Managing Credit Risk with Credit Derivatives

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Abstract Credit risk is one of the most important forms of risk faced by national and international banks as financial intermediaries. Managing this kind of risk through selecting and monitoring corporate and sovereign borrowers and through creating a diversified loan portfolio has always been one of the predominant challenges in bank management. The aim of our study is to examine how a risky loan portfolio affects optimal bank behavior in the loan and deposit markets, when derivatives to hedge credit risk are available. In a stochastic continuous-time framework a hedging model is developed where the bank management can use derivatives to hedge credit risk. Optimal loan, deposit and hedging strategies are then studied. It is shown that the magnitude and the direction of hedging are determined by the bank manager' s preferences, the corresponding risk premium and the variance of the loan rate and its hedging instrument respectively.

Keywords: banking firm, credit risk, credit derivatives, hedging.

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