



Risk Modeling Bulletin Issue 18

Credit Risk

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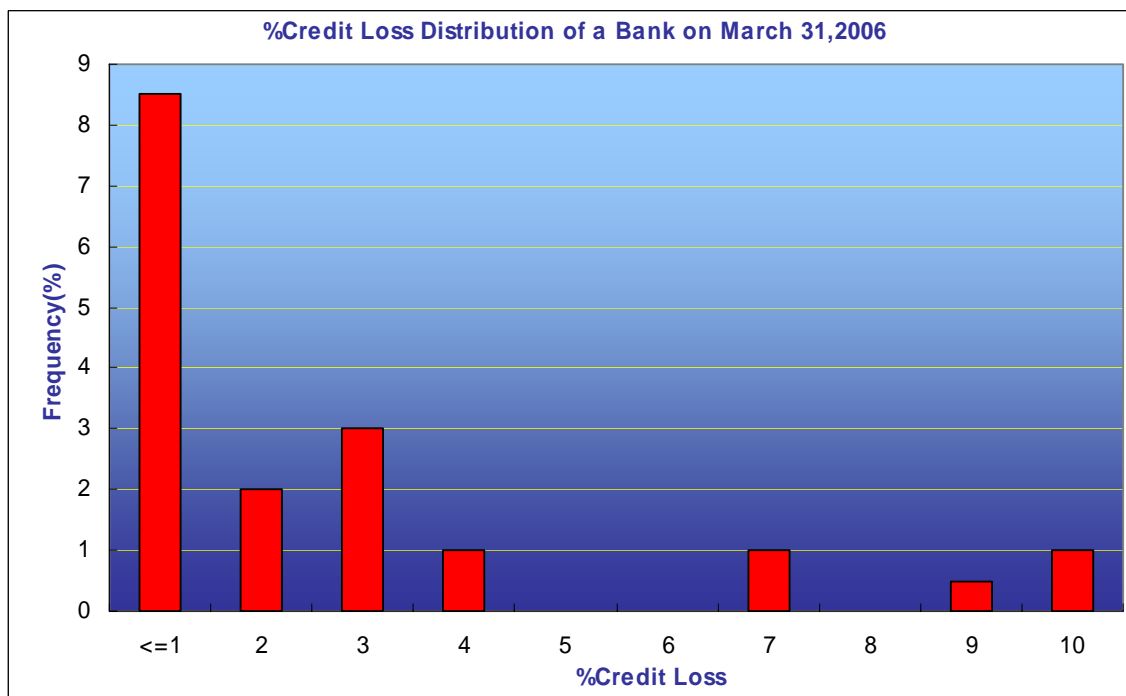
This issue focuses on credit risk of bonds. The Feature Article describes the prospective analysis for credit risk in THC Decisions; the Market Perspective presents the credit spread of FRM.

Feature Article: Prospective Analysis – Credit Risk

Credit risk results from uncertainty in an obligor's ability to meet its obligations. A bank's prospective analysis should assess this risk exposure. THC uses IRB (Internal Rating-Based) approach, introduced in issue #16 to assess the credit risk of a bank's assets over the balance sheet.

Figure 1 depicts the distribution of the credit loss as a percentage of the bank's net portfolio value on March 31, 2006. The analysis shows that the bank may suffer a credit loss exceeding 8% of the net portfolio value at a 1.5% probability level. The results are generated by the Gaussian copula model.

FIGURE 1



Market Perspective: Credit Spread of the Fixed-Rate Mortgage

Banks price mortgages at a spread over the Treasury yield curve. What determines the spread? How can we estimate it?

Default risk is a factor affecting credit spread. When mortgagors default on their debt, banks will suffer a loss, receiving only a portion of the remaining balance of the mortgage. The proportion of the amount received to the promised amount is called the recovery ratio. Illiquidity of the mortgage market is another factor that affects the spread.

THC uses the FICO credit score as one of the measures of the credit quality of the mortgagor. The mortgage's option adjusted spread (OAS) is then related to the FICO credit scores as depicted Figure 2. The OAS is simulated with the THC prepayment-default model for a given price as the FICO changes. Characteristics of the mortgage are described in Table 1 below. The result shows that the fall in credit from 750 to 550 may lead to a change of 50 basis points to compensate for the credit risks.

FIGURE 2

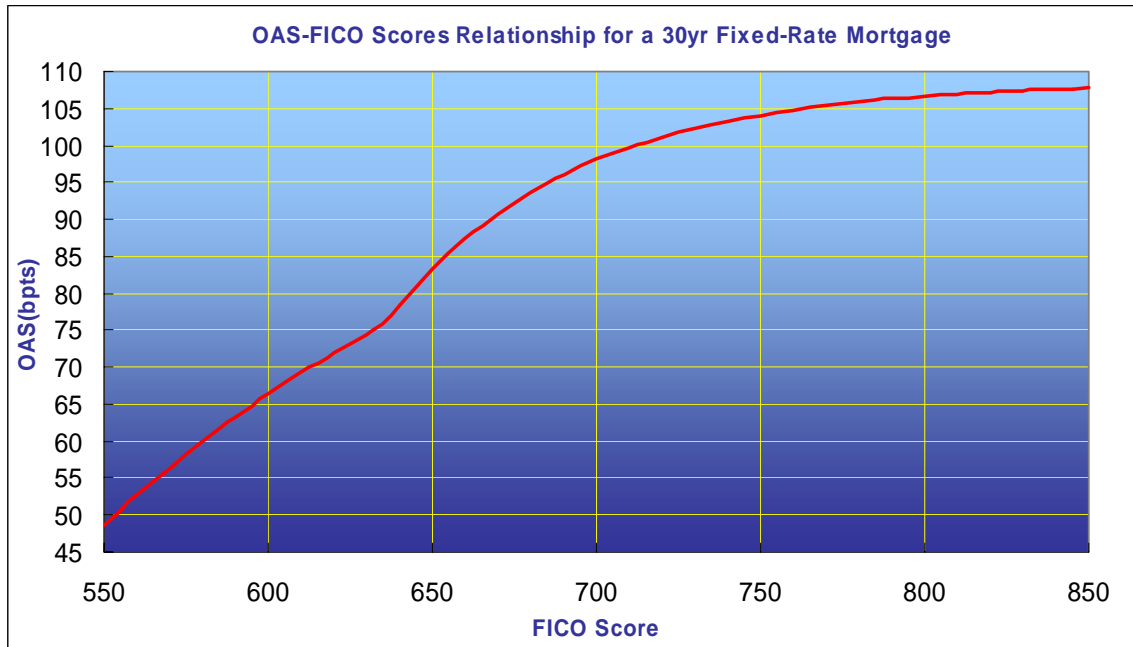


Table 1: Characteristics of the Fixed-Rate Mortgage Loan

Start Date	Maturity	Servicing Fee(%)	Coupon(%)	LTV(%)	Recovery Ratio(%)
2006-6-1	2036-6-1	0.25	6.875	74	90

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