

Discussion of "The Value of Data to Fixed Income Investors"

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ABFER 11th Annual Conference
May 21, 2024

- A long-standing literature on the **informational effect on corporate debt pricing**
 - Duffie and Lando (2001): introducing noise into the market's information set
 - Cetin, Jarrow, Protter and Yildirim (2004): the market sees a reduction of the full information set
- We still lack empirical evidence on **the magnitude of the value of information**
 - The Duffie-Lando model focuses on the issuers' information advantage over investors
 - How to translate it into economic gains
 - Not easy to implement the model at the individual level
- This paper provides the **first empirical estimates of the value of information (VOI)**.
 - Real-time estimates at the bond-month level

Summary of the Paper

- Building on [Back and Baruch \(2004\)](#)
 - Liquidity trades arrives as Poisson processes with a fixed order size.
 - Market makers quotes bid and ask prices.
 - Bonds have a random maturity date and their payoffs are binary.
- Deriving VOI estimates as [the amount that an investor is willing to pay to learn the binary outcome](#)
 - Calibrating three key parameters sequentially for each bond-month
 - r : bond duration
 - p : observed bond yield
 - β : measured bid-ask spread

Summary of the Paper

- Examining the **empirical drivers of VOI**
 - In the cross-section, VOI increases with yield, time-to-maturity, size, callability, liquidity, and uncertainty.
 - VOI **decreases during financial crises**.
 - Results based on a **regression discontinuity design** verify that investor composition affects VOI.

On the Relation between VOI and Bond Liquidity

- The uncovered negative relation between VOI and illiquidity could be partially attributable to the calibration scheme.
 - β is identified by calibrating the modeled bid-ask spread to its empirical counterpart (with calibrated r and p).
 - A high bid-ask spread is associated with a low β and thus with a low VOI.
 - Measures for bid-ask spreads should be highly correlated with gamma.
 - The Roll (1984) measure is essentially twice the square root of gamma.

On the Time-Series Variation in the VOI Estimate

- Not clear whether the **assumption of zero risk-free rate** is applied to the model implementation. If so,
 - The market maker's belief about default risk depends on the total yield rather than credit spread.

$$p_{i,t} = \exp(-yield_{i,t}/r_{i,t})$$

- A sharp decrease in $yield_{i,t}$ during crises leads to a large increase in $p_{i,t}$
⇒ VOI falls in crises.

On the Model Comparison

- As $\delta \rightarrow 0$ and $\beta \rightarrow \infty$, the model's equilibrium case converges to that of a continuous-time Kyle model.
- The binary distribution is not necessarily more relevant than the normal one.
 - Recovery rate is highly dispersed, with inter-quartile range of [0.130, 0.654] (Jankowitsch et al, 2014)
 - The rising share of short-horizon investors (bond funds) \implies caring about short-term bond returns
- A skewed and continuous distribution could be accommodated in the Kyle framework (Back, 1992)

Minor Comments & Suggestions

- Information from the stock market
 - Strong empirical evidence that stock returns lead corporate bond returns (Back and Crotty, 2015; Holden, Mao, and Nam, 2018)
- A large fraction of corporate bonds in the US are callable. How to adjust for the call provision when calibrating r and p to bond duration and yield?
- The eMaxx data is noisy, as the “class” variable of a given investment company could change over time.
- The key references Back and Baruch (2004a) and Back and Baruch (2004b) are the same paper.

- Interesting paper that deepens our understanding about the value of information in financial markets
- Raise some intriguing questions that may lead to many follow up papers
- My comments & suggestions are mainly about the robustness and interpretation of empirical results.