Leveraging Financial Transactions and Collections Data: How Big Data Enhances Affordability in the UK Banking Industry

Abstract

In the UK, only the largest banks have access to extensive internal financial transaction data, inclusive of both debits and credits. This data forms a comprehensive dataset with billions of observations, where each row represents an individual transaction for each of the millions of customers within the bank.

This data provides valuable insights into spending habits and cash flow of the UK population, which are not typically available through UK bureaux. Key challenges of working with this transactional data include archaic banking data infrastructure and storage as well as developing a robust categorisation system for transactions.

The UK's financial regulator outlines expectations for essential expenditure. It is industry standard to use data from the Office of National Statistics (ONS) to model essential living costs. This data is normally lagged by 2 to 3 years and requires inflation adjustments to update costs to present day. In April 2025, energy, water, and council tax caps were increased leading to increased costs for customers. Whilst an inflation adjustment can estimate costs beyond these cap changes, it does not consider consumers changing their habits in line with increasing prices, i.e., a customer may choose to reduce their energy usage to keep their energy costs down. Utilising transactional data allows a bank to see real time actual cost impacts of said changes.

Within a banks collections department, customers undertake an income & expenditure (I&E) assessment, the results of this assessment give detailed data into the actual essential expenditure of customers. This I&E data is under-utilised within the industry, but combined with transactional data, and ONS data allows for a more accurate and robust triangulated approach to cost-of-living modelling.

Our paper benchmarks conclusions from the organisation's I&E and transactional data against publicly available ONS data, highlighting the benefits of this methodology over standard ONS practices prevalent in the UK banking industry. Key benefits include:

• Greater control over sample selection, allowing for a customer centric solution tailored to varying demographics across the full lending spectrum rather than a one-size-fits-all national average approach.

• Access to timelier data, not having to rely on inflationary uplift factors, and identifying shifts in spending habits in real time.

• Growth in lending volumes whilst reducing risk exposure.

• Increased model statistical significance by leveraging big data over a limited volume averaged sample.

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