

Discussion:
**Are Ratings the Worst Form of Credit Assessment
Apart from All the Others?**

Andreas Blöchlinger, Markus Leippold
and Basile Maire

Discussant: Magdalena Pisa
University of Luxembourg and Maastricht University

Seventh Annual Risk Management Conference
12 July 2013

Contributions

- *Big question*: Is a combination of Merton's DD and Altman's accounting-based models an improvement over the existing credit ratings?

- Why is it *interesting*:
 - 1) *Transparent*, easy to *replicate* and based on public information alternative for credit ratings.

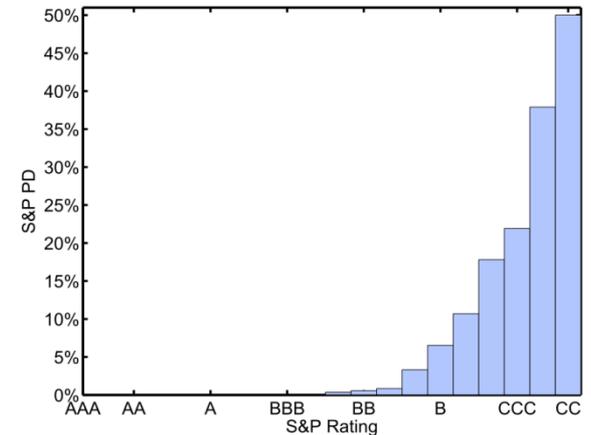
 - 2) First study to *test the calibration* of PDs over multiple time periods. The sequence of predictions is calibrated if both: the forecasts and actual outcomes are close to some distribution p .

 - 3) *Manual* of credit risk estimation.

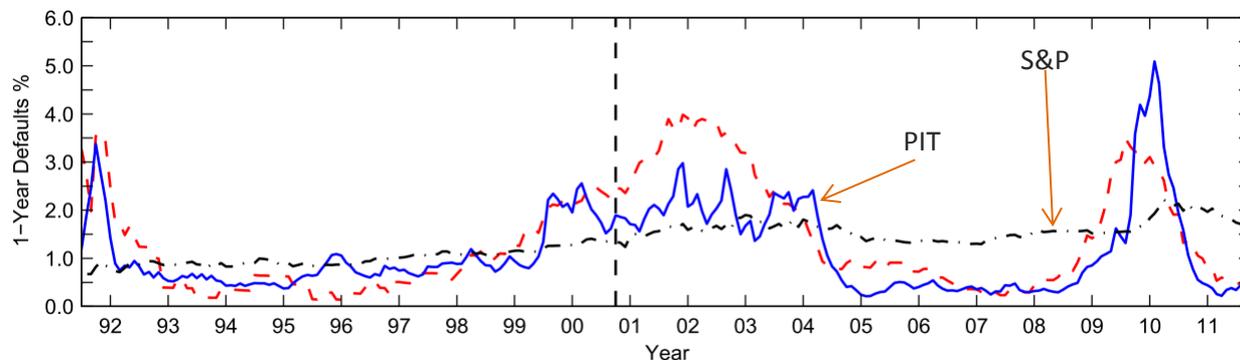
Comments (1/4)

1) The authors *compare S&P* ratings with PIT and TTC.

- S&P gives relative credit risk of issuers.
- PIT gives point in time PD.
- TTC gives through the cycle PD.



- In order to bring the three measures on one scale the authors *estimate PD* for each S&P rating class (Fig4).
- The crucial analysis of calibration is then based on those estimates.



Comments (2/4)

1) *Comparison with S&P* - cont.

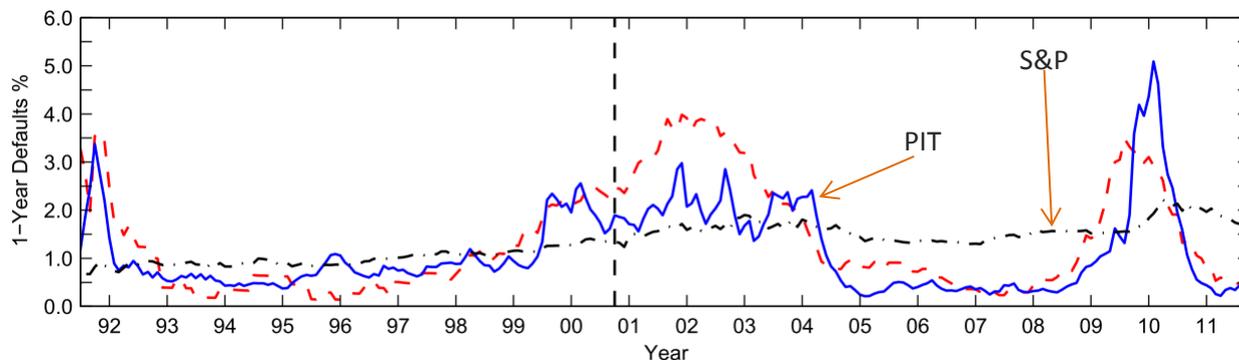
- *Caution*: If the PD estimates for S&P rating classes are not *time varying*, is the S&P and PIT comparison reasonable?
 - Alternative: use annual PD estimates for S&P rating classes.

- To compare S&P and TTC *adjust the PDs* in the manner of TTC.
 - For example subtract α_t at each point in time so that the population has the same PD.

- Alternatively use *ordinal scale*. Show superiority of PIT and TTC over S&P on an ordinal scale as well.

Comments (3/4)

- 2) Are the PIT *forecasting* abilities a desirable feature?
- 6 months *delay* in PIT forecast in predicting defaults.
 - The model correctly identifies the increase (or decrease) in credit risk, but does it with a delay.
- Although during normal times it performs best among all the models, is it possible that during recession it becomes *unsustainable*?



Comments (4/4)

2) PIT *forecasting* – cont.

- PIT does not yield a better result for every possible state of nature.
 - It is not *state-by-state dominant*. In particular, in a recession it has lower accuracy than S&P credit ratings.
- Is this something to worry about? Would stress testing of a portfolio based on your measure address this issue?

time period	obs.	def.	exp. PD	real. PD	exp. area	real. area	level	shape	comb.	
10/2008 – 10/2009	1,619	52	3.59%	3.21%	0.876	0.896	0.008 (0.9283)	1.105 (0.2931)	1.113 (0.5731)	} PIT
10/2009 – 10/2010	1,518	19	0.77%	1.25%	0.886	0.946	1.106 (0.2930)	2.820 (0.0931)	3.926 (0.1404)	
10/2008 – 10/2009	1,619	52	1.58%	3.21%	0.906	0.931	2.129 (0.1445)	2.844 (0.0917)	4.973 (0.0832)	} S&P
10/2009 – 10/2010	1,518	19	2.02%	1.25%	0.908	0.973	0.206 (0.6499)	7.396 (0.0065)	7.602 (0.0223)	

Comments & Extension

- 3) From regulator's point of view it should be transparent, easy and universal.
- we know it is a transparent and easy credit risk model.
 - but is it *universal* as well?
 - Coverage: non-financial corporations rated by S&P
(U.S., Europe, Asia-Pacific, Japan, Australia, New Zealand)
 - So far results robust in a well diversified portfolio.
Could a *local bias* affect your results?
In particular, are credit ratings better than PIT/TTC in ranking the corporations i.e. Asia?
- 4) First step towards a uniform credit risk assessment that deals with non-fin corporate bonds. Hopefully more to follow in *other asset classes*:
- structured products, financial corporations, sovereign.

Conclusions

- Interesting paper with detailed derivation, analysis and validation of *Merton+Altman* credit risk model.
- *Message*: the combined Merton+Altman model are a valid and robust alternative to credit ratings.
- Contributions to:
 - *regulatory* framework of credit risk assessment.
 - a healthy critical look at the *reliability* of credit ratings and simple credit risk models.
- Policy relevant:
 - accurate, calibrated and transparent alternative for credit ratings. Easy to implement by financial institutions.

Appendix

LaTeX code to set counter of equations in Appendix correctly:

```
\begin{appendices}
\section{Estimating the Distance to Default}\label{Ap1}
\renewcommand{\theequation}{\thesection\arabic{equation}}
\setcounter{equation} {0}
```