Abstract

Attaining sharper Pricing-for-Risk in the UK Sub-Prime Mortgage Market

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Credit risk analytics facilitates maximal usage of internal and external data measures (including third-party suppliers of predicted U.K. house prices available at a post-code level). Using Basel II Credit Risk principles for measurement of expected loss (PD, LGD, EAD), we demonstrate how mortgage pricing can be decomposed into its key elements including its embedded options (the credit default and prepayment options) plus all remaining mortgage administration costs. PDs can be estimated using distinct models based on each of the traditional three 'C's of credit underwriting. These are: Character ('willingness to repay') as measured via traditional modelling such as Application Scoring and/or Bureau Behavioural Scoring and Fraud Models; Capacity (the 'ability to repay') as measured by Affordability models and/or Bureau derived Over-Indebtedness Indices; and Collateral: measuring future Loan-to-Value (LTV) via the Black-Cox extension of the Merton structural credit risk model. Sub-prime mortgage LGD is largely dependent upon forecast LTV measures for localised property distributions. The pricing-for-risk outcomes can also form part of any Risk Adjusted Performance Measurement (RAPM) framework - given required market and operational risk estimates. Effective use of pricing for credit risk should also assist lenders to abide by the spirit of FSA directives for treating all customers fairly (TCF). Link to Presentation paper