

Accepted Manuscript

Reading between the Ratings: Modeling Residual Credit Risk and Yield Overlap

Charles Chang , Cheng-Der Fuh , Chu-Lan Michael Kao

PII: S0378-4266(17)30098-5
DOI: [10.1016/j.jbankfin.2017.04.011](https://doi.org/10.1016/j.jbankfin.2017.04.011)
Reference: JBF 5135



To appear in: *Journal of Banking and Finance*

Received date: 29 August 2015
Revised date: 22 March 2017
Accepted date: 18 April 2017

Please cite this article as: Charles Chang , Cheng-Der Fuh , Chu-Lan Michael Kao , Reading between the Ratings: Modeling Residual Credit Risk and Yield Overlap, *Journal of Banking and Finance* (2017), doi: [10.1016/j.jbankfin.2017.04.011](https://doi.org/10.1016/j.jbankfin.2017.04.011)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Reading between the Ratings: Modeling Residual Credit Risk and Yield Overlap

Charles Chang^{a,1}, Cheng-Der Fuh^b and Chu-Lan Michael Kao^c

^a Shanghai Advanced Institute of Finance, Shanghai Jiao Tong University
and the Chinese University of Hong Kong.

^b National Central University

^c National Chiao-Tung University

Abstract

Credit ratings group firms by risk, yet yields are shown to overlap between firms of adjacent ratings. We model this by considering the residual risk arising from differences in the parameters of each firm's value process for firms with the same rating. To do so, our framework simultaneously incorporates jump default with Markov-governed likelihoods and continuous defaults in a default-barrier framework. We provide closed-form approximations for expected default time and tail probabilities, and empirically fit the S-shaped yield curve, intra-rating spread, and inter-rating overlap. Results are robust to time period, rating system, sub-rating, and common characteristics such as liquidity.

JEL: G32; C32

Keywords: credit rating, yield curve, Markov model

Acknowledgement: We thank participants of the finance seminar at SAIF and those at the 2013 China International Conference in Finance as well as Wolfgang Härdle, Kewei Hou, Robert Jarrow, Tan Wang, Fan Yu, Dragon Tang, and an anonymous representative of a credit agency for valuable comments. All remaining errors are our own. This work benefits from grant support from the China Academy of Finance Research, and from the Ministry of Science and Technology, 103-2118-M-008-002-MY3 and 103-2410-H-008-039-MY2.

¹ Corresponding author could be reached at charleschang@saif.sjtu.edu.cn; 211 Huaihai W. Rd., Shanghai, China; tel: (8621) 6293-3102.

Download English Version:

<https://daneshyari.com/en/article/5088076>

Download Persian Version:

<https://daneshyari.com/article/5088076>

[Daneshyari.com](https://daneshyari.com)