Corporate Loans: Challenges in modeling heterogeneity

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Stress Testing Modeling Symposium

The opinions expressed herein are solely those of the author and do not necessarily represent those of the Federal Reserve Bank of Chicago or the Federal Reserve System.
What are corporate loans?

• Commercial and Industrial Loans
  – Only loans over $1 million are reported on the Y-14Q
  – Graded, using the bank’s commercial rating system in its normal BAU
  – Excludes securities held for investment and trading assets
  – Excludes small business loans and some corporate cards

• Other Commercial Loans
  – Loans to US and foreign banks
  – Loans to finance agriculture and farmland
  – Commercial capital leases, but not operating leases
  – Loans to purchase securities that are not in the trading book
  – Loans to governments and official institutions
  – All Other Commercial Loans
What are C&I loans?

• Large Corporate Loans
  – Includes syndicated credits, bought and sold
  – Includes loans valued using the Fair Value Option
  – Includes some investment banking / capital markets activities

• Middle Market Loans
  – The “meat and potatoes” of large bank C&I portfolios
  – Includes a wide range of lines of business

• International Loans
  – Large global customers
  – Trade finance
  – Foreign banks

<table>
<thead>
<tr>
<th>Commercial &amp; Industrial Loans</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Large Corporate Loans Domestic</td>
<td>45%</td>
</tr>
<tr>
<td>Large Corporate Loans International</td>
<td>16%</td>
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<tr>
<td>Corporate Cards Domestic</td>
<td>4%</td>
</tr>
<tr>
<td>Corporate Cards International</td>
<td>0%</td>
</tr>
<tr>
<td>Small Business Loans Domestic</td>
<td>3%</td>
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<tr>
<td>Small Business Loans International</td>
<td>1%</td>
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<table>
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<tr>
<th>Other Loans</th>
<th>Percentage</th>
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<tbody>
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<td></td>
<td>32%</td>
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Corporate Loan Facts

• 44% are secured
• 75% have floating interest rates
• 2.92% average coupon as of 3/31/12
• Average utilization of domestic loans = 37%, international = 51%

Note that the ratings groupings above do not represent actual ratings from any ratings agency and instead are groupings of loans by similar characteristics labeled using a commonly employed nomenclature.
What are Middle Market loans?

• The Fed has no standard definition of middle market loans. We use whatever the bank’s BAU definition is.
• Includes: term loans, revolving loans, standby letters of credit, trade LCs, equipment leases, asset based loans, etc.
• Common lines of business include:
  – Asset based loans and cash flow based loans
  – Floorplan / dealer finance
  – Private wealth management
  – Owner occupied CRE
  – Regionally based lending
  – Treasury services / asset management
  – Other specialized “niche” lines of business

<table>
<thead>
<tr>
<th>Business Type</th>
<th>Percentage</th>
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<tr>
<td>Regional Business Banking</td>
<td>24%</td>
</tr>
<tr>
<td>Asset Based Lending</td>
<td>5%</td>
</tr>
<tr>
<td>Equipment Leasing</td>
<td>2%</td>
</tr>
<tr>
<td>Floorplan Lending</td>
<td>4%</td>
</tr>
<tr>
<td>Other Specialty Businesses</td>
<td>10%</td>
</tr>
</tbody>
</table>
Some Other loans look like C&I loans

• Most banks manage their customers by line of business and not by Y-9C category. Most bankers have only a vague notion of what Y-9C category a loan is in.
  – Since banks use LOBs for categorization, so do we from a risk perspective.
  – But we use Y-9C categories for balancing.

• Other loans that look like C&I loans
  – Loans to banks (US and foreign)
  – Equipment leases
  – Municipal loans

• Other loan categories that do not look like C&I loans
  – Loans to purchase securities
  – Farmland and agriculture
  – Unplanned overdrafts
International Loans

• Largest exposures concentrated in a relatively small number of banks.
  – A representative sample of large regional banks shows that international loans are only about 3.5% of their portfolio.
• Mostly global Fortune 1000-type companies
  – Major banks follow their relationships around the world.
• Lots of term exposures to foreign banks
• Lots of trade finance
• All other factors held equal, these loans have an additional element of risk because of currency issues and workout processes subject to foreign jurisdictions.
Loans to Financial Institutions

• Includes US and foreign banks and non-bank finance companies
• Many of these facilities are short term (i.e. 90 days), secured and fairly highly rated.
• Most banks, in their CCAR submissions treat these loans as a very low loss category.
  – Even after controlling for rating and security.
  – But few have a separate estimation methodology.
• Historically, these loss rates have been quite volatile, raising the question of whether they are capturing a downturn in their estimated losses.
What’s in the “all other” category?

• A grab bag of stuff that does not fit anywhere else.
  – Loans to special purposes entities
    • Warehouse lines
    • Liquidity facilities
    • ABCP seller specific financing vehicles
  – Some loans to municipalities
    • Includes credit enhancements for municipal issuers
  – Some of these loans look like they might meet the definition of another loan classification. Banks should check to see if these are being accurately categorized.