
Improving Credit Offers Using Affordability Predictions

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Outline

- Regulatory position
- UK debt levels
- Affordability measures: types and uses
- Debt Service to Income Ratios
- Summary

Regulatory Position

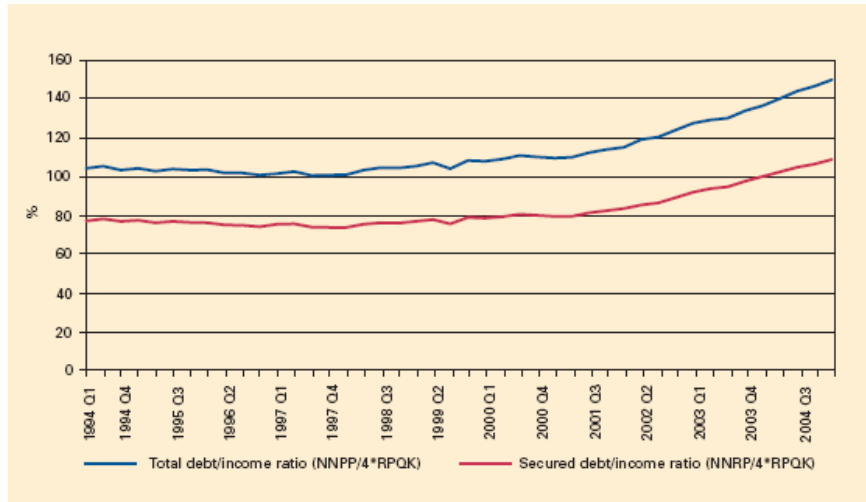
- Consumer Credit Bill
- Enterprise Act 2002
- Voluntary codes of practice e.g. Banking Code
- Added pressure of financial inclusion

Why measure affordability?

- Regulation
- Reputation
- Risk
- Stress testing

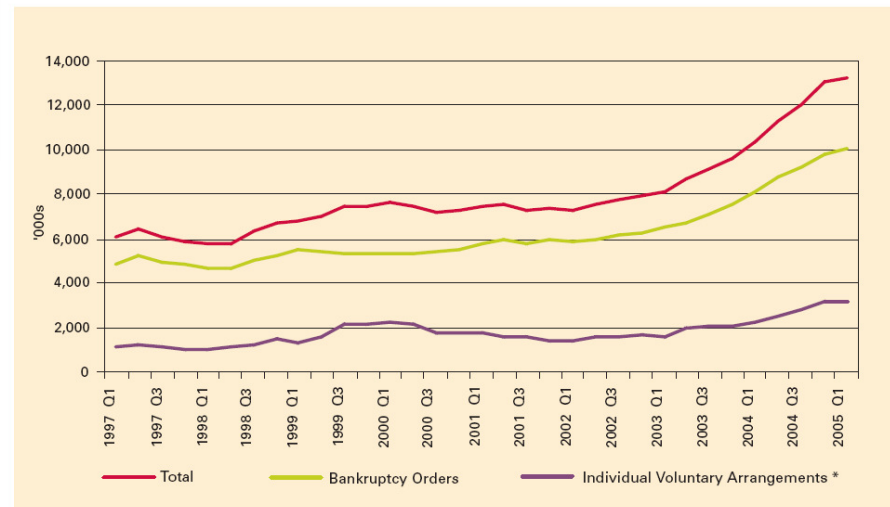
U.K Debt Levels

Figure 1: Total Household Sector Debt/Incomes Ratios



Source: ONS

Figure 3: Individual Insolvencies in England and Wales ('000s)



Source: Insolvency Service, DTI

Affordability Measures

- Risk models using affordability and other factors
 - Typically used to ‘top and tail’ applicants for separate treatment or as a risk scorecard / policy rule criterion
- Individual criteria: utilisation, overlimit indicators
 - Risk scorecard / policy rule criteria
- Debt service to income ratios
 - Applicant’s ‘headroom’: used in conjunction with risk scorecard to accept / reject and determine credit offer

What are we measuring? Ability vs Propensity

“We fully accept that credit scoring systems can provide a good guide to a customer’s **propensity** to repay a loan, but **propensity** to repay is not necessarily the same as **ability** to repay”

John Tiner, Chief Executive of the FSA

Affordability Measures

- Risk model using affordability and other factors
- Individual criteria: utilisation, overlimit indicators
- Debt service to income ratio

Debt Service to Income Ratio: Key Components

Key components:

- CRA monthly credit commitments
- Mortgage / rental payment estimates
- Non-CRA regular expenditure modelled on public data

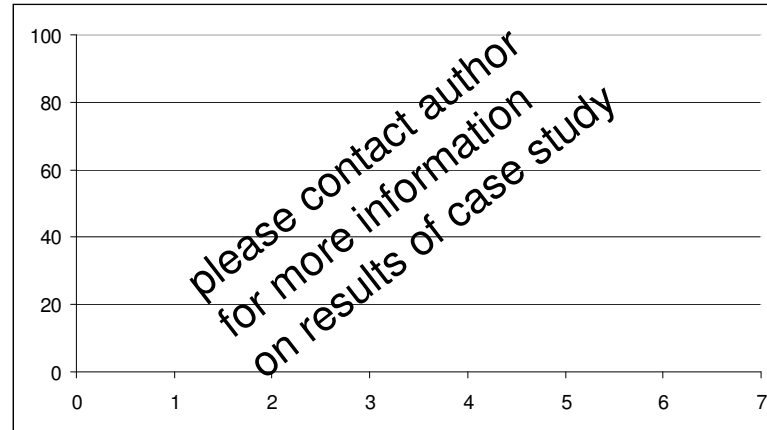
Debt Service to Income Ratio: Bespoke development

- Derivation of monthly payment amounts
- Lifestyle & other key expenditure
- Mortgage / rental estimates
- Consolidation based on probability of debt reduction
- Stress testing for economic scenarios

Debt Service to Income Ratio: Case study

- Base (generic) model constructed and distributions derived
- Bespoke calibration to lender's portfolio
- Consolidation prediction and DSIR adjustment
- Economic scenarios: revised distributions

Debt Service to Income Ratio: Distributions on generic model

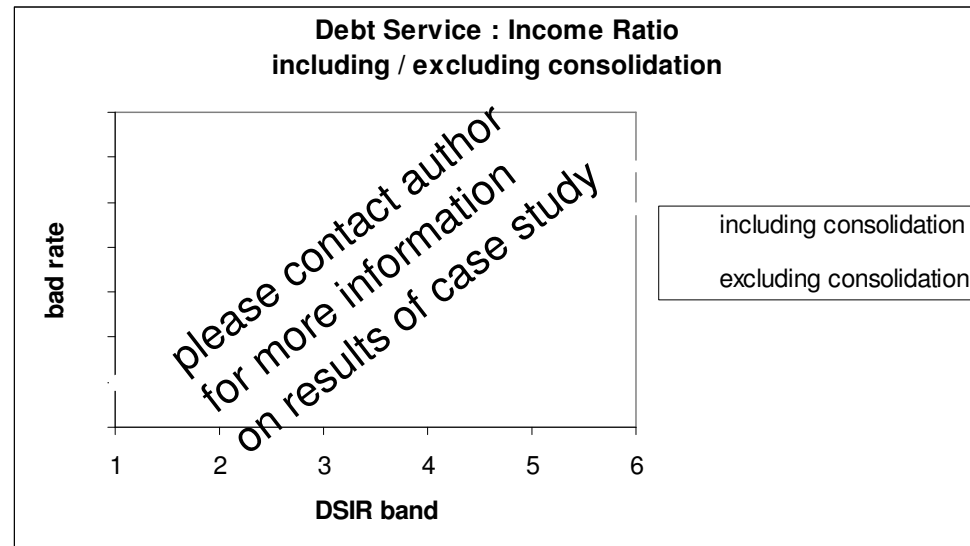


- Large volume of applicants scoring over 100
- Modifications:
 - Credit payment assumptions
 - Mortgage / rental estimates
 - Lifestyle / key expenditure estimates
 - Consolidation

Debt Service to Income Ratio: Modifying components

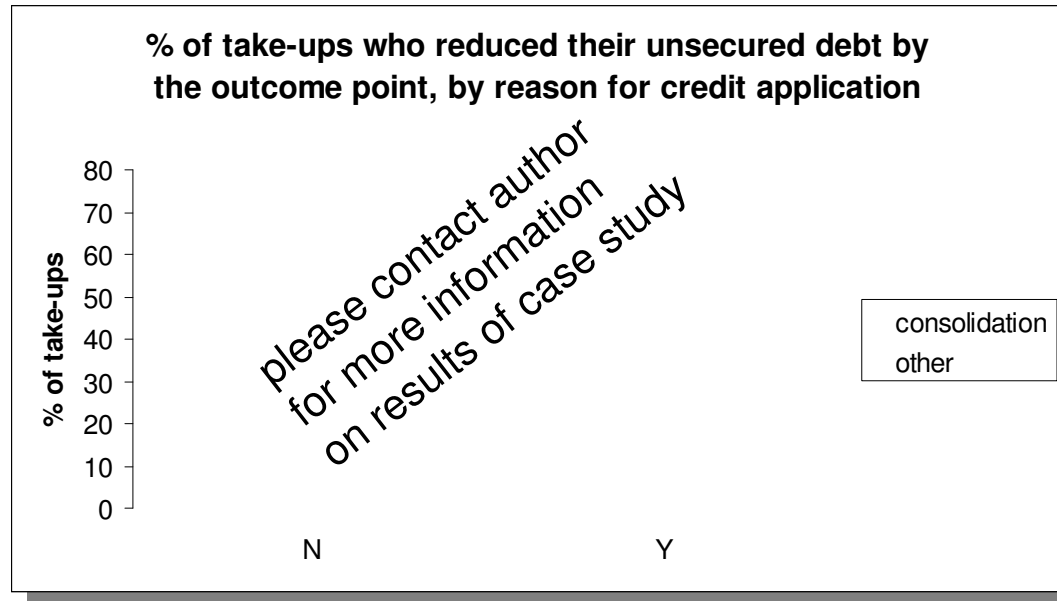
- Derivation of monthly payment amounts
 - Revolvers / non-revolvers
- Lifestyle & other key expenditure
 - Using application criteria to drive estimates
- Mortgage / rental estimates
 - Calibration based on known values

Consolidation



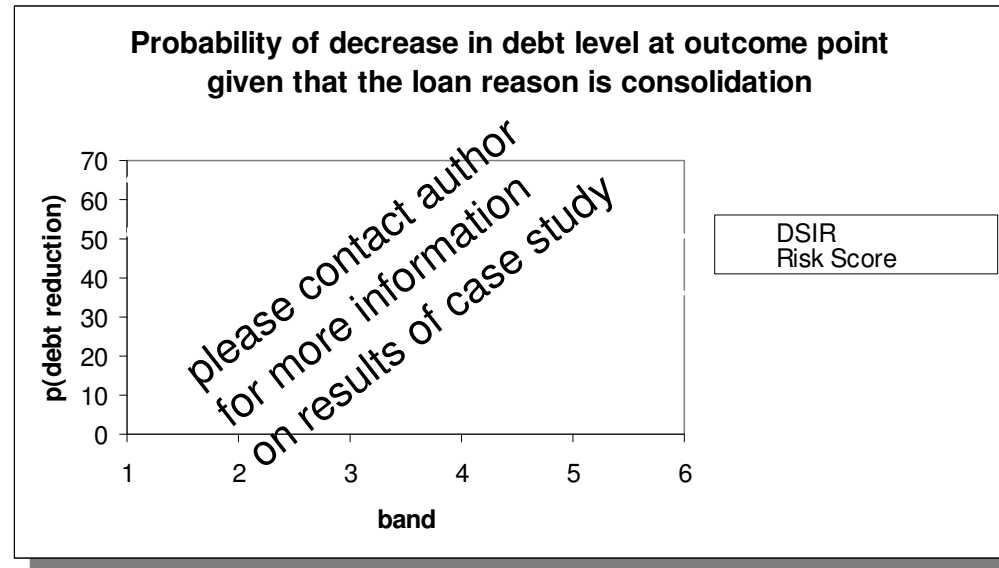
- Inclusion of consolidation amount as deduction from monthly unsecured payment gives true picture of affordability
- Significant increase in strength of DSIR on consolidators when consolidation amount taken into account

Consolidation



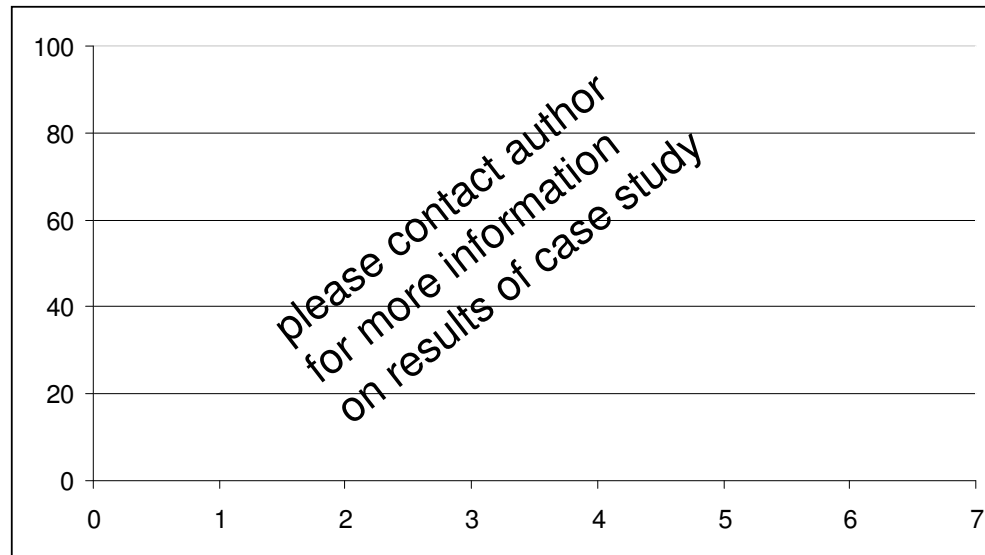
- Only 42% of ‘consolidators’ reduce their unsecured debt

Consolidation



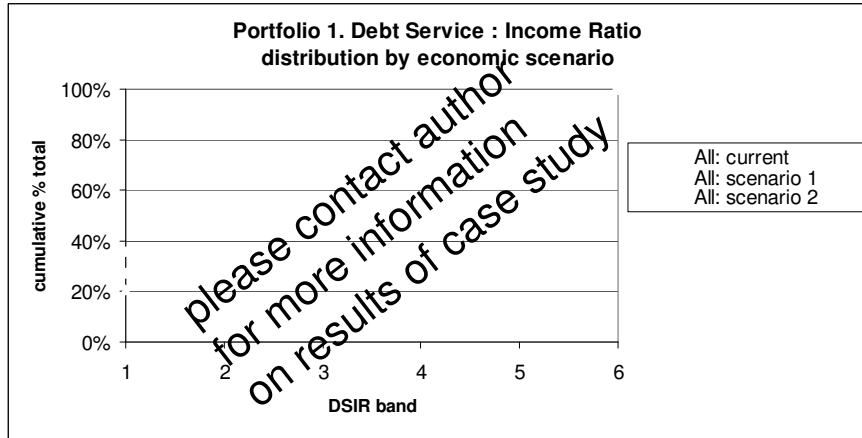
- Risk score does not predict consolidation
- Other application and bureau criteria not individually predictive
- Debt Service : Income Ratio gives strongest prediction

Debt Service to Income Ratio: Distributions on bespoke model



- Calibration to lender's portfolio results in more accurate estimate of DSIR

Stress Testing



% Increase: DSIR exclusions

Scenario 1: %

Scenario 2: %

% Increase: Population Bad Rate

Scenario 1: %

Scenario 2: %

% Increase: DSIR exclusions

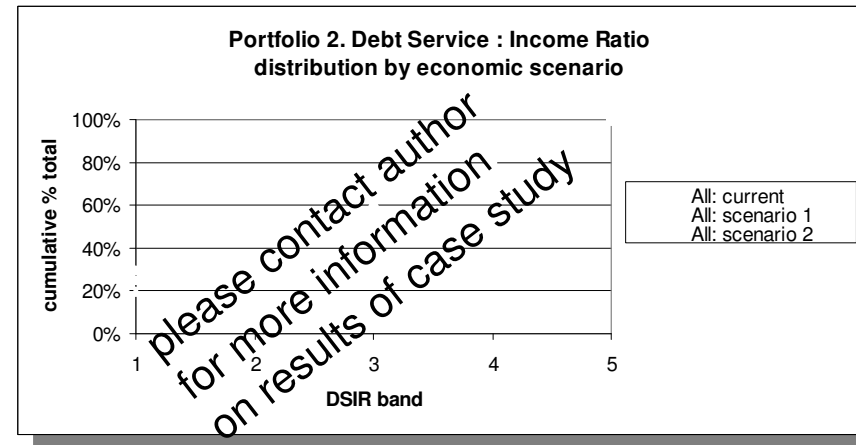
Scenario 1: %

Scenario 2: %

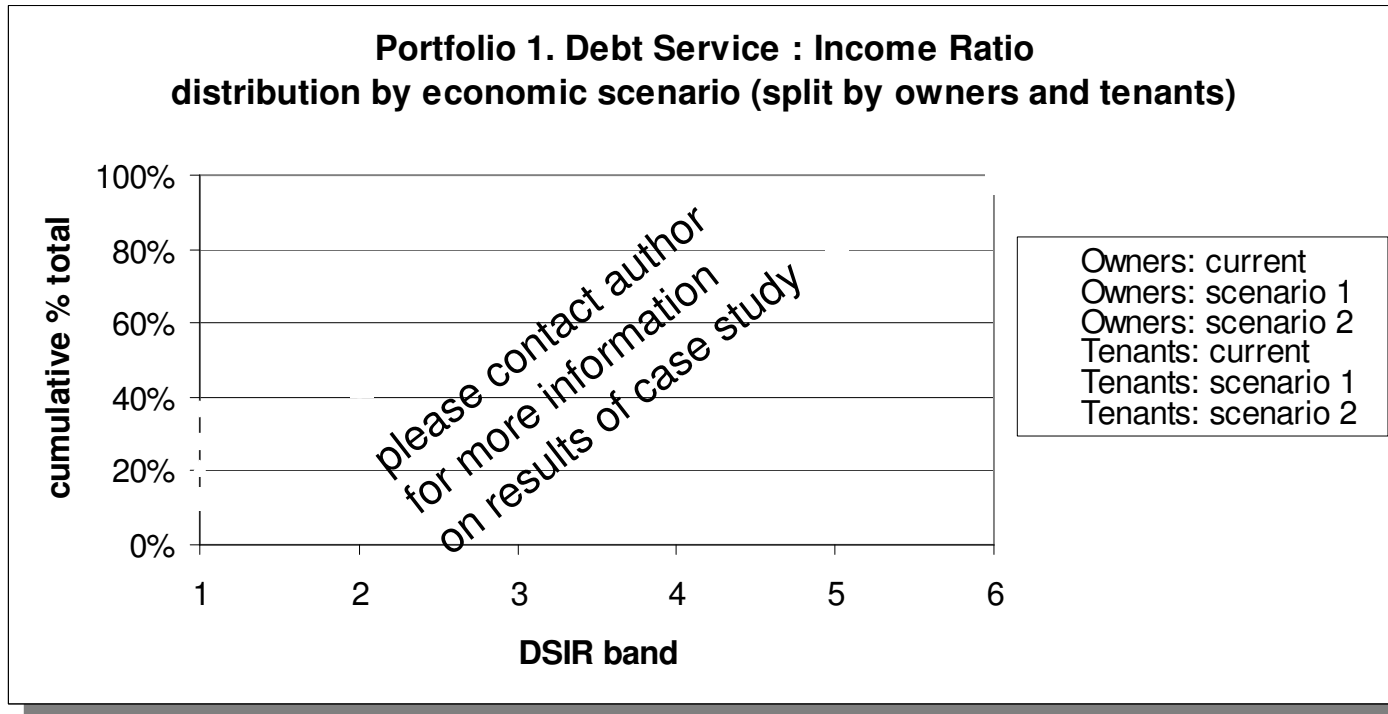
% Increase: Population Bad Rate

Scenario 1: %

Scenario 2: %



Stress Testing



- Change in acceptance strategy and credit offer based on economic forecasts

Summary

- Various tools available for predicting affordability, but differ in composition and application
- Debt service to income ratio has multiple uses
- Recalibration based on expenditure assumptions and consolidation activity results in more accurate distribution
- Incorporation of stress test factors allows lender to align acquisition strategy with internal forecasts