 and thus the time series of the demand (total and latent) is not very long. As each of the two BIS/YouGov surveys undertaken since the beginning of 2008 was run in 4 waves, in total there are 8 data points.

Overall, the share of households defined as having a demand for debt advice fluctuated between 21% and 25% from 2008 to July 2009, hit a peak of 28% in the third quarter of 2009 and thereafter fluctuated between 18% and 25% to the fourth quarter of 2010 (Figure 22).<sup>32</sup>

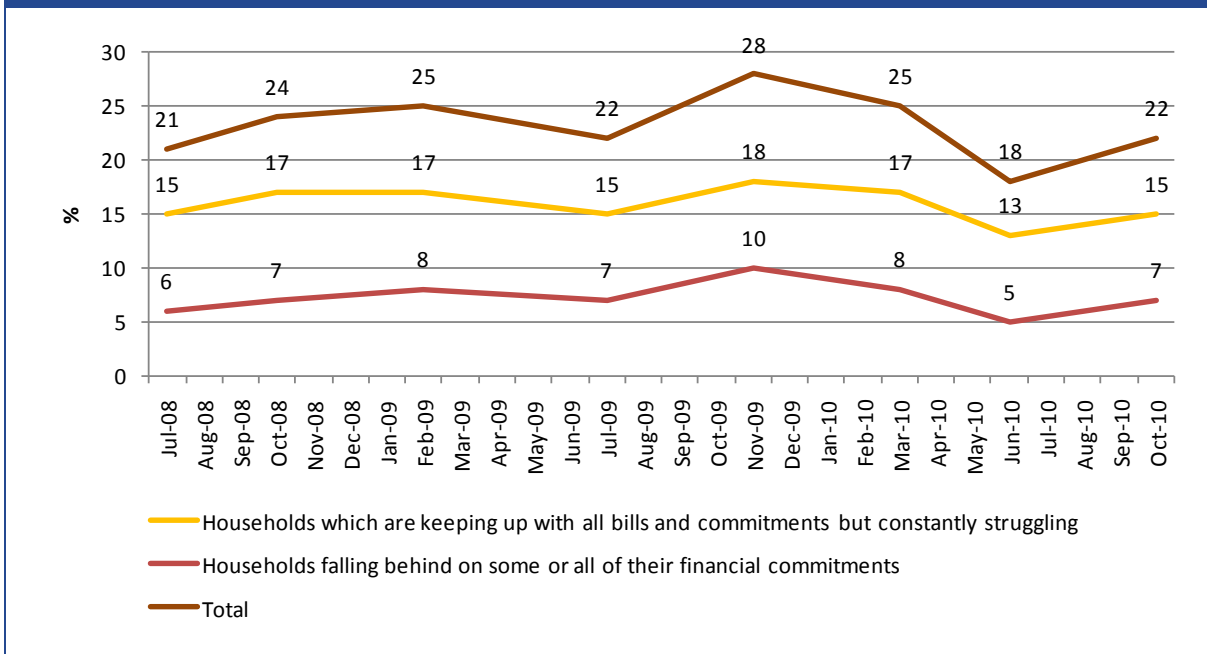
<sup>31</sup> The latent demand is defined as the difference between the total number of households who are in particular situation and those in that particular group who are actually debt advice.

<sup>32</sup> Interestingly, a March-May 2002 survey found that, at that time, 8% of households were constantly struggling to meet their financial commitments but were not falling behind while 3% of households were falling behind on their financial commitments (Kempson, 2002).

The share of households which actually sought debt advice fluctuated much less during the period, ranging from 3% of all households to 5% of all households (Figure 23).

While the series of the total demand for debt advice and the actual demand of debt advice show identical local peaks (February 2009 and October 2009), the two series do not move exactly in tandem as shown by Figure 24. In fact, the correlation between the two series is only 0.75.

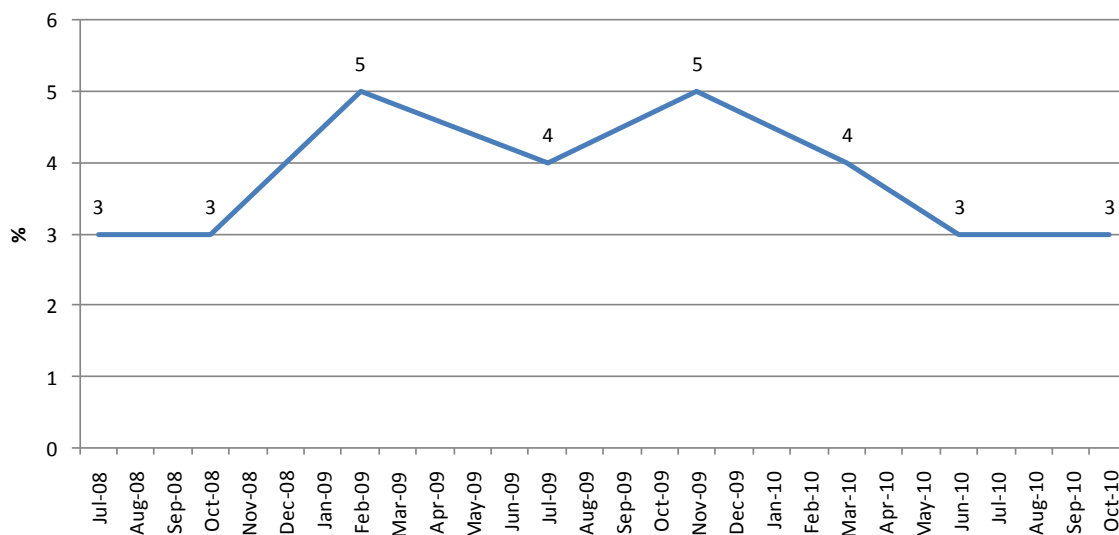
**Figure 22: Demand (actual+latent) for debt advice, % of households**



Source: London Economics analysis of BIS/YouGov surveys

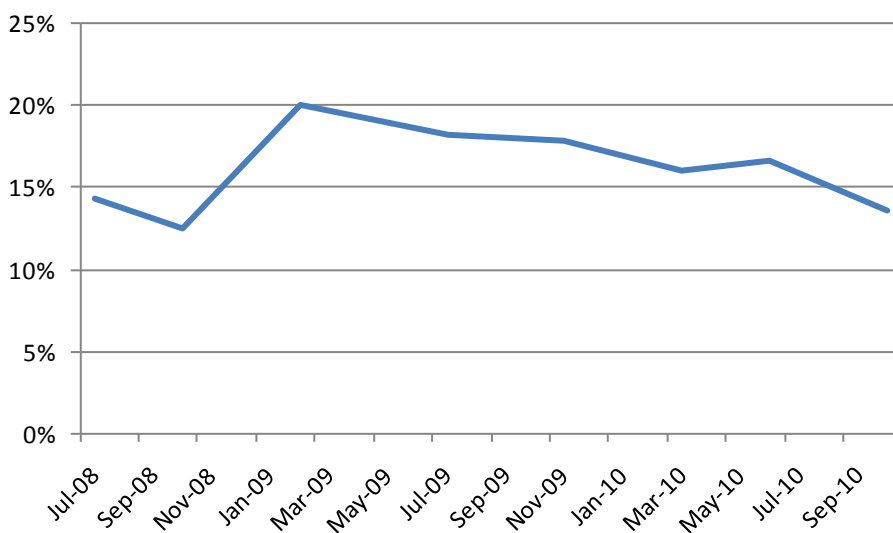


Figure 23: Actual demand for debt advice, % of households



Source: London Economics analysis of BIS/YouGov surveys

Figure 24: Ratio of the actual demand for debt advice to the total demand for debt advice, July 2008 = 100



Source: London Economics analysis of BIS/YouGov surveys

## 4.7 Forecasting the total demand for debt advice and the actual demand for debt advice

The lack of long time series data presents a major challenge for constructing a forecasting model for the total demand for debt advice and the actual demand for debt advice as it is impossible to estimate econometrically such a model.

Typically, in such cases, the approach used by modellers is to assume that the forecast value of the variable remains constant at either the last observed value or an average value computed over a certain period. In the table below, we show the forecast error that would have been made in 2009-10 using either the last value of the 2008-09 survey or the average value of the 2008-09 survey.

In the case of the total demand for debt advice, the forecast error (actual minus predicted) would have fluctuated between 6 percentage points in November 2009 and 4 percentage points if the last data point of the 2008-09 survey had been used and 5 percentage point if the average of the 4 data points in the 2008-09 survey had been used to project the total demand (Table 30).

In the case of the actual demand for debt advice, the forecast error would have fluctuated between 1 percentage and -1 percentage point under both forecasting approaches.

**Table 30: Error of projection of total and actual demand for debt advice (in terms of % of households) using last data point or average in 2008-09 BIS/Gov survey**

		Nov-09	Mar-10	Jun-10	Oct-10	Average error
		<b>Actual percentage minus projected percentage</b>				
Total demand for debt advice						
	last data point: 22%	6	3	-4	0	1.25
	average: 23%:	5	2	-5	-1	0.25
Actual demand for debt advice						
	last data point: 4%	1	0	-1	-1	0
	average: 4%:	1	0	-1	-1	0

*Source: London Economics analysis of BIS/YouGov surveys*

Figure 22 and Figure 23 showed that both the total demand for debt advice and the actual demand for debt advice fluctuate a fair amount within each survey period. However, these fluctuations do not seem to be driven by any developments in the potential drivers of the total and actual demand for debt advice.

For example, Table 38 shows that the level (or the change) in various consumer interest rates and the total and actual demand for debt advice, at least over the period July 2008 to October 2010, do not move in tandem as the highest correlation coefficient is only 0.38 and in some cases, the correlation coefficient is even negative.

**Table 31: Correlation between consumer interest rates and total and actual demand for debt advice**

Consumer Interest rate	Correlation between level of interest rate and		Correlation with change in level of interest rate	
	Total demand for debt advice	Actual demand for debt advice	Total demand for debt advice	Actual demand for debt advice
5k loan	0.09	0.19	0.04	-0.15
Credit card	-0.71	-0.74	-0.75	-0.50
10k loan	0.16	0.28	0.34	0.38
Overdraft	0.10	0.36	0.13	0.39
Variable mortgage rate	-0.09	-0.45	-0.19	-0.59

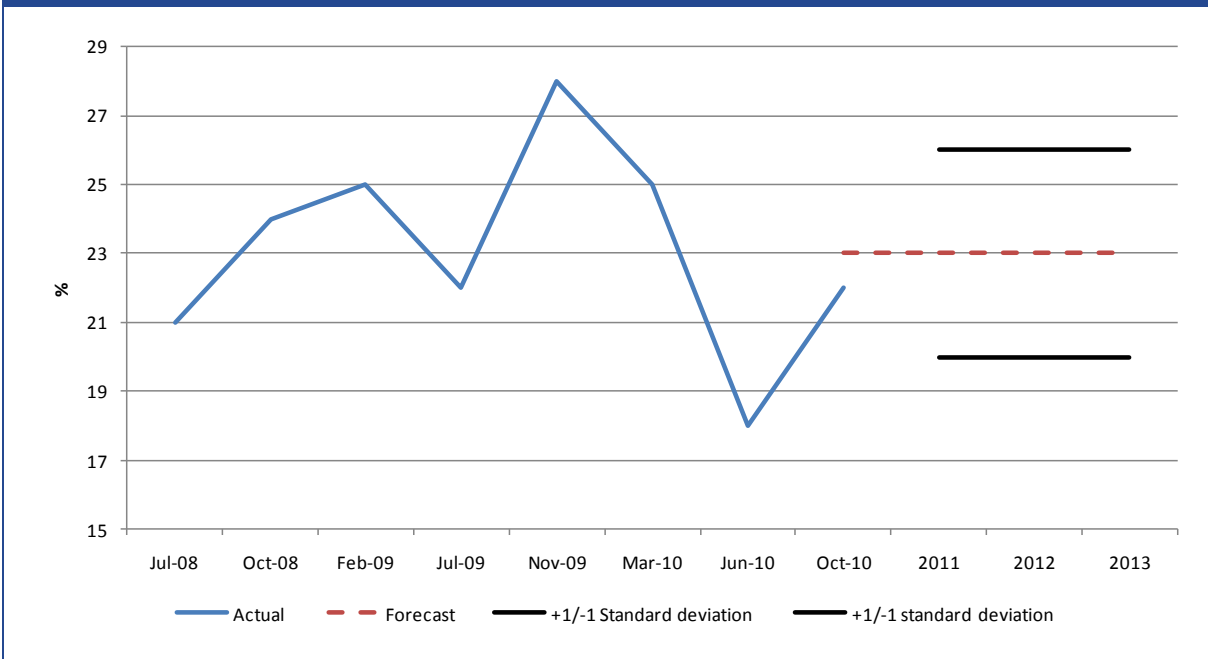
*Source: London Economics analysis of BIS/YouGov surveys and Bank of England interest rate data (IUMBX67, IUMCCT, IUMHPTL, IUMODTL and IUMTLMV)*

Based on the analysis above, the best forecast that can be made at this stage is to assume that the forecast values of the total demand and actual demand for debt advice will be equal to the average of the observed values in the two BIS/YouGov surveys.

We have estimated an econometric model of the actual demand of advice (see Annex 5) but, in light of some counter-intuitive estimation results, we do not recommend using this model to forecast the demand for debt advice.

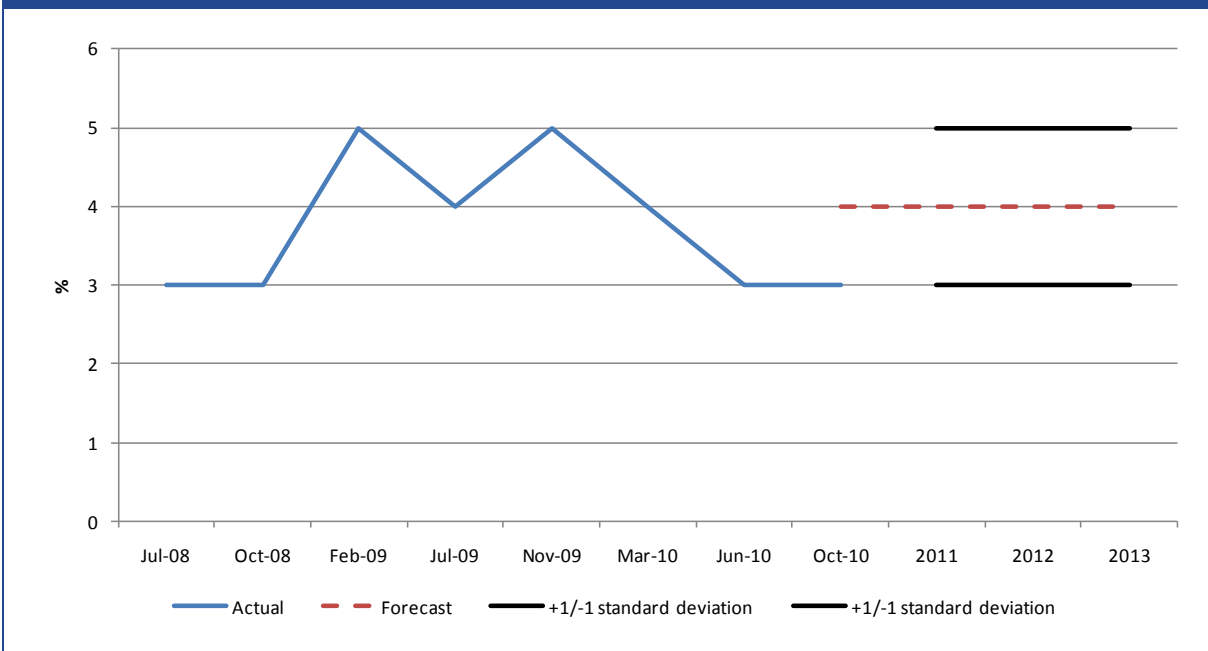
The two forecasts are shown in the figures below.

Figure 25: Forecast of total demand for debt advice - percentage of households



Source: London Economics

Figure 26: Forecast of actual demand for debt advice - percentage of households



Source: London Economics



## 5 Model for allocating the Money Advice Service debt advice costs

### 5.1 General considerations

One of the key objectives of the present project was to develop a fair and transparent model which could be used to allocate to different parties the levy to be charged by the Money Advice Service to fund debt advice activities.

Besides being fair and transparent, the model should also be easy to update and, ideally, impose no or little administrative burden on stakeholders.

Currently, funding for the Money Advice Service's debt advice activities comes from a levy on the financial services industry collected by the Financial Services Authority. This section considers other potential ways to collect the debt advice service costs.

Below, we examine:

- the options of using either the OFT Credit Register or the FSA fee block system as a base for a levy aimed specifically at funding the Money Advice Service's debt advice activities and review whether; and,
- how creditors not registered in the OFT Credit Register or covered by the FSA funding blocks could be included in the base as well.

### 5.2 Option 1: The OFT Credit Register

The OFT has a duty under the Consumer Credit Act 1974 to maintain a register of consumer credit licence holders and the Consumer Credit Register includes details of:

- applications for - and holders of - consumer credit licences, both current and past;
- applications to vary or renew those licences and changes to certain particulars notified to the OFT;
- the OFT's decisions to refuse applications, revoke consumer credit licences or impose requirements;
- information relating to any appeal to the First Tier Tribunal (Consumer Credit) against any such decision;
- information on Validation Orders in respect of credit agreements made by unlicensed or incorrectly licensed traders.

However, the OFT Consumer Credit Register does not contain any information of the amount of credit extended by the credit licence holder. Thus, in principle, the OFT Consumer Credit register provides useful information if the funding allocation mechanism in the model is based on the number of credit providers.

However, the OFT Consumer Credit Register includes licences of credit providers which may no longer be active. Thus, before its information could be used, a major data cleaning exercise would need to be undertaken to eliminate the dormant licences.

Currently any levy base would be the credit licence if the OFT Credit Register were to be used for establishing the level base. We recommend against using such an approach currently, as it would not be fair as small credit providers would be required to pay the same levy as large credit providers. Moreover, many non-credit providers would also be subject to the levy.

However, subject to improvements to address the various issues noted above, it is potentially a route that might be pursued in the future.

### 5.3 Option 2: The FSA funding blocks

At the present time, the FSA recovers from the industry its annual funding requirements and those of the Money Advice Service through levies charged on all authorised firms and other bodies which group in a series of fee-blocks. These fee-blocks represent groupings of related regulated business activities and other bodies permitted to undertake their activities.

Many of the firms falling into the FSA fee-blocks relevant for the present study also hold an OFT credit licence. Thus, it would not be appropriate to use both the OFT Consumer Credit Register and the FSA fee-blocks to establish a tariff base unless any duplication are addressed in the construction of the tariff base

The actual fee varies across the FSA fee-blocks reflect different supervisory costs and non-supervisory costs for each fee-block. Non-supervisory costs are to the extent possible allocated to the fee-blocks whose permitted business the policy development relates to (see FSA (2011) for more details).

Of interest for the purpose of the development of a funding allocation model, for the funding of debt advice services only, is the fee-block A (see table below) and more particularly, within this fee-block, the sub-blocks A.1 (Deposit acceptors) and A.2 (Home finance providers and administrators). Among all the FSA fee-blocks, these are the only ones relating to credit activities (credit provision or credit intermediation).

One could argue that fee block A18 – Home Finance providers, advisers, and arrangers - might also be an appropriate block to which the levy for funding debt advice activities should be applied. However, the relationship of a home finance broker with the lending institution is different to the usual relationship between an intermediary and a product provider.

In this case, the lender has the ultimate responsibility for establishing a customer's ability to repay and, thus, whether the lending decision is responsible. Furthermore, when a consumer reaches a crisis debt situation, the secured creditors in fee block A2 are holding what is known as a 'priority debt'<sup>33</sup> and any debt advice given will ensure that 'priority debts' are paid ahead of non-priority

---

<sup>33</sup> Non-repayment of a 'priority debt' puts an individual at risk of losing their home, liberty or access to essential services. Other examples include council tax arrears, court fines and utility bills.

debts. While unsecured debts are routinely classified as ‘non-priority’, secured debts will always be classified as ‘priority’ by debt advisers.

Fee block A2 institutions therefore are likely to be the greatest beneficiary of people receiving debt advice. In contrast, institutions covered by fee block A18 do not benefit directly from the delivery of debt advice as no debts (funds) are recovered for or owed to the organisations/individuals in fee block A18.

**Table 32: Components of FSA Fee-Block A**

Fee block	Industry segment
A.0	Costs that all firms in the fee-block contribute through the minimum fee
A.1	Deposit acceptors
A.2	Home finance providers and administrators
A.3	Insurers- general
A.4	Insurers –life
A.5	Managing agents at Lloyd’s
A.7	Fund managers
A.9	Operators, Trustees and Depositories of collective investment schemes and Operators of personal pension schemes or stakeholder pension schemes
A.10	Firms dealing as principal
A.12	Advisory arrangers, dealers or brokers (holding or controlling client money or assets, or both)
A.13	Advisory arrangers, dealers or brokers (not holding or controlling client money or assets, or both)
A.14	Corporate Finance Advisors
A.18	Home Finance providers, advisers, and arrangers
A.19	General insurance mediation

Source: FSA (2011)

The tariff base for fee-block A.1 is modified eligible liabilities (essentially) UK deposits held, for fee-block A.2 is the number of home finance transactions entered into and administered, and for A.18 the tariff base is annual income.

As the FSA fee-blocks of interest for the development of the funding model are volume based, the fee charged to each firm is reflective of its level of activity and, thus, is arguably fairer than a system based on the OFT credit register under which a flat fee would be imposed on each credit licence.

Bank of England Tables A5.3 and A5.6 provide a breakdown of secured lending and unsecured consumer credit between MFIs and other lenders in the Bank of England data. The table below shows that:

- In the case of secured lending, MFIs account for 84% of the total secured household debt owed to UK-based lenders whereas specialist lenders accounted for 15%. All the UK-based mortgage credit provision is covered by the FSA fee-block A.2 “Home finance providers and administrators”.

- In the case of unsecured lending, MFIs account for 59% of the total unsecured household debt while other lenders account for 41%. In the case of unsecured lending, only the MFIs are subject to the FSA fee and are included in the FSA fee block A1 “Depositor acceptors”.

In total, the institutions included in FSA fee-blocks A.1 and A.2 cover 94% of total household debt to UK-based lenders. Of this latter household debt, 90% can be allocated to fee-block A.2 and 10% to fee-block A.1.

**Table 33: Total secured and unsecured lending (amount outstanding) to households in BoE data - 31 Dec. 2011**

Type of institution		Amount (£ million)	Percentage of debt category	Percentage of total household debt
Lending secured on dwellings				
	By MFIs	1,044,117	84%	72%
	By specialist lenders	186,349	15%	13%
	By other lenders	7,466	1%	1%
	Total	1,238,029	100%	85%
Unsecured lending				
	By MFIs	126,534	59%	9%
	By other consumer credit lenders	87,123	41%	6%
	Total	213,560	100%	15%
Total (secured + unsecured)		1,451,589		100%

Source: Bank of England Bankstats Tables A5.3 and A5.6

## 5.4 Non-lending creditors

As already mentioned above, neither the OFT Credit Register nor the FSA fee block covers credit arising from arrears on bills from a wide range of entities such as utilities, phone companies, housing associations, local authorities, etc. The common characteristics of this type of credit are that a) such credit is not based on a formal credit contract and b) it is generally not extended voluntarily by these creditors.

As shown in Table 25, the share of such arrears debt in total debt is very small, less than 1% of the total debt held by households in general and households having sought debt advice. One might argue that this type of debt is very small (as a share of total debt) among debt-advice seekers because many of the arrears debt are priority debts which debt-advice seekers are advised to pay off first. But, this type of debt is also very small (as a share of total debt) among those who face serious debt problems and are not seeking any debt advice. This latter

information, together with the fact that overall this type of debt is small relative to total debt, suggests that the fact that the arrears are priority debts does not substantially alter the conclusion that arrears debt is small in aggregate.

## 5.5 Which option to use to establish the tariff base?

Based on the discussion of the three options above, we recommend using the FSA fee-blocks as the base for levying the fee for funding the Money Advice Service debt advice activities as they match to a very large extent the actual provision of credit.

A cost allocation mechanism based on the mere existence of a credit licence is likely to be viewed as highly unfair as the fee (in absolute terms) that small credit providers would have to pay would be the same as the one of very large credit providers. Moreover, if the fee were to be based on the volume of credit provided by the various licence holders, it would be necessary to seek directly this information from a wide range of lenders which are not MFIs. Thus, even if the Consumer Credit Register were to be cleaned so as to retain only active licences, it would still require a major data collection exercise to collect the information necessary to implement a credit-volume based levy through the OFT Consumer Credit Register. However, if the issues raised above are addressed, it is potentially a route that might be pursued in the future.

We recommend to exclude arrears from the base because collecting information on such arrears would require gathering information on arrears from a wide range of creditors such as electricity, gas, water, telephone utilities, landlords (social and others), local authorities, etc. This would be a very resource-intensive process and costly to pursue while expanding the tariff base by only less than 1%.

Moreover, for a number of reasons detailed below, we propose that the funding model use the Bank of England debt data from Bank of England Table A5.2. The main reasons are the following:

- 1) The FSA fee-blocks relate to the UK-based activities of MFIs and other lenders, thus the household debt figures based on the MFIs' and other lenders' lending (amount outstanding) are the most relevant debt figures;
- 2) the differences between the Bank of England and the ONS total household debt data are minimal in £ value; and,
- 3) the "other accounts payable" is very small and these creditors are not covered by any of the FSA fee-blocks.

## 5.6 Tariff base for allocation of cost of debt advice services from Money Advice Services across the FSA fee-blocks

Most of the debt held by households is either secured debt or unsecured consumer credit debt. These two types of debt can be easily matched to the FSA fee-blocks.

Therefore, we propose to use as a tariff base the amount of secured and unsecured credit debt owed by consumers to UK financial institutions.

At issue is which debt information to use to determine the level of the tariff base on which the levy would be charged. In our view, there are three possible choices, namely;

- the split between the total secured and unsecured consumer debt outstanding as recorded by the Bank of England;
- the split between secured and unsecured debt in the total debt owed by households defined as having a demand (actual and latent) for debt advice; and
- the split between secured and unsecured debt in the total debt owed by households having actually sought debt advice.

In each of the 3 cases, above, the share of secured tariff base will be several times as large as that of unsecured credit. This reflects the much larger volume of secured debt outstanding and is appropriate from a policy perspective as secured lending and debt not related to contractual credit arrangements are priority debts in a debt recovery process.

The table below shows that, according to the Bank of England data, mortgage lending (lending secured on dwellings) accounted for 85.3% of total lending to individual outstanding at the end of 2010 and unsecured lending for 14.7%.

Type of credit	Amount	Percentage of total
Secured lending (on dwellings)	£ 1 238 029 million	85.3%
Unsecured lending (consumer credit)	£ 213 560 million	14.7%
Total	£ 1 451 589 million	100%

**Source: Bank of England Bankstats A5.2**

If one focuses only on households having been defined as having a demand for debt advice, the split is 75.9% for secured lending and 24.1% for unsecured lending in the total debt owed by such households net of family loans (Table 35).<sup>34</sup>

Among the households having actually sought debt advice the share of unsecured credit is even higher at 26.2% and the share of unstructured credit stands at 73.8%.

Detailed information on a) the split between secured and unsecured debt by type of financial stress experienced by households and b) the composition of unsecured debt by type of financial stress experienced by households is provided respectively in Annex 3 and Annex 4.

<sup>34</sup> Family loans are excluded from the tariff base as it would be next to impossible to levy a fee on such debt.

**Table 35: Shares of secured and unsecured debt in total debt owed by households defined as having a demand for debt advice (latent or actual) or having sought debt advice**

Type of debt	Households defined as having a demand for debt advice (latent or actual)	Households having sought debt advice
Secured debt (no adjustment for student loans and loans from family)	74.8%	72.1%
Unsecured debt (no adjustment for student loans and loans from family)	25.2%	27.9%
Total (no adjustment for student loans and loans from family)	100%	100%
Secured debt (adjustment for loans from family)	75.9%	73.8%
Unsecured debt (adjustment for loans from family)	24.1%	26.2%
Total (adjustment for loans from family)	100%	100%
Secured debt (adjustment for student loans and loans from family)	79.3%	75.2%
Unsecured debt (adjustment for student loans and loans from family)	20.7%	24.8%
Total (adjustment for student loans and loans from family)	100%	100%

Source: London Economics analysis of 2009-2010 BIS/YouGov survey

As the debt advice activities of the Money Advice Service may stimulate a larger number of individuals to seek debt advice, it is probably better to use debt split shown by households being defined as having a demand (actual or latent) for debt advice.

However, the information on the split between secured and unsecured debt is an input variable in the funding model (discussed below) and can be changed as desired.

That being said, we recommend using the split shown in the Band of England data (namely 85% for secured lending and 15% for unsecured lending) as it is based on data from an official, reliable

source and the data are updated on a regular and timely basis. For example, on 3<sup>rd</sup> November, such data are available to September 2011



---

## References

Buck, Al. Day, L., Collard, S., Smith, M. and Patel, A. (2009), "Outreach Advice for Debt problems: Research and evaluation of outreach services for financially excluded people", Legal Services Commission.

Brown, S., Garino, G., Taylor, K. and Wheatley Price, S. (2005), "Debt and financial expectations: An individual- and household-level analysis", *Economic Inquiry*; 43 (1), pp. 100-120.

Brown, S. and Taylor, K. (2007), "Household debt and financial assets: evidence from Germany, Great Britain and the USA", *Journal of the Royal Statistical Society*, series A (2008), 171, Part 3, pp. 615–643.

Bryan, M., Taylor, M. and Veliziotis, M. (2010), "Over-Indebtedness in Britain: An analysis using the Wealth and Assets Survey and Household Annual Debtors Survey", Report to the Department for Business, Innovation and Skills. Institute for Social and Economic Research University of Sussex, October.

Citizens Advice Bureau (2010), "The outcomes of CAB advice".

Day, L., Collard, S. and Davies, V. (2008) "Money advice outreach evaluation: qualitative outcomes for clients", Legal Services Research Centre.

Dayson, K., Conaty, P., Dawson, J., Marchant, B., Salt, A. and Vik, P. (2009) "Economic impact and regeneration in city economies", Community Finance Solutions.

Del-Rio, A. and Young, G. (2005), "The determinants of unsecured borrowing: evidence from the British Household Panel Survey", Bank of England Working Paper No. 263.

Department for Business, Innovation and Skills (2009) "A better deal for consumers. Consumer White Paper: Economic narrative".

Disney, R., Bridges, S. and Gathergood, J. (2008), "Drivers of over-indebtedness", Report to the Department for Business, Enterprise and Regulatory Reform, Centre for Policy Evaluation, the University of Nottingham, October.

Disney, R. and Gathergood, J. (2009), "Understanding Consumer Over-Indebtedness Using Counselling Sector Data: Scoping Study", Report to the Department for Business, Innovation and Skills, the University of Nottingham, December.

Department for Business, Enterprise and Regulatory Reform (2007), "Tackling Over-Indebtedness, Annual report 2007".

Department for Business, Innovation and Skills (2010), "Over-indebtedness in Britain: Second follow-up report", March, London.

Department for Business, Innovation and Skills (2011), "Credit, Debt & Financial Difficulty in Britain 2009/10. A report using data from the YouGov DebtTrack survey", June, London.

Department for Trade and Industry (DTI) (2005), "Over-indebtedness in Britain: A DTI report on the MORI Financial Services survey 2004".

Edwards, S. (2003) "In Too Deep: CAB clients' experience of debt" Citizens Advice and Citizens Advice Scotland.

Engle, R. F. and Granger, C. W. J. "Co-integration and Error Correction: Representation, Estimation, and Testing". *Econometrica*, 1987, vol. 55, issue 2, pages 251-76.

Evans, G. and McAteer, M. (2011), "State of Play Report – A Business Case – Financial Impact of Debt Advice for Social Landlords", The Financial Inclusion Centre.

FSA (2011), "Consolidated Policy Statement on our fee-raising arrangements and regulatory fees and levies 2011/12", PS11/7, May

Gathergood, J. (2010), "Demand, Capacity and Need for Debt Advice in the United Kingdom", Money Advice Trust.

Gathergood, J. (2011), "Demand, Capacity and Need for Debt Advice in the UK: Update July 2011", Money Advice Trust.

Gillespie, M., Dobbie, L., Mulvey, G., Gallagher, Y. and Campbell, J. (2007) "Money Advice for vulnerable groups: final evaluation report", Scottish Executive.

Harris, J., Treanor, M. and Sharma, N. (2009) "Below the Breadline", Barnardos.

HM Treasury (2008) "Thoresen Review of generic financial advice: final report".

Illuminas (2008) "National Debtline Performance Evaluation", report for the Money Advice Trust by Illuminas Consultancy.

Knapp, M., McDaid, D. and Parsonage M. (editors) (2011), "Mental health Promotion and Prevention: The Economic Case", Department of Health, January.

Kempson, E. (2002), "Over-indebtedness in Britain", A report to the Department of Industry and Trade, Personal Finance Research Centre, September

London School of Economics (2011) "Mental Health Promotion and Prevention: The Economic Case", report to be published by the Department of Health.

May, O. and Tudela, M. (2005), "When is mortgage indebtedness a financial burden to British households? A dynamic probit approach", Bank of England Working Paper No. 277, October.

McCrone, P., Dhanasiri, S., Patel, A., Knapp, M. and Lawton-Smith, S. (2008) "Paying the Price. The Cost of Mental Health Care in England to 2026", London: Kings Fund.

Melhuish, E., Belsky, J. and Malin A. (2008), "An Investigation of the Relationship between Financial Capability and Psychological Well-being in Mothers of Young Children in Poor Areas in England", Occasional Paper Series No. 30, FSA, November.

- 
- National Audit Office (2010), "Helping over-indebted consumers", 4 February.
- Nielsen, M., Pezzini, S., Reinold, K. and Williams, R. (2010), "The financial position of British households: evidence from the 2010 NGM Consulting survey", *Bank of England Quarterly Bulletin*, 2010 Q4.
- ONS (2009), "Wealth in Great Britain Main Results from the Wealth and Assets Survey 2006/08".
- ONS (2011), "Financial Statistics Explanatory Handbook", Edition 2011
- Orton, M. (2008) "The long-term impact of debt advice on low-income households, Project Working Paper, The Year 1 Report", working paper of project funded by the Friends Provident Foundation.
- Orton, M. (2009) "The long-term impact of debt advice on low-income households, Project Working Paper, The Year 2 Report", working paper of project funded by the Friends Provident Foundation.
- Orton, M. (2010), "The Long-Term Impact of Debt Advice on Low Income Households, The Year 3 Report", Institute of Employment Research, University of Warwick.
- Oxera (2004), "Are UK households over-indebted?", Report prepared for APACS, BBA, FLA and CCA, April.
- Pleasance, P, Balmer, N. (2007) "Changing fortunes: results from a randomized trial of the offer of debt advice in England and Wales", *Journal of Empirical Legal Studies*.
- Pleasance, P. (2008), "Trials and Tribulations: Conducting Randomized Experiments in a Socio-legal Setting".
- Pleasance, P., Buck, A., Balmer, N. and Williams, K. (2007) "A helping hand: the impact of debt advice on people's lives", Legal Services Research Centre.
- Sainsbury Centre for Mental Health (2007) "Mental Health at Work: Developing the business case", Sainsbury Centre for Mental Health Policy Paper 8.
- Skapinakis, P., Welch, S., Lewis, G., Singleton, N. and Ricardo, A. (2006) "Socio-economic position and common mental disorders. Longitudinal study in the general population in the UK", *British Journal of Psychiatry* 189:109–117.
- Smith, M. and Patel, A. (2008) "Money Advice Outreach Evaluation: cost and effectiveness of the outreach pilots", Legal Services Research Centre.
- Turley, C. and White, C. (2007) "Assessing the impact of advice for people with debt problems, Legal Services Research Centre.
- Wells J., Leston J. and Gostelow, M. (2010), "The impact of independent debt advice services on the UK credit industry", Friends Provident Foundation.

## References

---

Whyley, C. (2010), "Financial Inclusion Evidence Review: the costs of financial distress and the benefits of access to debt advice", mimeo.

Williams, T (2004), "Review of Research into the Impact of Debt Advice", TPR Social Research.

Williams, K. and Sansom, A. (2007) "Twelve Months Later: Does Advice Help? The Impact of Debt Advice: Advice Agency Client Study", Ministry of Justice Research Series 6/07.

## Annex 1 Estimates of secured and unsecured lending with and without effects of securitisation and loan transfers – Bank of England data

Table 36: Secured and unsecured lending with and without effects of securitisation and loan transfers (MFIs)	
Type of lending	Amount (£million)
With effects of securitisation and loan transfers	
Secured lending	1 012 575
Unsecured lending	120 124
Without effects of securitisation and loan transfers	
Secured lending	1 012 321
Unsecured lending	119 764

Source: Bank of England Banstats Tables A4.1 and A4.3

## Annex 2 Comparison of the estimates of the demand for debt advice from the BIS/YouGov survey and the Bank of England/NMG survey

While the BIS/YouGov and the Bank of England/NMG surveys ask practically identical questions about the financial households participating in the survey, the results differ markedly. As the Bank of England/NMG survey does not ask any questions about seeking debt advice, the comparison of the survey results focuses exclusively on the households falling behind on their financial commitments or struggling constantly to meet these:

- Regarding the number of households being behind on some or many of their financial obligations, the BIS/NMG survey results show that 8.0% of participating households have such a problem while only 4.1% do in the Bank of England survey.
- Moreover, 17.1% are constantly struggling to meet their financial obligations in the BIS survey while only 9.9% do so in the bank of England.

Thus, the estimate of total demand for debt advice (as defined above) varies markedly, from 25.1% of all households in the BIS/YouGov survey to 14% in the Bank of England/NMG survey.

The marked differences between the levels of demand for debt advice implied by the two surveys cannot be explained alone by the difference in timing of the survey. Other factors, such as differences in sampling and sample size are also likely to play a role.

Because of the much larger sample size used in the BIS/YouGov survey, we propose to use the latter to derive estimates of the total demand (latent and actual). The use of this survey has the added bonus that it also provides information on the actual demand and thus provides a consistent estimate of both latent and actual demand.

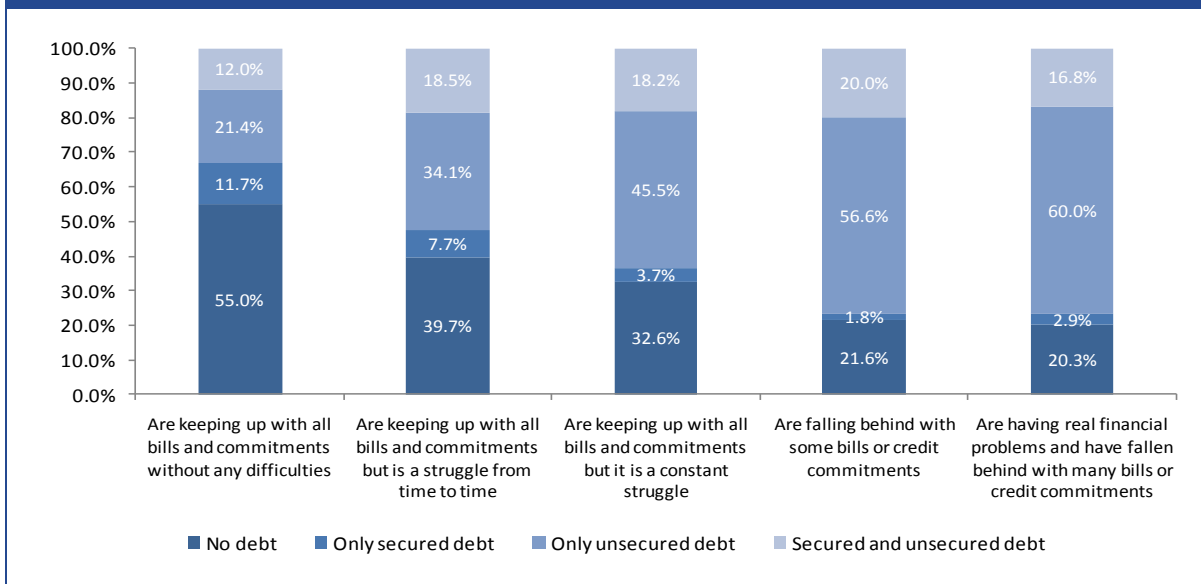
We believe that this approach is better suited to the needs of the Money Advice Service than the bottom-up approach taken by Gathergood in his 2010 study on the demand for debt advice as his bottom-up approach requires the collection, cleaning and aggregation of data from various debt advice providers.

While such an exercise is very useful for a one-off study (and we will use his results to “reality check” our own estimates of the actual demand for debt advice), an on-going reliance on such an approach would impose a significant burden on debt service providers having to provide the necessary information and on Money Advice Service in the model updating process.

For all these reasons, we strongly recommend to use the BIS survey results. In order to ensure the availability of similar information in the future, it would also be necessary to ensure the continued running of this survey in the future.

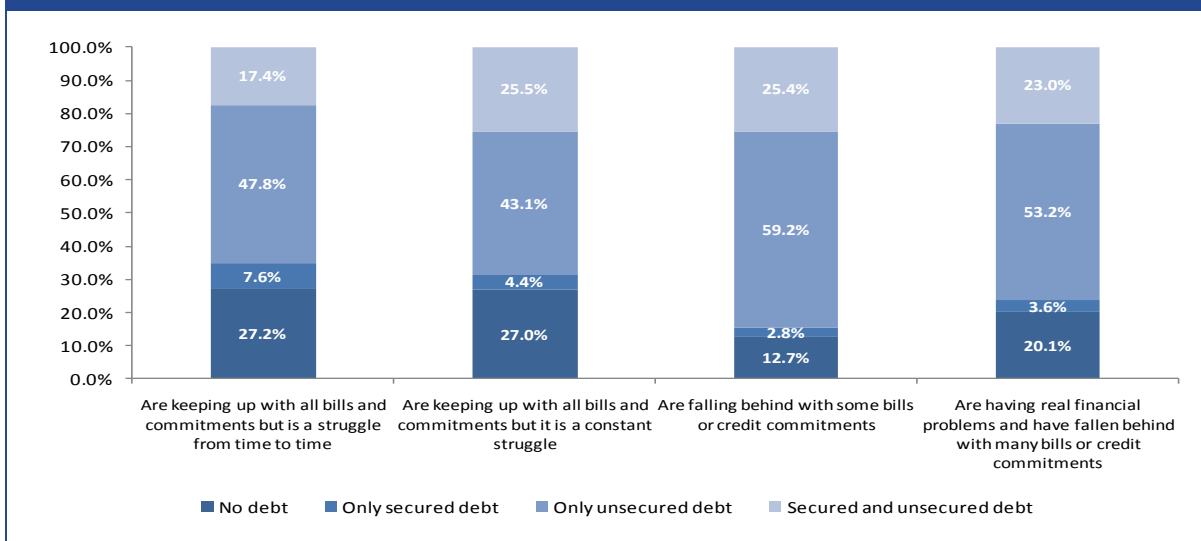
## Annex 3 Split between secured and unsecured debt by type of financial stress experienced by households

**Figure 27: Composition of household debt (secured and unsecured) by type of financial stress reported by households (all households defined as having a demand for debt advice (latent or actual))**



Source: London Economics analysis of BIS/YouGov 2009-2010 survey

**Figure 28: Composition of household debt (secured and unsecured) by type of financial stress reported by households (only households having sought debt advice)**



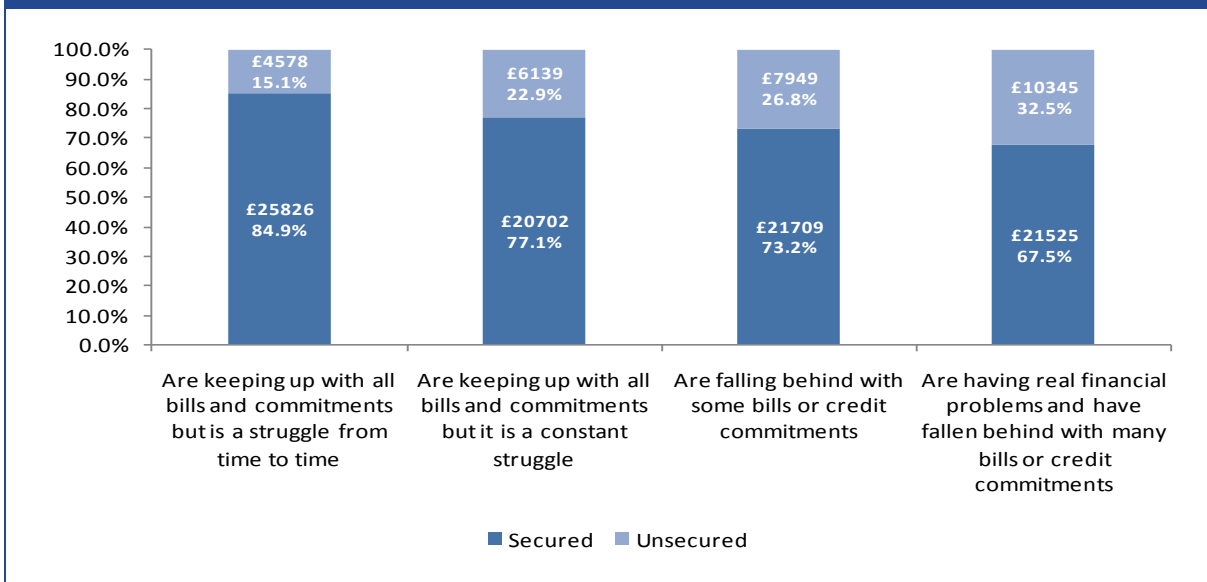
Source: London Economics analysis of BIS/YouGov 2009-2010 survey

**Table 37: Difference in household shares of type of debt (secured and unsecured) between households having sought debt advice and all households defined as having a demand for debt advice**

	No debt	Only secured debt	Only unsecured debt	Secured and unsecured debt
Are keeping up with all bills and commitments but is a struggle from time to time	-12.5	-0.1	13.7	-1.1
Are keeping up with all bills and commitments but it is a constant struggle	-5.6	0.6	-2.4	7.4
Are falling behind with some bills or credit commitments	-8.9	1.0	2.6	5.4
Are having real financial problems and have fallen behind with many bills or credit commitments	-0.1	0.7	-6.8	6.2

Source: London Economics analysis of BIS/YouGov 2009-2010 survey

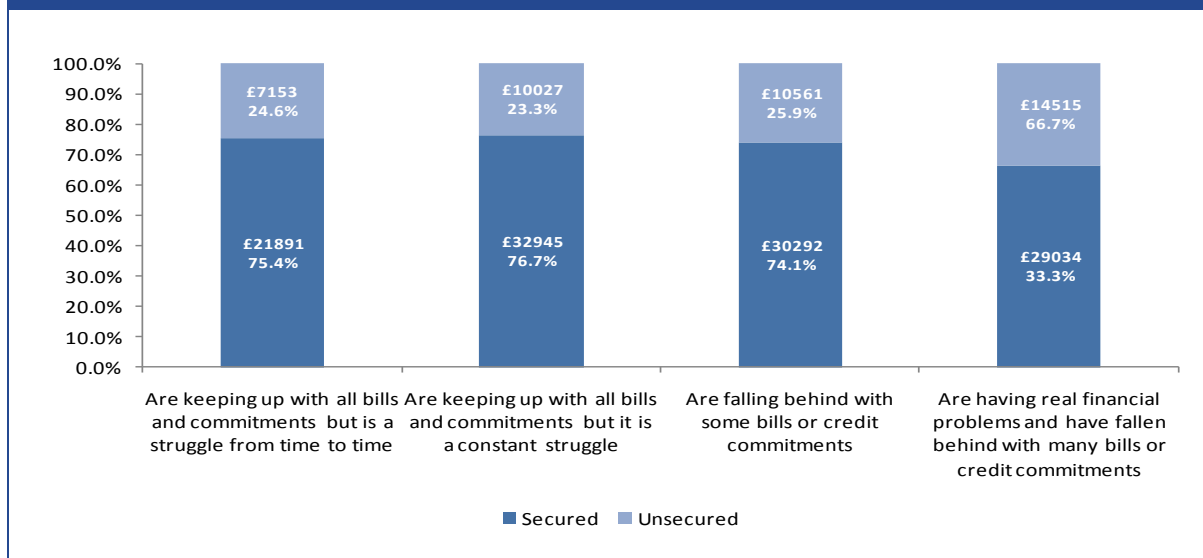
**Figure 29: Composition of household debt (secured and unsecured) by type of financial stress (and average debt level in £) reported by all households defined as having a demand for debt advice (latent or actual)**



Source: London Economics analysis of BIS/YouGov 2009-2010 survey



**Figure 30: Composition of household debt (secured and unsecured) by type of financial stress (and average debt level in £) reported by all households having sought debt advice**



Source: London Economics analysis of BIS/YouGov 2009-2010 survey

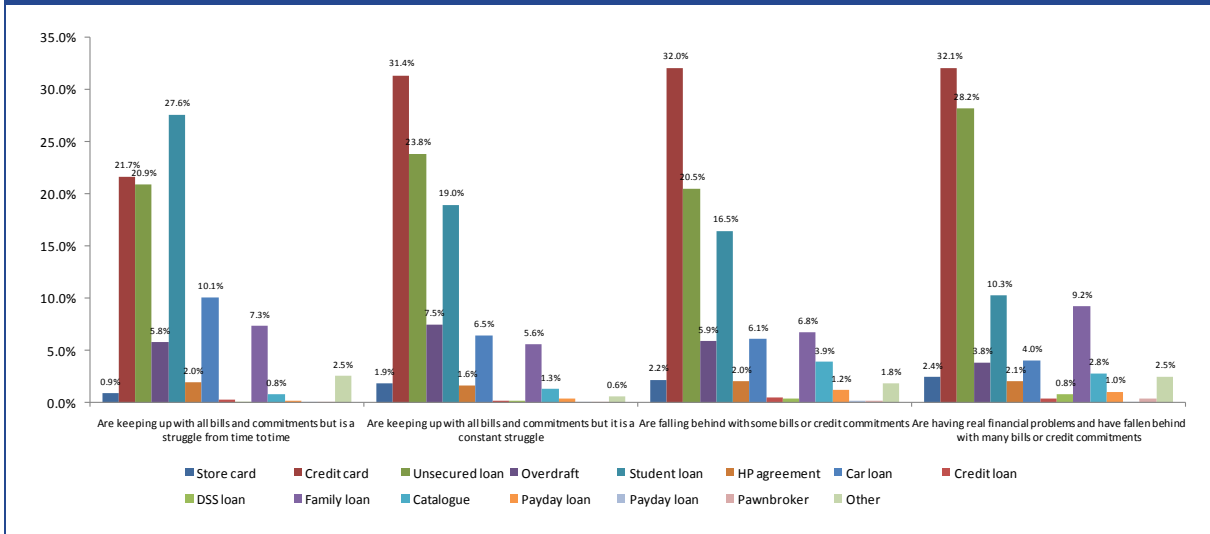
**Table 38: Percentage difference in average debt levels by debt type between households having sought debt advice and all households defined as having a demand for debt advice**

	Secured debt	Unsecured debt
Are keeping up with all bills and commitments but is a struggle from time to time	-15.2%	56.2%
Are keeping up with all bills and commitments but it is a constant struggle	59.1%	63.3%
Are falling behind with some bills or credit commitments	39.5%	32.9%
Are having real financial problems and have fallen behind with many bills or credit commitments	34.9%	40.3%

Source: London Economics analysis of BIS/YouGov 2009-2010 survey

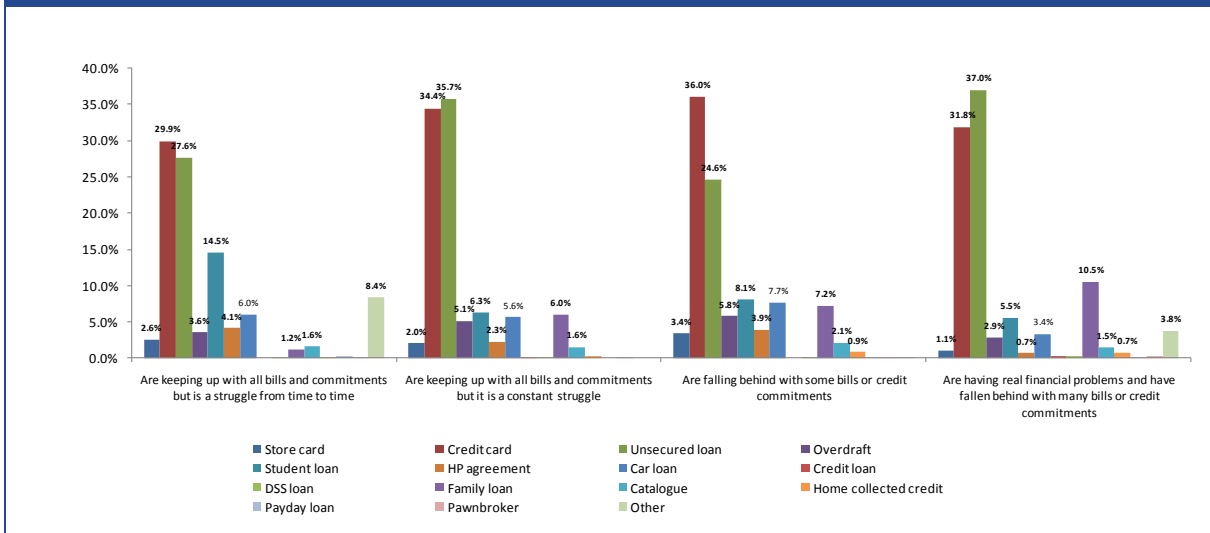
## Annex 4 Composition of unsecured debt

**Figure 31: Shares of different debt types in total unsecured debt – all households having a demand for debt advice (actual and latent)**



Source: London Economics analysis of BIS/YouGov 2009-2010 survey

**Figure 32: Shares of different debt types in total unsecured debt – households having sought debt advice**



Source: London Economics analysis of BIS/YouGov 2009-2010 survey

## Annex 5 Additional stationarity tests

**Table 39: Test statistics for KPSS tests for stationarity**

Variable	Test lag order:											
	0	1	2	3	4	5	6	7	8	9	10	11
<b>Test for level stationarity:</b> Critical value at 5%: 0.463												
Δ Total debt	0.18	0.19	0.21	0.22	0.24	0.27	0.30	0.35	0.43	0.55	0.81	1.57
Δ Secured debt	0.22	0.23	0.25	0.27	0.29	0.32	0.37	0.43	0.52	0.68	1.00	1.95
Δ Unsecured debt	0.33	0.35	0.36	0.38	0.40	0.43	0.47	0.53	0.62	0.77	1.08	1.71
Δ Employment level	0.33	0.33	0.34	0.34	0.34	0.34	0.35	0.36	0.38	0.44	0.53	0.64
Δ CPI level	0.50	0.52	0.56	0.58	0.65	0.68	0.76	0.80	0.96	0.93	1.08	0.97
Δ Inv. in dwellings	0.18	0.18	0.18	0.17	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.19
Δ Avg. earnings	0.12	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.12	0.14	0.14	0.16
Δ GDP	0.35	0.36	0.36	0.37	0.38	0.40	0.41	0.44	0.49	0.58	0.77	1.32
Δ Population	0.66	0.71	0.76	0.83	0.92	1.03	1.18	1.39	1.70	2.22	3.25	6.34
Δ T-bill 3-month yield	0.20	0.19	0.19	0.17	0.16	0.15	0.15	0.14	0.15	0.15	0.17	0.24
Δ Unemp. rate	0.59	0.63	0.65	0.68	0.71	0.75	0.80	0.87	0.98	1.20	1.61	2.39

Table 40: Results of Augmented Dickey-Fuller unit-root tests			
Variable	N	Test statistic	P-value
Total debt	72	0.952	0.994
Δ Total debt	71	-1.123	0.706
Secured debt	72	1.804	0.998
Δ Secured debt	71	-1.029	0.742
Unsecured debt	72	-2.651	0.083
Δ Unsecured debt	71	-4.041	0.001
Employment level	72	-2.230	0.195
Δ Employment level	71	-6.703	0.000
CPI	72	3.299	1.000
Δ CPI	71	-8.966	0.000
Inv. in dwelling	71	-1.636	0.464
Δ Inv. in dwelling	70	-8.441	0.000
Avg. earnings	71	-0.149	0.944
Δ Avg. earnings	70	-7.522	0.000
GDP	72	-3.184	0.021
Δ GDP	71	-3.388	0.011
Population	72	13.581	1.000
Δ Population	71	-2.215	0.201
T-bill 3-month yield	72	-0.200	0.939
Δ T-bill 3-month yield	71	-5.472	0.000
Unemp. rate	72	-2.802	0.058
Δ Unemp. rate	71	-4.791	0.000

## Annex 6 Econometric estimation of the actual demand for debt advice

### A6.1 Construction of actual demand for debt advice time-series

In this section, we describe how we developed a time-series of actual demand for debt advice that covers a longer historical time period than used in our previous analysis.

This measure covers the time period Q12005-Q12010 and was constructed by combining the data reported in Table 41 below. Information on the number of households in the UK was provided by the Office for National Statistics. We use data on actual demand for debt advice calculated in Section 5.5, as the basis of our estimate for actual demand for debt advice over recent quarters (Q32008-Q12010). And, we use data reported in Gathergood (2010) to adjust our estimate for actual demand for debt advice in Q32008 back to Q12005.

**Table 41: Data sources used for construction of demand for debt advice time-series**

Variable	Source
Number of households	ONS
Actual-to-total demand for debt advice	London Economics analysis of BIS/YouGov surveys
Individuals seeking advice from f2c sector	Gathergood (2010)

Note: Free-to-client (f2c)

Specifically, the calculations below summarise how we construct our demand for debt advice time-series.

- Demand for debt advice over Q32008-Q12010 was calculated as the product of the number of households and the percentage of survey respondents having sought debt advice.

*DEMAND FOR DEBT ADVICE<sub>t</sub> = NUMBER OF HOUSEHOLDS<sub>t</sub>\*ACTUAL-TO-TOTAL DEMAND FOR DEBT ADVICE<sub>t</sub>, for t [Q32008, Q12010]*

- Demand for debt advice for a given quarter over Q12005-Q2008 was calculated by adjusting the value for demand for debt advice in the following quarter for changes in Gathergood's estimate of individuals seeking advice from the free-to-client sector.

*DEMAND FOR DEBT ADVICE<sub>t</sub> = (NUMBER OF HOUSEHOLDS<sub>t</sub>\*ACTUAL-TO-TOTAL DEMAND FOR DEBT ADVICE<sub>t+1</sub>) / (1+CHANGE IN INDIVIDUALS SEEKING ADVICE FROM F2C SECTOR<sub>t+1</sub>), for t [Q22008, Q12010]*

## A6.2 Drivers of demand for debt advice

We follow Gathergood (2010) in considering the following set of drivers of demand for debt advice: the unemployment rate, average earnings growth, GDP, house price growth the quoted £10,000 loan rate and the quoted mortgage standard variable rate.

We expect that demand for debt advice would rise as the unemployment rate, the quoted £10,000 loan rate and the quoted mortgage rate increases; and demand for debt advice would fall as average earnings growth, GDP and house price growth increases. In addition, we consider the stock of total debt as a driver of demand for debt advice, and expect that the two would be positively related.

Table 42 provides a correlation matrix for demand for debt advice and its drivers. We observe that demand for debt advice is correlated with its drivers in the expected directions in most cases. However, demand for advice is negatively correlated with mortgage standard variable rates. This is counterintuitive because would expect higher mortgage rates to increase debt and therefore demand for debt advice.

Table 42: Correlation matrix for demand for debt advice and its drivers								
	DEMAND	TOTAL DEBT	EARNINGS GROWTH	GDP	HPI	£10K LOAN RATE	SVR	UNEMP.
DEMAND	1.0000							
TOTAL DEBT	0.6818	1.0000						
EARNINGS GROWTH	-0.9019	-0.6286	1.0000					
GDP	-0.2392	0.5152	0.4124	1.0000				
HPI	-0.4802	0.0905	0.5353	0.7358	1.0000			
£10K LOAN RATE	0.7908	0.4862	-0.1943	0.5847	0.0245	1.0000		
SVR	-0.8657	-0.3540	0.6103	-0.0509	0.4112	-0.4878	1.0000	
UNEMP.	0.9535	0.7160	-0.8130	0.0477	-0.3829	0.6017	-0.8181	1.0000

Note: Mortgage standard variable rate (SVR), House price index (HPI)

Source: London Economics et al.. (Demand); Bank of England/YouGov (Total debt); Gathergood (2010): ONS (Earnings growth and GDP), Halifax (HPI), Bank of England (£10k loan rate and SVR)

## A6.3 Econometric estimation of demand for debt advice

In this section we present the results of econometric estimations of demand for debt advice based on OLS regressions of demand for debt advice against its drivers.

$$\ln(\text{DEMAND}_t) = \ln(\text{TOTAL DEBT}_t) + \text{EARNINGS GROWTH}_t + \text{GDP}_t + \text{HPI}_t + \text{£10K LOAN RATE}_t + \text{SVR}_t + \text{UNEMP}_t$$

For each quarter, t:

- $LN(DEMAND_t)$  is the natural log of actual demand for debt advice
- $LN(TOTAL DEBT_t)$  is the natural log of the sum of total secured and unsecured debt
- $EARNINGS GROWTH_t$  is the year-on-year growth rate of wages and salaries per employee
- $GDP_t$  is an indexed measure of gross domestic product
- $HPI_t$  is the Halifax House Price Index
- $£10K LOAN RATE_t$  is the interest rate on a £10,000 personal loan of UK monetary financial institutions (excluding central banks)
- $SVR_t$  is the interest rate of UK monetary institutions (excluding central banks) standard variable rate mortgage to households
- $UNEMP_t$  is the ILO unemployment rate

Table 43 provides the estimation results based on this specification.

Table 43: Estimation results of demand for debt advice				
Dependent variable: LN (DEMAND <sub>t</sub> )	(1) <sup>a</sup>	(2) <sup>b</sup>	(3) <sup>b</sup>	(4) <sup>b</sup>
$LN(TOTAL DEBT_t)$			1.374 (.951)	1.0119*** (.1325)
$EARNINGS GROWTH_t$	.1014 (.1123)	.0645 (.1111)	.0446 (.1079)	
$GDP_t$	.0448 (.0214)	.0273 (.02118)	-.0175 (.0371)	
$HPI_t$	.0004 (.0012)	-.0001 (.0012)	.0004 (.0012)	
$£10K LOAN RATE_t$	.0169 (.0361)	.0210 (.0357)	.0051 (.0362)	
$SVR_t$	-.2150 (.0806)	-.1059 (.0798)	-.1074 (.0769)	-.1128*** (.0105)
$UNEMP_t$	.0069 (.0741)	0.1042 (.0734)	.0068 (.0977)	
Adjusted-R <sup>2</sup>	0.84	0.89	0.90	0.92
N	21	21	21	21

Note: \*\*\* Significant at >99% level, <sup>a</sup> Gathergood (2010) measure of demand for debt advice, <sup>b</sup> Demand for debt advice measure described in Section A6.1.

Models 1 and 2 in Table 43 report the estimation results of the above empirical specification based on the Gathergood (2010) measure of demand for debt advice and the measure of demand for debt advice described in Section A6.1.

Both models explain over 80% of the variation in the data. Model 1 (Table 43) has an adjusted R<sup>2</sup> of 0.84 and model 2 (Table 43) has an adjusted R<sup>2</sup> of 0.89. However, the drivers of demand for debt advice have little explanatory power, as they are not statistically significant. Further, diagnostic tests reveal that the data is non-normally distributed and that the standard errors are not stable.

Model 3 (Table 43, p. 83) adds the natural logarithm of total debt ( $LN(TOTAL\ DEBT_t)$ ) to the main empirical specification. The findings of this model are similar to models 1 and 2. That is, none of the drivers are statistically significant. However, these estimation results combined with the estimation results for models 1 and 2 suggest that total debt and the mortgage standard variable rate may be key drivers of the demand for debt advice as they are more statistically significant than the other variables.

Given these findings, model 4 (Table 43, p. 83) estimates a parsimonious model of demand for debt advice with total debt and the mortgage standard variable rate as the only drivers.

Interestingly, this reveals that both total debt and the mortgage standard variable rate are highly statistically significant. Demand for debt advice and total debt has close to a one-for-one relationship. Specifically, for a 1% increase in the stock of total debt there is a 1.02% increase in the demand for debt advice.

The demand for debt advice and the mortgage standard variable rate are negatively related to one another. That is, for a 1% increase in the mortgage rate there is a 0.11% decrease in the demand for debt advice. This finding conforms to our observation of an inverse correlation between demand for debt advice and the mortgage standard variable rate in the previous section. And, as mentioned there, this finding is counterintuitive because one might expect that an increase in the mortgage standard variable rate, associated with greater total debt, would lead to greater demand for debt advice.

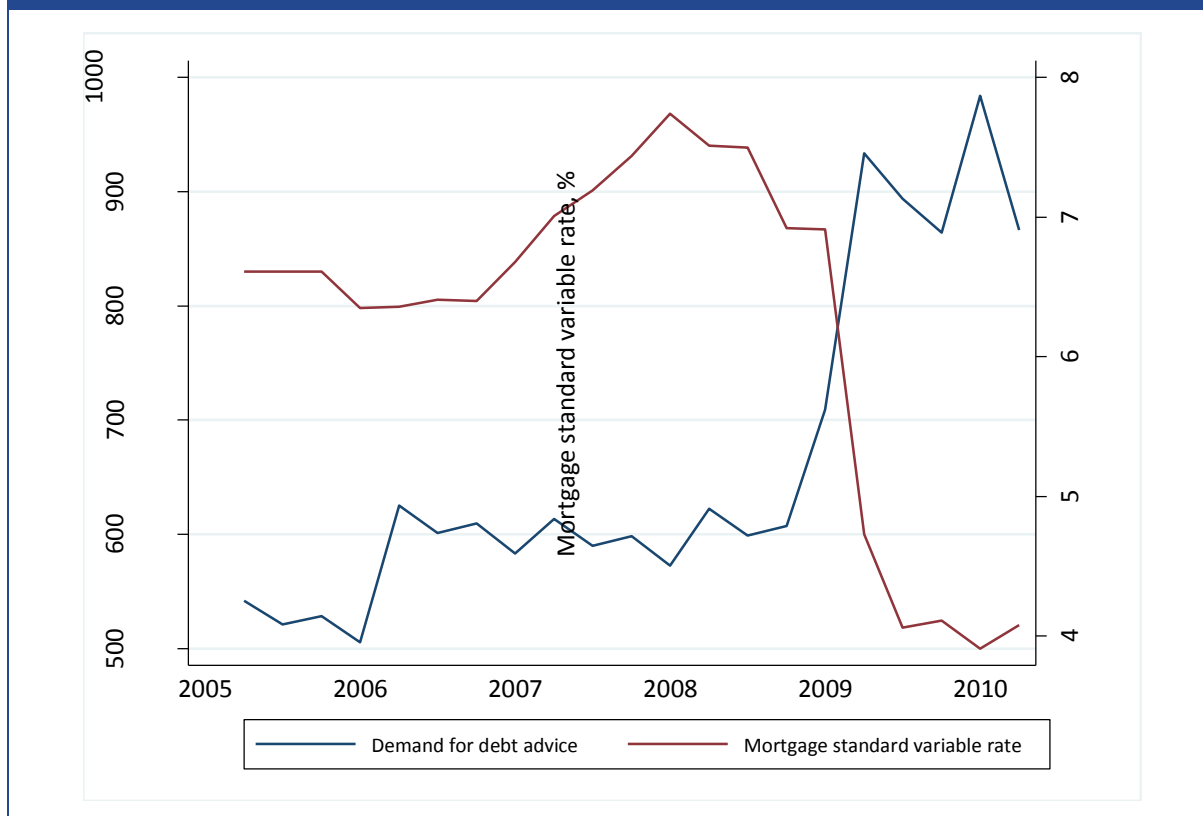
We investigate this counterintuitive finding graphically in Figure 33 below. This shows that there was a positive relationship between the demand for debt advice and the mortgage standard variable rate between Q12005 and Q42008. However, Q12009 saw demand for debt advice grow substantially (by 31% on the previous quarter) while the mortgage standard variable rate fell considerably (from 6.91% to 4.73%). Due to the coincidence in the shift in these quantities, we see a negative relationship between demand for debt advice and the mortgage standard variable rate.

Overall, while model 4 contains statistically significant coefficients, it faces similar problems to the other models when scrutinised with diagnostic tests.

Keeping these caveats in mind, the following section forecasts demand for debt advice on the basis of model 4.



Figure 33: Demand for debt advice and mortgage standard variable rate, Q12005-Q12010

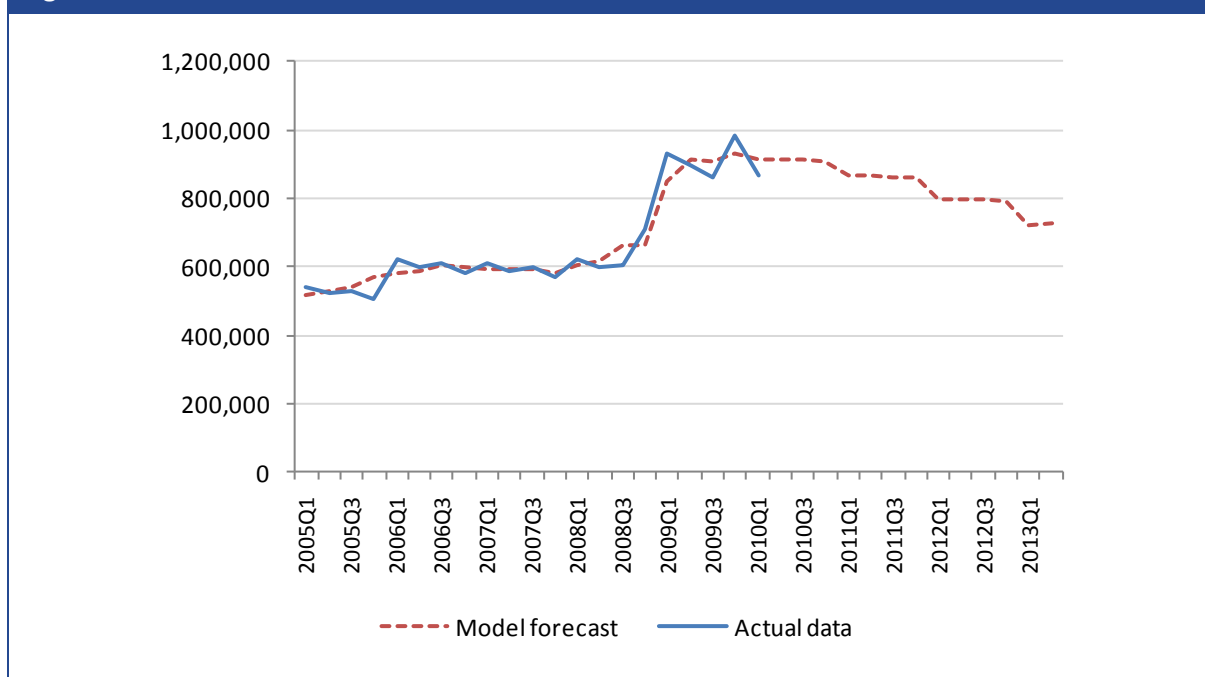


## 5.7 Forecast of demand for debt advice

In this section we forecast demand for debt advice on the following basis. We combine forecasts for total debt and the mortgage standard variable rate with the coefficient for these drivers estimated in model 4 to generate predicted values for annual demand for debt advice out to 2013.

The results of this exercise are described in Figure 34 and Table 44. We observe demand for debt advice falling over the forecast period of thirteen quarters (3 years and 1 month) by 20%. This is equivalent to 187,000 fewer households demanding debt advice.

Figure 34: Actual and forecast demand for debt advice



<b>Table 44: Actual and forecast demand for debt advice, number of households</b>	
	<b>Demand</b>
<i>Actual</i>	
Jan-Mar 2005	541,661
Apr-Jun 2005	521,043
Jul-Sep 2005	528,288
Oct-Dec 2005	505,462
Jan-Mar 2006	625,031
Apr-Jun 2006	601,239
Jul-Sep 2006	609,600
Oct-Dec 2007	583,261
Jan-Mar 2007	613,604
Apr-Jun 2007	590,247
Jul-Sep 2007	598,455
Oct-Dec 2007	572,598
Jan-Mar 2008	622,548
Apr-Jun 2008	598,851
Jul-Sep 2008	607,178
Oct-Dec 2008	709,258
Jan-Mar 2009	933,329
Apr-Jun 2009	893,860
Jul-Sep 2009	864,365
Oct-Dec 2009	984,115
Jan-Mar 2010	866,320
<i>Forecast</i>	
Apr-Jun 2010	911,831
Jul-Sep 2010	911,831
Oct-Dec 2010	908,665
Jan-Mar 2011	865,633
Apr-Jun 2011	865,029
Jul-Sep 2011	863,220
Oct-Dec 2011	859,600
Jan-Mar 2012	799,953
Apr-Jun 2012	797,698
Jul-Sep 2012	794,880
Oct-Dec 2012	793,189
Jan-Mar 2013	724,216
Apr-Jun 2013	724,731

Note: <sup>a</sup>Based on annualized OBR forecasts for the mortgage standard variable rate

T

