Discussion:

Herpfer and Maturana (2020):

“Credit Rating Inflation: Is it Still Relevant and Who Prices It?”

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Research question and setting

- Do Credit Rating Agencies (CRAs) suffer from a conflict of interest in the issuer fee-based business model?
  - Issuer fee-based business model: clients (i.e. borrowers) choose the specific CRA and pay for their own ratings
  - Conflict of interests when a credit downgrade causes an increase in the interest rate paid by the borrower
- Study this question in the context of **performance-sensitive debt (PSD) market**
  - Less complex market compared to other markets (e.g. the residential mortgage-backed security (RMBSs) market or the collateralized debt obligation (CDO) market)
  - **the interest payment depends directly on a measure of borrower's financial health such as credit ratings**

    Direct connection between credit rating and issuer's borrowing cost

Example from the paper

Panel A: One-notch credit rating downgrade from A+

Firm's name	Quarter	Current rating	Minimum rating	Maximum rating	Spread over LIBOR (bps)
Disney	2006 Q1	A+	AA-		11.5
Disney	2006 Q1	A+	A	A+	13
Disney	2006 Q1	A+	A-	A-	14
Disney	2006 Q1	A+	BBB+	BBB+	17.5
Disney	2006 Q1	A+		BBB-	30

Downgrade does not change the loan's interest rate

Panel B: One-notch credit rating downgrade from A

Firm's name	Quarter	Current rating	Minimum rating	Maximum rating	Spread over LIBOR (bps)
Disney	2006 Q1	A	AA-		11.5
Disney	2006 Q1	A	A	A+	13
Disney	2006 Q1	A	A-	A-	14
Disney	2006 Q1	A	BBB+	BBB+	17.5
Disney	2006 Q1	A		BBB-	30

Downgrade does change the loan's interest rate

Loan amount = $2.25 billion, 1 bps = $225,000 annual savings

Main Results

1. CRAs are less likely to downgrade if this causes a higher cost to the issuer
   - 1 SD increase in the cost of a downgrade associated with a decreased prob of downgrade of 0.8
2. Results are not driven by:
   - Firms hiding their negative financial information from CRA
     - Result hold even across firms with different ability of hiding/manipulating financial information
   - Loans that are transitioning from investment grade to non-investment grade class
3. This behavior by CRAs seems to continue even after the financial crisis and the settlements between the two major CRAs and the department of Justice

Important paper

- Highlights the critical role of CRAs and the potential implications of a distorted incentive system
- Excellent and thoughtful analysis that try to rule out other potential stories

High level feedback - Issuer fee-based model

- For someone not familiar with the institutional details (like me), it is very difficult to grasp a precise idea about the issuer fee-based model
- Including more information would be very useful
- Some of the questions for which I was not able to find an answer in the paper:
  - Is this the only model used in the market?
  - Is the fee depending on some aspects of the contract or is it a flat fee?
  - Does the fee depend on the characteristics of firm? (e.g. size, profitability, industry, ...)
  - Does the fee change over time within the same company for a given CRA?
  - In general it would be nice to have an understanding of why/which firms self-select into this model if there are alternatives available

High level feedback - Heterogeneity in CRAs' behavior

- Analysis based on credit ratings issued by S&P and Moody's
  - This is a decision taken by the authors - they cite a different paper but I still do not understand the reason of this decision
- Useful information to know:
  - How many other CRA are out there in the initial sample?
  - How many CRAs a firm asks for on average?
  - Is there any sample selection by considering only S&P and Moody's? Does this generate any potential selection bias?
    - In other words, are firms that are requesting credit ratings from only these two CRAs significant different from those that request ratings also to other CRAs?
  - Do the results hold if you expand the set of CRAs?

Main comment: Cost of borrowing or relationship length?

- In many situations the length of a relationship matters and it may shape the way in which the company (i.e. CRA) treats its customers
- Two potential explanations for why it matters:
  1. Company wants to secure a stable flow of revenues with historical costumers
     - Incentive to treat them well in order to keep the business with them
  2. In a world with asymmetric information, the cost of information acquistion is high
     - In banking relationship matters
       - Dealing with the same costumers for a long time let the lender become more familiar with the borrower's business and it is more capable of judging its future profitability based on "soft information"
       - Even if the business is not profitable at the moment, the lender knows that the fundamentals of the company are solid and so he is still willing to lend to
- **Does the duration of a business relation matter also in this context?**
  - Are CRAs more likely to treat their recurring customers better?

Does Relationship length matter in this context?

Two ways to test this alternative hypothesis:

1. Including the additional omitted variable:

   $$1(downgrade)_{i,t} = \beta_1 cost\ of\ downgrade + \beta_2 Relationship\ length + X'_{i,l,t}\Gamma + \varepsilon_{i,l,t}$$

   If relationship lenght matters we should expect $\beta_2 < 0$
2. Just consider the sample of firms that deal with the CRA for the first time
   - More difficult to implement this test as the sample size may be too small

Another (related) interesting correlation to consider

- In the anaylsis, in case a firm receives a credit ratings from both CRAs (i.e. S&P and Moody's), the authors consider the better of the two ratings
  - Considering these cases, is it possible to see if the CRA that provides the better rating is also the one that has a more established relationship with the firm?
  - This would speak a little bit about the willingness for CRA to treat historical costumers in a more advantageous way

Extra: How arbitrary is CRA rating?

- In theory credit rating should be assigned based on firm's expected losses
  - For instance, According to Moody's website:
    "a Moody's credit ratings represent a rank-ordering of creditworthiness, or expected loss. Expected loss is a function of the probability of default and the expected severity of loss given a default. Ratings are forward looking in that the rank ordering is designed to hold across multiple horizons"
- Instead the paper push the idea that CRA use "extra information" to decide the rating and whether to downgrade or not a loan
  - Not only future expected loss,
  - They also take into account other things such as the cost of downgrade
- Question: Do CRA include potential costs of downgrade in their model?
  - In other words, does the expected loss represent a subset of information compared to the one included in the credit rating?
  - Note that CRAs do not include the potential implications of their rating when making a decision

Extra: How arbitrary is CRA rating? (2)

- To understand the degree to which the rating includes or not this information we can compare three different models:

$$1(downgrade)_{i,t} = \gamma_1 Rating_{i,l,t} + X'_{i,l,t}\Gamma + \varepsilon_{i,l,t} \tag{1}$$

$$1(downgrade)_{i,t} = \gamma_1 Rating_{i,l,t} + \gamma_2 Expected\ loss_{i,t} + X'_{i,l,t}\Gamma + \varepsilon_{i,l,t} \tag{2}$$

$$\begin{aligned} 1(downgrade)_{i,t} \quad = \quad & \gamma_1 Rating_{i,l,t} + \gamma_2 Expected\ loss_{i,t} + \\ & \gamma_3 Cost\ downgrade_{i,t} + X'_{i,l,t}\Gamma + \varepsilon_{i,l,t} \end{aligned} \tag{3}$$

- What can we learn?
  - Comparing (1) and (2): if γ_2 is significant: credit rating includes more information than just expected losses
    - If expected loss is a good proxy for the hard-information used by the CRA, and rating is still significant, then the expected loss contains only a subset of information used by the CRA
    - Gives more credit on the idea that CRA based their decision on other things rather than expected loss based on balance-sheet information and general trend
  - Comparing (2) and (3): if γ_3 is significant: cost of downgrade is not included in the credit rating (which is what I would expect according to CRA's statement)