Differences between Wholesale Portfolio Loans and Public Debt

Joseph Nichols
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The Use of Public Debt in Model Development

- Research on the credit risk of portfolio loans would ideally be conducted using data on the performance of those loans.
  - These data are scarce and often not available over a range of business cycles.
- The lack of data has historically been addressed by using data on public debt markets, for example:
  - Using the variation of the expected distance to default (EDF) from corporate bonds to proxy for the probability of default of corporate loans in portfolio.
  - Estimating loan level default models for portfolio CRE loans using data from loans packaged in commercial mortgage backed securities.
Does this matter?

- Portfolio loans differ from public debt in many ways.
  - Portfolio loans have significantly different structures.
  - Banks target the middle of the obligor credit distribution.
  - Banks are more active in lending to specific industries.
- These differences can result in fundamental differences in credit risk.
- A modeler using public debt data to build and calibrate models of portfolio loans should:
  - Evaluate whether these data are representative of the loans being modeled.
  - Account for these differences either in the model design or through the appropriate use of model overlays.
What is in the Corporate Loan Portfolio?

Note: Distribution is for a sample of FR Y-14 reporters as of 2014Q4. Shares are based on current outstanding.
Comparing Portfolio Loans to Public Debt – Corporate

- Made the samples as similar as possible by comparing only fixed rate term corporate loans and corporate bonds.
- The portfolio loan data is taken from the FR Y-14 Q Schedule H.1.
  - The data is limited to a subsample of respondents
  - Owner-occupied CRE loans are excluded.
- The bond data includes the component bonds in Bank of America – Merrill Lynch bond index (BAC-ML).
  - The sample includes both the investment grade and sub-investment grade components.
  - The bond data is pulled from Bloomberg.
Difference in Credit Quality

Note: FR Y-14 distribution is for fixed rate term loans from a sample reporters as of 2014Q4. BAC-MI distribution is as of December 2014. Shares are based on current outstanding. Credit ratings for Y-14 loans are based on bank internal ratings mapped to the external rating scale using bank supplied concordance maps.
Differences in Industry Coverage

Note: FR Y-14 distribution is for fixed rate term loans from a sample reporters as of 2014Q4. BAC-MIL distribution is as of December 2014. Industry categories are based on FRB staff definitions. Shares are based on current outstanding.
## Differences in Loan Characteristics

<table>
<thead>
<tr>
<th>Loan Characteristic</th>
<th>Bloomberg BAC-ML Index</th>
<th>FR Y-14 Corporate Fixed Rate Term Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Term (years)</td>
<td>13.55 (10.77)</td>
<td>8.78 (5.23)</td>
</tr>
<tr>
<td>Current Balance (million $s)</td>
<td>691.47 (565.9)</td>
<td>6.81 (21.7)</td>
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<tr>
<td>Coupon Rate (%)</td>
<td>5.27 (2.15)</td>
<td>3.80 (1.76)</td>
</tr>
<tr>
<td>Share with International Obligor</td>
<td>22.5%</td>
<td>35.4%</td>
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<tr>
<td>Share Senior</td>
<td>93.3%</td>
<td>59.2%</td>
</tr>
</tbody>
</table>

Note: Standard deviations are reported in (). BAC-MIL data is as of December 2014. FR Y-14 data is as of 2014Q4. Shares are reported as of commitment balance.
CRE Portfolio Loans by Loan Type

Note: The data reports the share of bank portfolios by loan type for a set of banks active in origination for both securitization and their own portfolios as of 2012 Q1. The source is the FR Y-14 Q and the chart was first produced for Black et. al (2015).
Comparing Portfolio Loans to Public Debt - CRE

- Made the samples as similar as possible by comparing only fixed rate mortgages on income producing properties originated by the same pool of firms.
  - The firms are limited to those in the FR Y-14 reporting panel who also originated loans for the CMBS market.
- The portfolio loan data is taken from the FR Y-14 Q Schedule H.2.
  - Construction loans are excluded.
- The CMBS mortgage data is provided by Morningstar.
Differences in CRE Portfolio Loans and CMBS Loans by Property Type

Note: The source of the bank data is the FR Y-14 Q and the CMBS data is Morningstar. Both samples are limited to fixed-rate loans from the same set of banks active in origination for both securitization and their own portfolios. The chart was first produced for Black et. al (2015).