Discussion on “Systemic Risk: What Defaults Are Telling Us” by Kay Giesecke and Baeho Kim

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Main ideas of the paper

- **Systemic risk calculated based on credit data**

- Two-step approaches: economy-wide & system-wide considerations

- The intensity of the point process

\[ \lambda_t^* = \text{baseline hazard} + \text{spillover effect} \]

- Novel use of the default volume as a proxy of the defaulter’s firm size in estimating \( \lambda_t^* \)
Discussion 1 (time-lag effect)

- The paper uses the VaR of the default rate $\mathcal{D}_t(T)$ to quantify systemic risk.

- Can $\mathcal{D}_t(T)$ help generate warning signals of the systemic risk?
Default Counts and Volumes

Source: Moody’s global credit policy
Discussion 1 (time-lag effect)

- The paper uses the VaR of the default rate $D_t(T)$ to quantify the systemic risk.

- Can $D_t(T)$ help generate warning signals of the systemic risk?

- Prior default volume is low

  $\Rightarrow \lambda_t^*$ is small in 2008
Discussion 2 (use of DV)

- The default volume (DV) may reflect the impact of the defaults on financial markets.

- Can we use the distribution of the DV to quantify systemic risk?

- If so, it seems that the time series structure of the DV can be helpful.
Discussion 3 (other credit variables)

- Would credit information other than the default incidence be relevant?

- Recovery rates

- Upgrade-to-downgrade ratios
Default & Recovery Rates

**Correlation between Default and Recovery Rates**

*Panel A Default Rates vs. Trading Prices, 1982-2008*

\[ y = -3.0265x + 0.5877 \]

\[ R^2 = 0.4778 \]

*Panel B Default Rates vs. Ultimate Recoveries, 1987-2008*

\[ y = -2.3408x + 0.6498 \]

\[ R^2 = 0.429 \]

The higher the DR, the lower is the recovery.

Source: Moody’s global credit policy
Upgrade-to-downgrade ratios
Discussion 4 (other directions)

- What if the crisis is not originated from the credit incidence?

- What can we tell from the market data?

- Is there any warning signal in 2007?
Tail Dependence Coefficient (extreme co-movement)

TDC: Indices in Hong Kong

HSI and HSCE
Results (Chinese and Asian markets) – cross region

TDC of HSI (Hong Kong) with:

- SSEC
- STI
- SZSC
- TWII

Reach some historical high in 2007
TDC of TWII (Taiwan) with:

Reach some historical high in 2007
Future Research:
Combining Credit and Market Variables To Measure Systemic Risk

Thank you!