Discussion of “Have Big Banks Become Safer” by Natasha Sarin and Larry Summers

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Motivation

- Significant changes in regulations post-crisis
  - more equity, multiple metrics, stress tests, systemic risk, SIFIs. [Ingves(2015)]
- The Sarin-Summer puzzle: Market-based measures of risk have not declined.
Source: Vlab, based on
[Acharya et al.(2009)Acharya, Pedersen, Philippon, and Richardson]
MVE

- Key point is market value of equity

<table>
<thead>
<tr>
<th></th>
<th>Pre-Crisis</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large US Banks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price to Book</td>
<td>2.11</td>
<td>0.90</td>
</tr>
<tr>
<td>MVE / A</td>
<td>0.13</td>
<td>0.10</td>
</tr>
<tr>
<td>P/B (France)</td>
<td>1.44</td>
<td>0.73</td>
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Citigroup, MVE / A
Model

- Let $\pi$ be probability of disaster

\[
V_t = Nl_t + \frac{(1 - \pi) V_{t+1} + \pi V^D_{t+1}}{1 + r}
\]

- Scale by assets $A_t$ growing at rate $g$, assume constant ROA, and define $v \equiv V_t/A_t$

\[
v = roa + \frac{1+g}{1+r} ((1 - \pi) v + \pi d)
\]

- Therefore MVE/A is

\[
v = \frac{roa + \frac{1+g}{1+r} \pi d}{1 - (1 - \pi) \frac{1+g}{1+r}}
\]
ROA $\approx 1\%$
Impact of Risk on Valuation

- Back-of-the-envelope, \( d = 0, \ roa = 0.01 \)

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<tr>
<td>actual MVE / A</td>
<td>0.13</td>
<td>0.10</td>
</tr>
<tr>
<td>( \pi )</td>
<td>0.32%</td>
<td>0.94%</td>
</tr>
<tr>
<td>predicted MVE / A</td>
<td>0.13</td>
<td>0.12</td>
</tr>
</tbody>
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- Risk can easily account for 1/3 of valuation
- Based on disaster risk, unrelated to predictability of net income in normal times
ROA has declined

Source: Federal Financial Institutions Examination Council (US)
fred.stlouisfed.org
Partly because of NIM
Impact of ROA on Valuation

- Back-of-the-envelope, \( d = 0 \)

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<tr>
<td>actual MVE / A</td>
<td>0.13</td>
<td>0.10</td>
</tr>
<tr>
<td>roa</td>
<td>1.2%</td>
<td>1%</td>
</tr>
<tr>
<td>predicted MVE / A</td>
<td>0.13</td>
<td>0.11</td>
</tr>
</tbody>
</table>

- ROA can account for 2/3 of decline in valuation
Why is ROA lower?

- Low interest rate $\Rightarrow$ franchise value of core deposits lower
- Low credit demand
- Risk vs ROA? How did banks make so much money during the boom?
  - When everyone underestimates $\pi$ (real estate), we have standard mispricing.
  - But if some underestimate more than others? When Dusseldorf believes the Wall Street knows what it’s doing, willing to clear the market for credit junk $\Rightarrow$ Supply chain of profitable credit products $\Rightarrow$ ROA increases
  - So repricing of risk could also explain drop in ROA, at least in theory
- Then there is non bank competition (fintech, etc.)
- Then, there is regulation
Finance is not really shrinking

Source: [Philippon(2015)]
But banking is, relatively...
Regulations to blame?

- Post crisis idea: move away from banking towards AM
  - But why need a bank then? See MS’s recent departures.
- Dealer inventories are down. Large trades harder to make.
Dealer Inventory Much Lower

Exhibit 1: DEALER INVENTORY OF CORPORATE BONDS

Source: New York Federal Reserve, Haver Analytics. As of Dec. 31, 2015. Prior to April 2013, the primary dealer corporate bond positions data included non-agency RMBS and CMBS.
Regulations to blame?

- Post crisis idea: move away from banking towards AM
  - But why need a bank then? See MS’s recent departures.
- Dealer inventories are down. Large trades harder to make.
  - Regulatory collateral damage? MM in bonds not a very risky business. Why shrink it? Collateral effect of leverage ratio?
  - Or is it just HFT competition?
Conclusion

- Repricing of risk a big part of the story
  - lower valuation
  - exit some lines of business
- Important to further decompose
  - macro factors (low rates, end of secular credit cycle)
  - regulatory collateral damage
Viral V Acharya, Lasse Heje Pedersen, Thomas Philippon, and Matthew Richardson.  
Measuring systemic risk.  

Stefan Ingves.  
Update on the work of the Basel Committee.  
Speech at the IIF Annual Meeting, October 2015.

Thomas Philippon.  
Has the US finance industry become less efficient? On the theory and measurement of financial intermediation.  