

Discussion: *Does Modeling Framework Matter?* Gündüz and Uhrig-Homburg

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22 July 2011

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- Studies structural vs. reduced-form models of CDS spreads.
- Very nice: honest comparison of these approaches.
 - choose well-regarded representatives for each approach;
 - use some common parameters² + equity and bond data; and,
 - estimate and test model parameters on the same dataset.
- Findings of this paper:
 - Largely similar overall performance (e.g. portfolio level); but,
 - Reduced-form better for investment-grade, longer maturities;
 - Structural better for high yield and shorter maturities.
- Good: both approaches work; prefer one for certain bonds.

²Careful... *non-joint parameter estimates?*

Motivational Suggestions

- A *lot* here to like \Rightarrow be clear, stark about benefits.
- Do risk managers need more accuracy in some subspaces?
 - Investment-grade vs high-yield? Short- vs long-term?
 - Helps them choose best model based on their risk exposures.
- Note amount spent on credit modeling to clarify importance.
- Increasing underprediction for high yield bonds:
 - Can relate this to put options being overpriced (Bondarenko).
- Good to note primacy of CDS spreads vs bond spreads.
- Note fixed loss given default unrealistic if correlated defaults.
- Note that cross-holdings, correlated defaults are not handled.

- Clarify: Are Markit prices “matrix” (interpolated) prices?
- Data (1998–2005) includes LTCM. What if 1998 omitted?
- Filters eliminate firms whose bonds all need “sweeteners.”
- Thus too little lower-credit data. (Often our biggest risk.)
 - Could maybe get prices for CDS on junior bonds;
 - Could easily incorporate CBs by pricing as bond+warrant.
- How were these firms chosen? Why not more? Survivorship?
- Firms are all large-cap, almost all investment-grade \Rightarrow bias.
- Possible biases from omitting firms w/o debt, public equity?

Results: Commentary

- In table of common parameters, address some oddities:
 - Reversion speed of I_t : $\kappa_I < 0$ for CAT. (=nonstationary)
 - Cash cushion (ν) is very negative for Nordstrom. Why?
 - $\text{Corr}(dI_t, dr_t) < 0$ for Akzo Nobel, Philips, Tel. It. Why?
- Similar oddities in non-common parameters:
 - Structural equilibrium θ_I 's for CAT, Nordstrom;
 - Reduced-form equilibrium $\theta_{K/V} \approx 0$ for CAT, Nordstrom.
- Many disparities in bond-, option-implied volatilities.
- A few outliers for 30 firms is a lot; must clean up issues.
- Be more clear how mean error (ME) can be 0 in-sample.

- Better name for l_t : log-(debt)-coverage process.
- Equation in “common components”: $d \log(K_t)$, not $\log(K_t)$.
- Can sometimes find explicit first-passage-time pdfs³.
- Should put MSEs, not MAEs in tables.
- Model complexity concerns \Rightarrow show BICs instead of AICs.
- t -tests should be on mean errors, not mean absolute errors.

³See Feller II for details.

Conclusion

- A great chance to see true comparison of two approaches.
- Some conclusions are enticing:
 - Overall similar performance; but,
 - Differing excellence in different credit levels, maturities.
- Must address data issues (including size, large-cap skew).
- Be more clear in a few places to let study shine.
- I look forward to final product.