Measuring Consumer Credit Risk for Large UK Retail Bank

Overview
The current unprecedented level of unsecured consumer borrowing has created concern amongst lending institutions that a sudden and severe economic shock, such as an interest rate rise, and its concomitant impact on GDP and unemployment, could result in a significant increase in defaults on unsecured borrowing of a magnitude last seen during the UK recession of the early 1990s. To understand the relationship between the performance of the UK economy and credit card defaults, NERA undertook a study to investigate the relationship between macroeconomic variables and charge-offs on a credit card portfolio held by a large UK retail bank.

NERA is well positioned to undertake this analysis. Our financial risk and regulation team specialises in measuring and analysing credit risk on portfolios of exposures held by utilities, banks and other institutions. Our analyses provide our clients with a deeper understanding of the riskiness of their portfolio of exposures under different scenarios of the market conditions they face and the economic and regulatory environment in which they operate. Our analyses have been used to underpin active portfolio management and risk transfer arrangements aimed at improving the efficiency of allocating economic capital.

Project Background
NERA was engaged by one of the largest UK retail banks to estimate charge-offs on their credit card portfolio under different scenarios for the UK economy. The bank sought to reinsure tranches of its credit card portfolio and wanted an independent assessment of the riskiness, and hence, benchmark price, of a reinsurance transaction. We developed a time-series econometric model to explain the main macroeconomic determinants of an increase in charge-off rates on the credit card portfolio. The model examined the relationship between charge-off rates and a range of macroeconomic variables and aggregate household characteristics. Our analysis was used to inform a transaction to reinsure tranches of the credit card portfolio.

The Result
NERA’s analysis provided an independent assessment of the riskiness of the credit card book and hence provided analysis to support a transaction to reinsure tranches of the portfolio. Our analysis found increased competition amongst credit card providers to be significantly correlated with the charge-off rate. The debt/equity position of households and the lagged unemployment rate were also found to be significant, though to a lesser extent. Our analysis was used to estimate the probability distribution of expected (mean) charge-offs on the portfolio using different forecasts of unemployment, household debt/equity and interest rates.
Our findings revealed the significance of market characteristics, in particular competition amongst credit card providers, in explaining charge-off rates. Our analysis also examined the similarities and differences between the conditions which prevailed during the last UK recession and the current economic environment. We found significant differences which make the current situation materially different than the economic environment that led up to the UK recession of the early 1990s. We used this analysis to model changes in the credit quality of the client’s credit card portfolio. This helped identify a transfer price for different tranches of lending, based on changes in credit quality under different economic scenarios.

Benefits of NERA’s Analysis

Our analysis provided an independent quantification and analysis of the credit risk that the client was aiming to reinsure. It thus underpinned the proposed transaction through:

- Providing the client with an independent measure of the riskiness of its credit card portfolio

- Providing the client with an assessment of credit quality under different scenarios for the UK credit card market and UK economy.

- Providing reinsurers with independent analysis of the value of the credit card portfolio and, hence, the value of the proposed transaction.

About NERA

NERA Economic Consulting (www.nera.com) is a global firm of experts dedicated to applying economic, finance, and quantitative principles to complex business and legal challenges. For over half a century, NERA’s economists have been creating strategies, studies, reports, expert testimony, and policy recommendations for government authorities and the world’s leading law firms and corporations. We bring academic rigor, objectivity, and real world industry experience to bear on issues arising from competition, regulation, public policy, strategy, finance, and litigation.

NERA’s clients value our ability to apply and communicate state-of-the-art approaches clearly and convincingly, our commitment to deliver unbiased findings, and our reputation for quality and independence. Our clients rely on the integrity and skills of our unparalleled team of economists and other experts backed by the resources and reliability of one of the world’s largest economic consultancies. With its main office in New York City, NERA serves clients from more than 20 offices across North America, Europe, and Asia Pacific.

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