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An Analysis of the Consistency of Banks' Internal Ratings

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#### ACCEPTED MANUSCRIPT

## An Analysis of the Consistency of Banks' Internal Ratings

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#### Abstract

Internal ratings-based models are used for a variety of important bank and regulatory decisions. Thus, model risk – the potential for different models to provide different probability-of-default (PD) estimates – is of crucial importance. Using a comprehensive dataset from 40 banks and 17,000 corporate borrowers from 2008-2012, we assess the consistency of internal PD estimates across banks. We find three main results. First, the variability of PD estimates for the same borrower across banks is large. Second, bank fixed effects explain 5% of the variation in PD estimates across banks, while 95% of the variation is idiosyncratic. For the 10 largest banks in our sample, reported regulatory capital ratios would change by a maximum of  $\pm 10\%$ , equivalent to approximately 1 percentage point, when using average risk weights from all banks instead of risk weights based on banks' individual PD estimates. Third, we explore various bank characteristics that explain the size of bank fixed effects.

**Keywords:** internal ratings, Basel minimum capital requirements, IRB approach, bank incentives, bank regulation

**JEL-Classification:** G21, G28

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