Discussion: Lending Standards and Borrowing Premia in Unsecured Credit Markets

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Plan of My Discussion

- Background.
- Four main contributions of the paper.
- Comments.

Background

- Over the past 40 years, unsecured credit (credit card debt) has become an important part of our life.
  1. Everybody has credit cards.
  2. Many, especially low wealth or income, borrow.
  3. 1.5 million consumer bankruptcies in 2010.

- Models of unsecured credit.
  - Standard model Livshits et.al.(07), Chatterjee et.al.(07), Athreya (02)
  - Credit line: Mateos-Planas & Rios-Rull (07), Braxton et.al. (19)
  - Teaser rate: Drozd and Kowalik (19)

Standard Model

- Structure of the standard model with unsecured credit:
  1. HH optimization: $r(S, s, a') \to d(S, s, a) \in \{0, 1\}$
  2. Credit sector optimization: $d(S, s, a) \to r(S, s, a')$.

- Typically, the model is calibrated using macro moments.
  $\to$ Need more micro data!

- Some micro data for 1.
  - SCF, PSID, Braxton et.al. (19)

- Little micro data for 2.
  $\to$ This paper fills this important gap.

Contribution 1

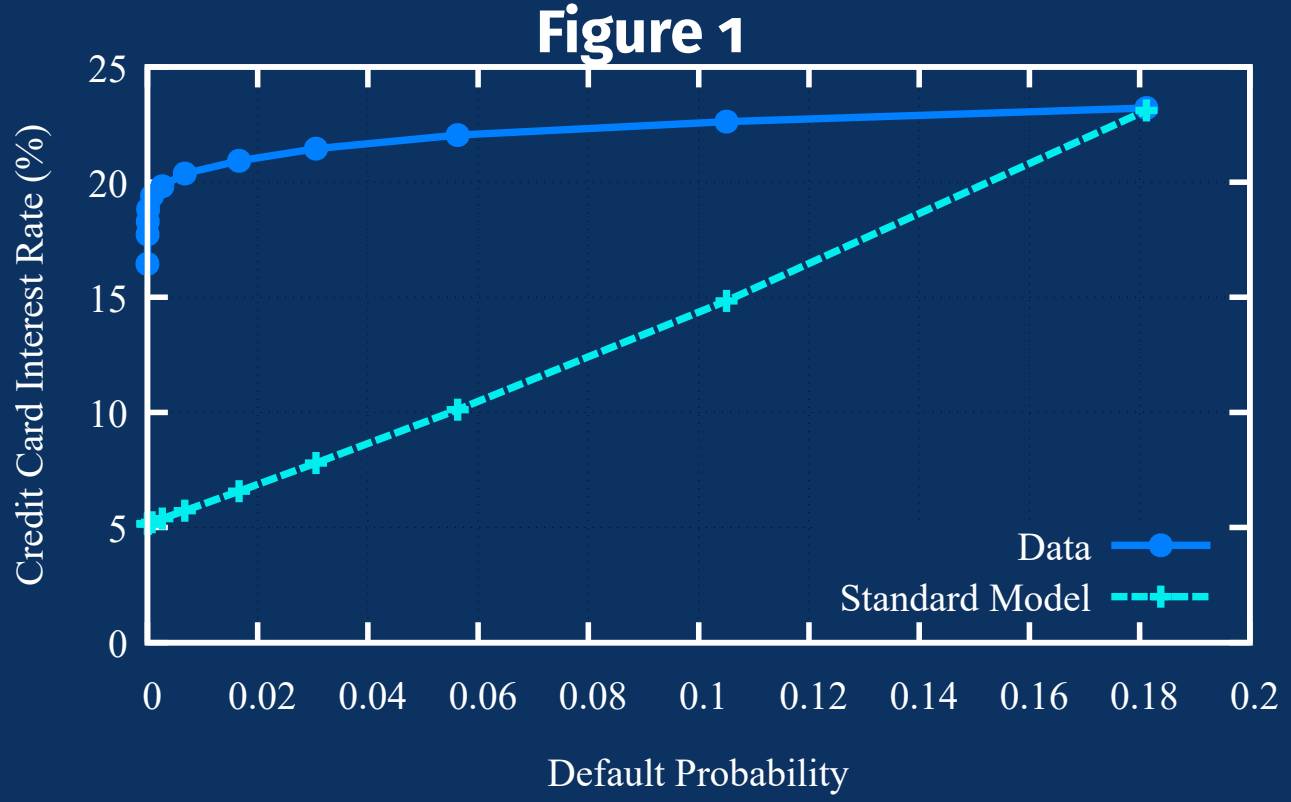
- Unsecured credit interest rate is the standard model:

$$r(S, s, a') = i + (1 - \zeta)\mathbb{E}d(S', s', a') \tag{1}$$

  - $i =$ risk-free saving rate.
  - $(1 - \zeta)\mathbb{E}d(S', s', a') =$ default risk premium.
  - ζ: Recovery rate upon default ($= 0$ in a simple model).
  - Interest rate goes up linearly with default probability.

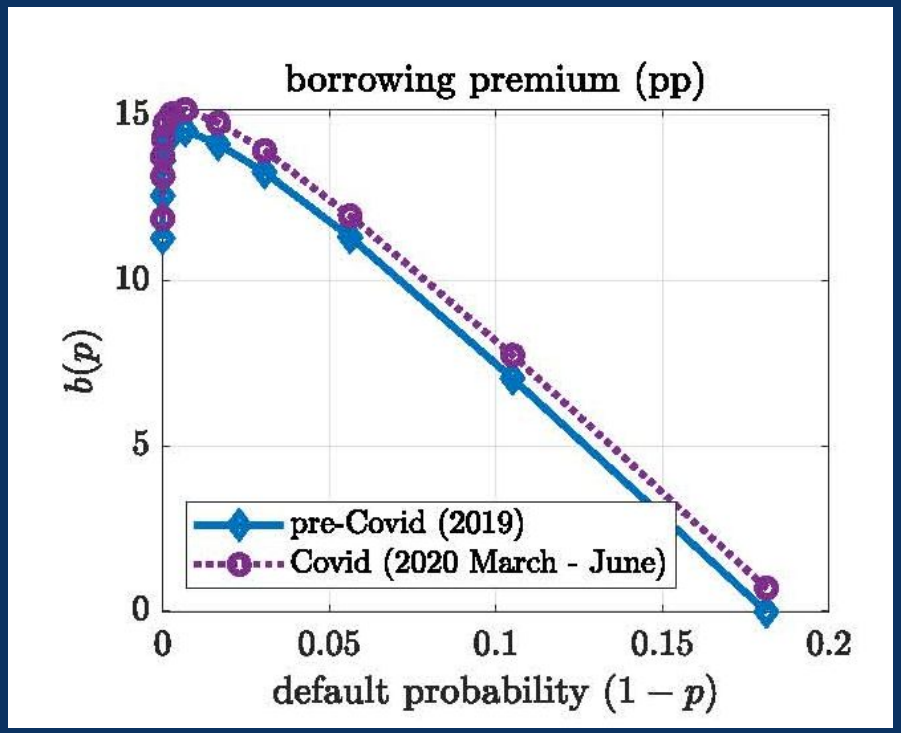
- The authors evaluate Eq (1) using cutting-edge data.
  1. Credit card interest rate $\rightarrow$ Credit score (Y-14M)
  2. Credit score $\rightarrow$ default probability (FRBNY-CCP)

Contribution 1A



1. Data on interest rate are very different from what is implied by the standard model (i.e., Eq (1) is inconsistent with data).
2. Flat with respect to default probability.
3. Even low-risk borrowers face a high interest rate.
4. Call the difference (Solow residuals!) borrowing premium.

Contribution 1b



1. The authors compute the borrowing premium for normal times (2019) and during COVID-19 recession.
2. Borrowing premium is up about 0.6-0.7% during COVID-19 recession.

Contribution 2

- Propose a model in which a credit firm faces a funding constraint that can generate the observed borrowing prem.

  Weighted (with $\lambda(Z, d)$) sum of loan amount $\leq$ Total savings

  $$\rightarrow r(S, s, a') = i + \lambda(Z, d) + (1 - \zeta)\mathbb{E}d(S', s', a')$$

- Mechanical interpretation
  - Exog borrowing premium $\lambda(Z, d)$ is used to replicate Figure 1.
  - Saving interest rate i adjust to clear the market.

- The authors show that lending standard data (SLOOS) are consistent with the cyclicality of the borrowing premium.

- How to interpret a higher weight for low-risk loans?
  - Seems opposite of the idea of risk-weighted assets.

Contribution 3

- Incorporate the funding constraint to the standard steady-state model with unsecured credit and investigate how aggregate and welfare implications are affected.

- Finding (Table 2):
  1. Both aggregate and welfare implications are very similar, between the standard model and the baseline model.

- Intuitions:
  1. 88% of HHs are savers.
  2. Low credit card rates in the standard model and flat credit card rate schedule in the baseline model are canceled out.
     $\rightarrow$ Different types of borrowers?

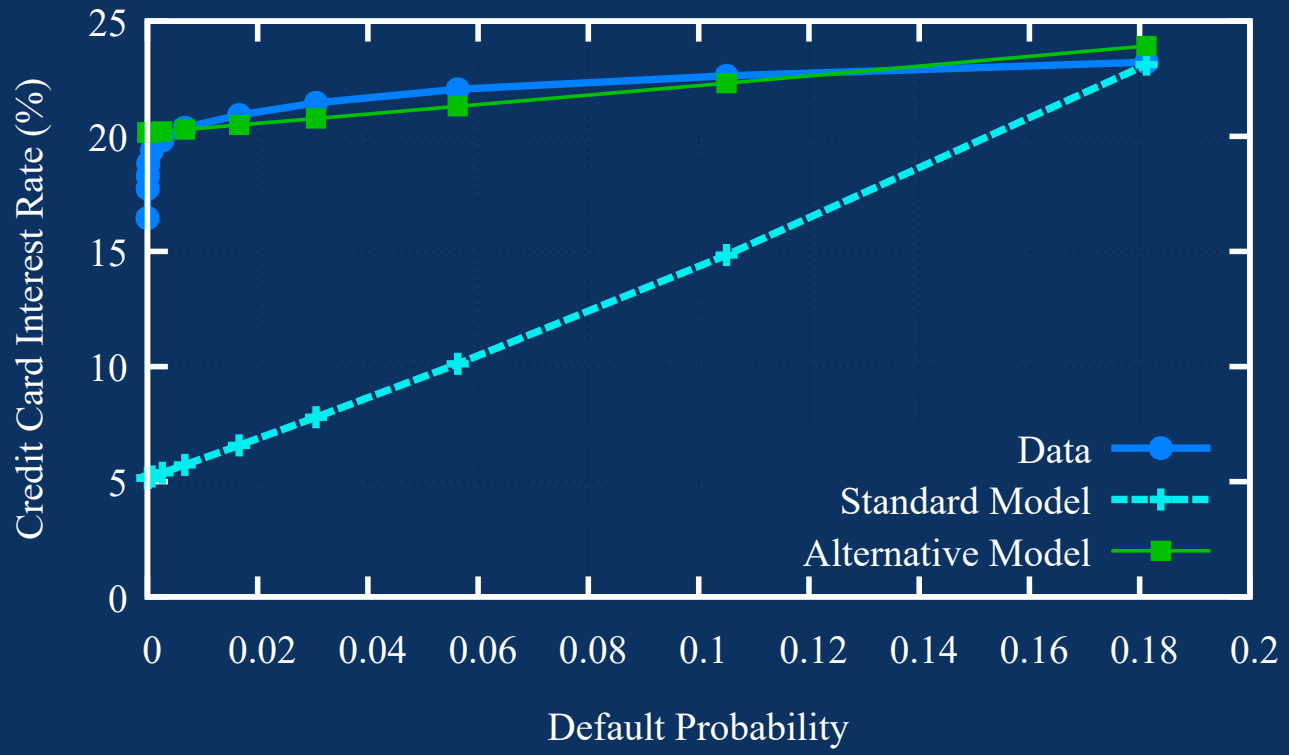
Contribution 4

- Introduce aggregate shocks, together with cyclical movement of the borrowing premium.

- Findings with one-time COVID-19 shock (Table 4):
  1. Both aggregate and welfare implications are very similar.

- Findings with business-cycle shocks (Table A2):
  1. Credit becomes less volatile than the standard model, because of countercyclicality of borrowing premium.
  2. Difficulty in cons smoothing over the business cycle.

Comment 1: Alternative Theory?

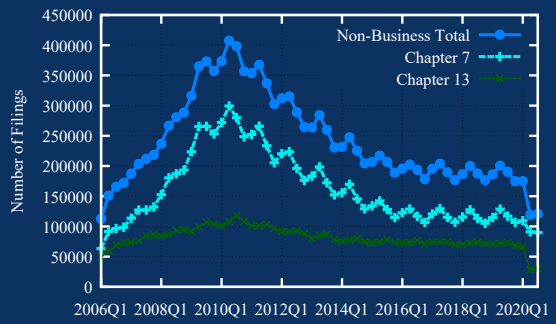


- With the cost of making credit card loans ($= \kappa$), we can tweak κ and ζ to get something close to data ($\kappa = 15\%$, $\zeta = 0.8$).
- Agarwal et. al. (2018): $\kappa = 4.8\%$.
- Average credit card interest rate (24.6%) too high?
  $\leftrightarrow$ 12-16% in G.19 (similar in SCF).

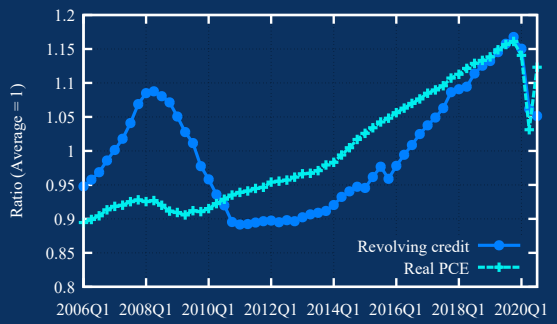
Comment 2: Why Stick to the Standard Model?

- Contribution 1 is by far the most important and interesting.
- Their data can be used to answer important questions:
  - Is the current standard model a good approximation?
  - Should the model with credit lines, search frictions, teaser rate, and/or balance transfer be the standard?
  - Is it really the constraint for the credit card lenders?
- In order to answer important questions...
  - Combine multiple accounts of the same holder.
  - Bring back loan balance and credit limit to the analysis.

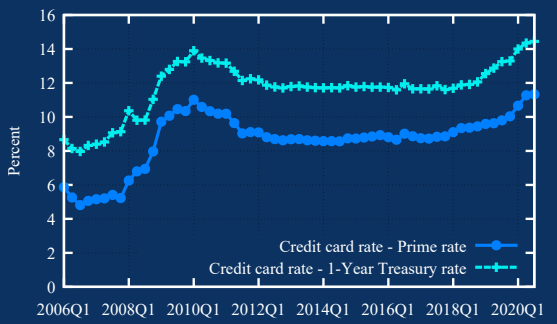
Comment 3: COVID-19 Recession is Different



Bankruptcy Filings



Revolving Credit



Interest Premium

- COVID-19 recession is very different from a normal recession.
  $\rightarrow$ Is $\lambda(Z, d)$ from 2020 valid for other recessions?
- Are TFP$\downarrow$, $\sigma_{\epsilon 2} \uparrow$, and $\lambda(Z, d) \uparrow$ sufficient to mimic COVID-19 recession?

Comment 4: Anticipation Effect?

- $\lambda(Z, d)$ is found to be higher during COVID-19 recession.
- This could be due to an anticipation effect.
  - Default rate hasn't risen yet, but is expected to rise soon, with elevated UR and expiration of extra UI benefits.
  - Banks could raise the credit card interest rate in advance.
- Another example of the uniqueness of COVID-19 recession.

Comment 5: Comparison with Aggregate Data

- Total amount of credit card debt
  - Not calibrated. Baseline = 0.0193 (of output?).
  - According to G.19: 5% of GDP in 2019Q4.
  - Revolving credit in G.19 is procyclical, while standard model generates countercyclical credit. How about in their data?
- Average credit card interest rate
  - Volatility in their model seems too low compared with G.19.
- Number of defaults.
  - Defaults in the model are much less volatile compared with bankruptcy filings.
  - The paper uses a wider (bankruptcy + severe derogatory) definition. What is the volatility?

Concluding Comments

- Nice paper with super cool data.
  - Potential to provide guidance for choosing the standard model of unsecured credit.
- Model is super hard to solve but what is the punchline?
  - The standard model and the authors' baseline model seem to generate similar macroeconomic and welfare implications.
  - Cyclicality of the borrowing premium too small to matter.
- I would focus more on the data, and focusing on micro, not macro, implications.