“Risk Taking and Low Longer-term Interest Rates: Evidence from the U.S. Syndicated Loan Market”
Sirio Aramonte, Seung Jung Lee, and Viktors Stebunovs

Discussed by Andres Liberman - NYU Stern

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Research question

- Do financial intermediaries extend riskier loans when interest rates are lower?
- Answer from paper: Yes
- Interpretation: “...results are consistent with a “search for yield” by lenders in the syndicated loan market.”
Part of a very active research agenda

- This is an important question
- Broad agenda: does monetary policy affect risk premia?
- Why?
  - Theory: (De Nicolò et al (2010)): asset substitution, search for yield (e.g. Rajan (2005)), leverage (Adrian and Shin (2009), Dreschler et al (2015)), limited liability (Dell’Ariccia, Laeven, and Marquez (2010)), etc
Discussion

- Empirics
- Contribution
Empirics

- What does the paper do?
- Causality?
What does the paper do?

- Data: roughly 90% of total syndicated loan market volume, primary and secondary market
- Look at ex ante (regulatory) default probability of quarterly originations / portfolio additions for different types of intermediaries between 4Q 2009 and 4Q 2013
  - 7 categories of intermediaries
- Main test: correlate time series variation in pD’s with time series variation in the 10 year Treasury rate (nominal) over this period
- Second part: loan price does not reflect this
Empirics

- A good picture is worth... (Figure 4)
Two observations

- First, this is a period when interest rates are always relatively low, and the (absolute) variation in rates is not large.
- Authors agree: “... *it is precisely the period we cover that is characterized by persistently low longer-term interest rates*...”
- Second, there is remarkably little variation in the probability of default of portfolio additions (is this to be expected?)
- Third, what about real rates?
- Is this the right setting to study this question? (I’ll return to this in a second)
My interpretation

- In terms of risk, if anything, banks seem to be adding less risky loans to their portfolio as time goes by
  - Perhaps a positive relationship between rates and ex ante risk?
Empirics

- A good picture is worth... part 2 (Figure 4)
My interpretation

- I don’t see any noticeable trends for any other intermediary
- There is remarkably little variation in the probability of default of portfolio additions
  - Is the time-series variation in pD’s statistically significant?
Regression

- So, what does the main regression test show?

\[
\log(p_{d_{i,j,t}}) = \alpha_i + \sum l_{j} \beta_j T_t + q_{j,y} + \text{controls}_t + \epsilon_{i,t}
\]

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<tr>
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<th>Unbal.</th>
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<tr>
<td>U.S. banks and BHCs</td>
<td>-0.102</td>
<td>-0.607**</td>
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<td>Non-U.S. banks and BHCs</td>
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<td>Insurance cos./Pension funds</td>
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<td>(10.5)</td>
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<td>U.S. CLOs/CDOs</td>
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<td>-0.832***</td>
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<td>U.S. inv. funds and others</td>
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<td>-0.268</td>
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Regression model

- What’s going on?

\[
\log(pd_{i,j,t}) = \alpha_i + \sum l_j \beta_j T_t + q_{j,y} + \sum l_j \gamma_j \text{controls}_t + \epsilon_{i,t}
\]

- First, you should be able to run 7 separate regressions and obtain the same coefficients:

\[
\log(pd_{i,\text{banks},t}) = \alpha_i + \beta_{\text{banks}} T_t + q_{y} + \gamma_{\text{banks}} \text{controls}_t + \epsilon_{i,t}
\]

\[
\log(pd_{i,\text{insurance},t}) = \alpha_i + \beta_{\text{insurance}} T_t + q_{y} + \gamma_{\text{insurance}} \text{controls}_t + \epsilon_{i,t}
\]

\[
\ldots
\]

- Or, if you want to highlight differences, use the full panel and make banks the excluded category and see whether coefficients for other intermediaries are significant.
Regression model

- An example:

\[
\log (pd_{i,\text{insurance},t}) = \alpha_i + \beta_{\text{insurance}} T_t + q_y + \gamma_{\text{insurance controls}} t + \epsilon_{i,t}
\]

- Second, structure of fixed effects:

  - \(\alpha_i\) is there because you only want to focus on changes in credit policy over time when rates change
    - I agree!
Regression model

\[ \log (pd_{i,\text{insurance},t}) = \alpha_i + \beta_{\text{insurance}} T_t + q_Y + \gamma_{\text{insurance controls}} t + \epsilon_{i,t} \]

- \( q_Y \) is there because... you want to focus on within-year comparisons?
  - I don’t understand this
  - How much variation is there in rates within years?

- Would like to see results without this year fixed effect: absorbs a lot of the time-series variation
More importantly

- Now I return to this: is this the right setting to study this question?
- “Our analysis focus on how the default risk of investment in the syndicated term-loan market changes when investors expect that U.S. interest rates will remain lower for a longer period of time” (page 11)
- There is little to no variation in rates!
  - What do you compare loans issued in an environment of low rates today to?
- Expand the time-series?
Finally, causality?

- Assume results are as regression tables, not as in graphs
- Authors push a story where lower rates cause higher pDs
- (Plausible) Alternative: pDs and interest rates both driven by an omitted factor
- E.g., demand for Treasuries is higher at a time when, on average, new investment projects are riskier
Endogeneity

- Robustness test: outcome is prob of default normalized by prob of default of existing assets
- Only works if omitted factor affects older projects in the same way, but why would it?
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- Robustness test: outcome is prob of default normalized by prob of default of existing assets
- Only works if omitted factor affects older projects in the same way, but why would it?
- Really, you need exogenous variation in rates (previous literature has also looked at within-borrower estimation)
- I think paper shows a particular time-series correlation in the crisis/post-crisis period
  - Potentially very valuable information too! But not what the paper says it measures
Discussion

- Empirics
- Contribution
Contribution

- Let’s take results as given
- i.e., during this period of time, risk of default of loans added to portfolio of intermediaries increases when Treasury rate decreases
Contribution

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- i.e., during this period of time, risk of default of loans added to portfolio of intermediaries increases when Treasury rate decreases

- Not a new finding
- Recent empirical literature: higher (real) rates cause lower bank risk taking (e.g.: Jimenez, Ongena, Peydro, and Saurina (2014); Dell’Ariccia, Laeven, and Suarez (2013); Landier, Sraer, and Thesmar (2013); Scharfstein and Sunderam (2014); Drechsler, Savov, and Schnabl (2014))
- So where does this paper fit?
Can you exploit the cross sectional variation in effect by intermediary types to say something about the mechanism? (then compare $\beta_{banks}$ with $\beta_{insurance}$ etc, not with 0)

E.g.:

- Banks are affected by leverage constraints, patient investors are not
- Moral hazard / management incentives should be more of a problem in some institutions than in others
- Are banks concerned with “search for yield”? Are pension funds?
- Which institutions should be more affected by asset substitution?
Thanks!

Thanks!
Other comments and questions

- Should we be concerned that “only banks in the early stages of adopting Basel II” (page 8) must report pD?
  - In particular, bank holdings go from 22% to 55% (!) when restricting sample to loans with pD
- I’m also worried that having a pD is systematically correlated with lender type. Sample selection may drive correlation?
- Summary stats: how many loans? From what period are these loans?
- Balancing drops 35k observations (88%). Why is this a good exercise?
Other comments and questions

- Would appreciate more info about determination of pD in Basel II regulations: do banks have discretion? are there strategic considerations, i.e., do banks gain something by rating loans in a certain manner?
- Why use the log(pD) instead of pD as the outcome variable? Is the percent-change in probability of default the relevant outcome (i.e., 1% to 2% is the same as 5% to 10% increase in pD)?
- I like the point that “orthogonalized” treasury rates are estimated, and thus s.e.’s will tend to be too low