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STRUCTURAL MODEL OF CONSUMER CREDIT RISK

Abstract

Basel II requires Banks to estimate PD, LGD and EAD for their retail lending and mortgages. These measures are taken directly from corporate models of credit risk, which can not be directly transformed into retail lending due to the differences in loan repayment behaviour of individuals and corporations. Personal shocks (e.g. loss of income or marriage distress) are far more important for the individuals than the continuous process of revaluation of their liabilities and assets. It also appears that conventional credit scores can not be directly translated into the Basel II framework.

This paper proposes a framework for developing a model of consumer credit risk that is closely linked with analogous option-pricing based corporate credit risk models, and is capable of estimating risk measures required by the regulator. In order to develop a structural model of consumer default I analyse the volatility of consumer's disposable income and two stochastic variables that can be affected by idiosyncratic shocks: amount of money available to the consumer for repaying the debt (subject to consumer's willingness to pay), and the structure and level of consumer liabilities.