Comments on "Debt Overhang, Rollover Risk and Investment in Europe"

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The views expressed here are those of my own. No responsibility for them should be attributed to the Bank of Canada.

Summary

- What factors are behind the collapse and sluggish recovery of investment spending in Europe?
- Could it be the ready availability of debt before the crisis?
  - The high level of pre-crisis debt creates a "debt overhang" and drags down investment.
  - The effects of debt overhang among banks has been previously studied (DeYoung et al., 2014), but this paper is the first to look at debt overhang in firms.
- The debt overhang effects can become worse if the debt is short-term, due to rollover risk.
- In turn, rollover risk can be affected by sovereign risk and whether the firm's bank is distressed or not.

Main Findings

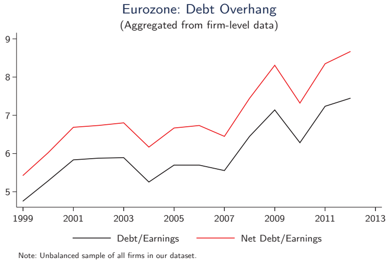
- The authors use a very detailed firm sample and a smaller firm-bank matched sample to analyze these possibilities.
- They find that high levels of indebtedness held back investment in Europe during the sovereign debt crisis.
- The prevalence of short-term debt contributed to this problem, due to heightened rollover risk during the crisis.
- The increase in rollover risk can be traced back to heightened sovereign risk and worsening of bank balance sheets.

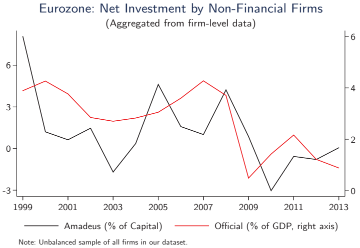
Overall Impressions

- A well structured paper, with a clear (and important) research question.
- Excellent and comprehensive data set, which clearly required a lot of time and effort to assemble.
- The paper has clear potential to contribute to a number of different literatures and the authors manage this "multi-literature appeal" very well.
- However, the findings regarding "rollover risk" and "bank balance sheet weakness" seem to hinge on a couple of assumptions/assertions, which need to be strengthened:
  - I will concentrate my comments on these issues.
- Overall a very interesting paper and an enjoyable read.

Divergence in (Short-Term) Debt vs. Investment

- Before 2007, debt and investment spending seem to move (broadly) together.
- But in 2007-2009, debt increases sharply, while investment starts to decrease.
- What is the debt being used for during the pre-crisis period?





A Comparison with the United States

- According to Berrospide et al. (2012) and Berrospide and Meisenzahl (2015) US firms started drawing down credit lines as early as 2007:
  - They used these funds to sustain investment spending early on during the crisis. Debt went up and investment remained unchanged.
  - On the other hand, there is limited evidence of firms using credit line drawdowns to boost precautionary cash holdings.
- Maybe some firms in Europe took a different route? Used early credit line drawdowns to hoard cash, while decreasing investment spending in anticipation of tough times?
  - For example, are these firms with ties to the US, where the crisis started earlier? If so, credit demand and uncertainty factors will come from a subset of firms in an industry/country.
- Then, the high levels of debt right before the crisis may partly capture differences in expectations or confidence.

Rollover, Short-Term Debt and Credit Lines

- Credit lines may also play a role in the findings related to debt maturity and rollover risk:
  - Credit lines were an important source of financing for SMEs during the pre-crisis period for Canadian and US SMEs (Leung et al., 2008)
  - While rollover of collateralized loans was possibly difficult during the crisis, it is not clear whether reduction of limits or cancelation of credit lines took place (Berrospide et al., 2012)
  - Damar et al. (2014) also find that Canadian households with *already existing* credit lines were able to borrow during the crisis.
  - Were credit lines were subject to rollover risk?
- Is there a way to account for short-term credit line debt vs. all other short-term debt in the analysis?
- Also, can you look at cash holdings of firms?

Weak Banks and Sovereign Holdings

- The findings related to firms located in high sovereign risk countries are very reasonable.
- On the other hand, the "weak bank" link and the identification of weak banks can be expanded a bit.
- The exposure of a bank to a foreign sovereign seems to be solely driven by bond holdings a subsidiary in that country.
- Could this be under-estimating exposure of non-periphery banks to foreign sovereign risk?
  - The Greek subsidiary of the French bank with the greatest exposure to Greek debt only employed 100 people. Perhaps not all of the Greek bonds were being held by the subsidiary?
  - Canadian banks may have owned some Greek/Spanish government debt as well (a very small amount), despite not having any subsidiaries there.

Weak Banks and Sovereign Holdings (continued)

- Perhaps the "weak bank" link is only observed in the periphery because the weakness in non-periphery banks is under-measured:
  - Some non-periphery banks are reported (in the press) to have non-trivial exposures to sovereign risk from the periphery.
  - Findings in Paravisini et al. (2015) and Damar et al. (2014) imply that even modest foreign exposures can lead to negative credit supply shocks at home.
- Given that BANKSCOPE does not report the origin of the bonds held by banks, this is not an easy problem to address:
  - Alternate definition for "weak bank" using other sources, such as the BIS International Banking Statistics?
  - For example, a coordinated effort to better understand and analyze international banking statistics at the bank-level is currently under way (Buch and Goldberg, 2014).

Other Comments

- A large number of firms have more than one "main bank"
  - Selection issues non-withstanding, the authors are excluding potentially valuable information by not analyzing the second/third banks.
  - Set "weak bank" equal to one, only if all banks are weak?
- The paper has an excellent review of how sovereign risk can lead to bank distress or vice versa. However, all of the findings are interpreted from the "banks holding sovereign debt" angle.
  - Could the "bank distress leading to sovereign risk" mechanism also be at work in some countries? If so, does it matter?

Conclusion

- A very interesting and enjoyable paper.
- The data set is excellent and constructed with great care.
- The policy relevance of the findings are obvious and made even more attractive by the macro effect calculations.
  - However the relatively early increase in debt and decrease in investment remains a bit of a puzzle.
  - Perhaps the authors can try to squeeze a bit more out of their data to address the precautionary liquidity hoarding issue and also the weak bank definition.
- A recommended reading!