

Interest Rate Clustering in UK Financial Services Markets

BACKGROUND

- A substantial proportion of UK consumers make poor financial decisions – this is an area of significant public policy concern. Academic reports, government initiatives and charities have all acknowledged the need for consumers to be better informed about financial matters. This study considers this problem from a distinct perspective: how do firms use their understanding of how customers make decisions, and specifically process number and price information, to maximise their profits?
- In contrast to most other academic contributions, this study views the underlying rationale for prices or interest rates to cluster at certain digits disproportionately, as a function of profit maximisation. It is proposed that banks wishing to maximise returns from customers who employ cognitive estimation tools to recall number and price information set prices or interest rates in a clustered manner. A formal model is provided to identify the key digits with which firms may maximise profits from customers who round and truncate numbers. This model is extended to incorporate the case where prices act as a cost, such as with mortgages, where prices act as a benefit, as in the case of deposits, and for truncation and rounding of number information, both separately and in combination.
- Key predictions from the model, assuming truncation and rounding to integer points, include the propensity for banks maximising returns from:
 - investors who round numbers leads to a high proportion of ‘half’ point observations
 - investors who truncate numbers leads to a high proportion of integer observations
 - investors who both truncate and round numbers leads to a high proportion of integer and ‘half’ point observations
 - borrowers who truncate numbers leads to a high proportion of observations just below integers
 - borrowers who round numbers leads to a high proportion of observations just below half points.
 - borrowers who both round and truncate numbers leads to a high proportion of observations just below integers and half points.

METHODOLOGY

- Each of the predictions of the formal model has then been tested using substantial data sets. The comprehensive data set was obtained from Moneyfacts PLC, for deposit and mortgages, on a monthly basis for a period of 12 years (1993-2004). For deposits, 1294 products were included covering 186 firms and 9 deposit values from £1 to £100,000. For mortgages, the institution reference interest rate from which interest charged on different mortgage contracts is assessed was used. This provided information from 181 firms.

KEY FINDINGS

- The degree of interest rate clustering is substantial and has a statistically significant non-random distribution.
- The distribution of interest rate clustering differs substantially between deposit and mortgage interest rates and they both indicate that the degree of clustering is

substantial. The clustering of interest rates in these markets is consistent with the predictions of the model.

- Overall analysis of the data of the mortgage and deposit interest rates provides very strong evidence that rates cluster in ways which conforms to firms seeking to maximise profits, given the existence of “naïve” consumers. Only 5% of firms choose not to do this. This is viewed to be strong evidence that the model predictions actually provide an explanation of the form of interest rate setting observed.
- The degree of interest rate clustering varies with the amount of money invested and evidence shows that this impacts most significantly to the detriment of small investors.
- External or environmental influences on interest rate clustering are viewed to have only very limited influence on the degree of interest clustering observed. The amount of clustering is positively associated with the level of market interest rates.

POLICY CONCLUSIONS

- The evidence presented in the study indicates that banks and other financial services providers use their understanding of individuals’ methods of recalling and processing number information to maximise their profits. This effect is exaggerated for investors of smaller monetary quantities. This is potentially an area of future interest for OFT and FSA.
- There may be a clear public welfare case to administer more closely those firms which set prices in a clustered manner to maximise returns from consumers who do not fully recall number information.

THE CCP

The ESRC Centre for Competition Policy (CCP), at the University of East Anglia, undertakes competition policy research, incorporating economic, legal, management and political science perspectives, that has real-world policy relevance without compromising academic rigour.

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The full working paper (CCP Working Paper 06-14) and more information about CCP and its research is available from our website: www.ccp.uea.ac.uk

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