Does High Leverage Render Businesses Vulnerable to the COVID-19 Shock?

Discussion

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Overview of Paper

- Use Y14 micro banking data to examine role of leverage in lending patterns during pandemic.
- Big picture: leverage is high when measured using debt/assets but low when using interest payments/earnings.
- Issue going forward – what happens when rates rise?

Advantages to Y14 data

- Individual loan data with loan quantities and prices (spreads).
- Information on new loan issues as well as stock of loans outstanding.
- Broad coverage that includes many non-publicly traded small and medium size enterprises.
- Caveat – considerable attrition when constructing a sample with all quantities and prices.

Key Findings

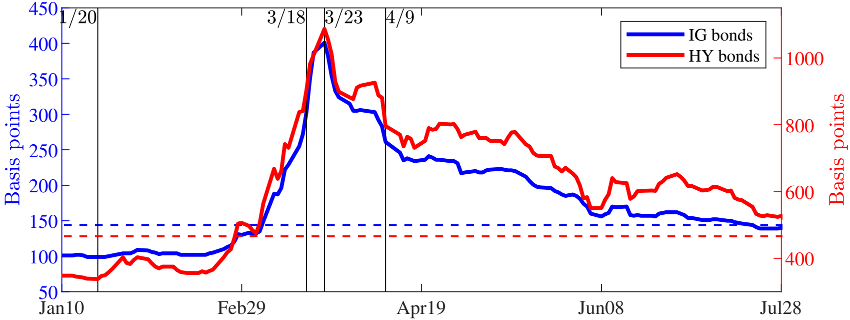
- Intensive margin effects:
  - Small firms with high leverage took out smaller loans on average during the pandemic.
  - No discernible effects on credit spreads or credit-line utilization.
- Extensive margin effects:
  - Small firms with high leverage less likely to establish a new lending relationship during the pandemic.
  - No effect of leverage on propensity to refinance.
- Investment spending:
  - Leverage has no effect on small firm investment during the pandemic.
  - Leverage has a negative on large firm investment during the pandemic.

Lessons to be drawn

- Causal inference is a challenge.
- No obvious first-order effects of leverage on outcomes.
  - Perhaps there is none to speak of?
- Can we separate credit demand vs credit supply?
  - Is “credit supply” balance-sheet induced or bank-dependent?

U.S. Corporate Bond Market During Covid-19

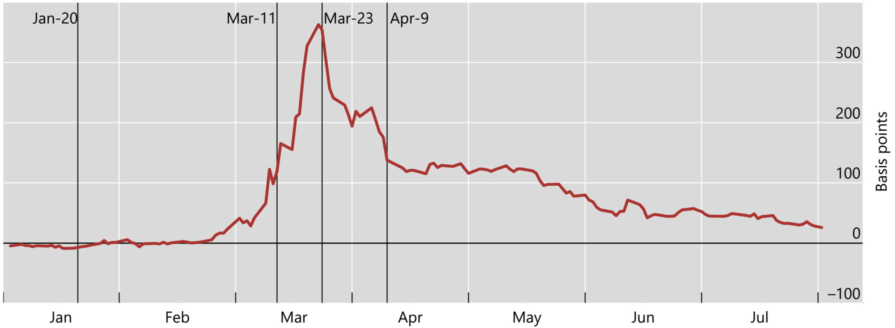
Benchmark (option-adjusted) corporate bond credit spreads



NOTE: Jan-20 = Chinese officials acknowledge that Covid-19 might be transmissible between humans; Mar-11 = WHO declares Covid-19 a pandemic.
SOURCE: ICE BofA/ML indexes.

Excess Bond Premium (EBP)

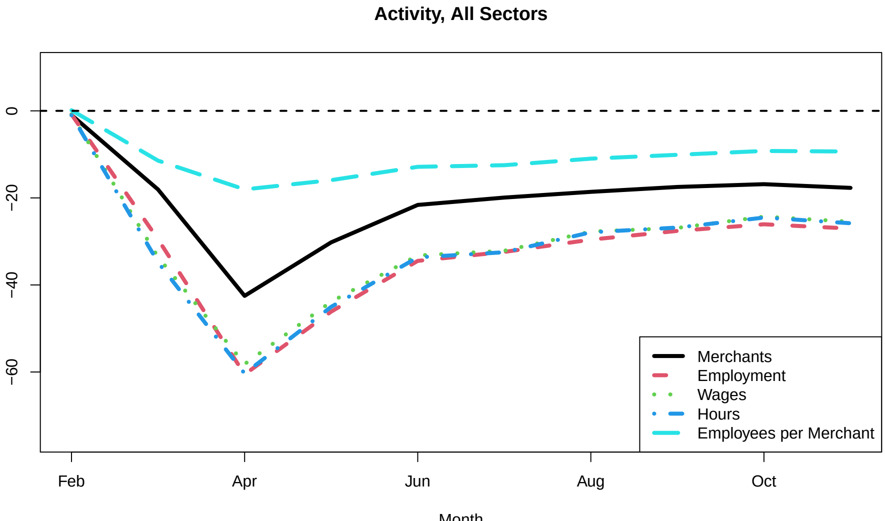
Daily data (January – July, 2020)



NOTE: Jan-20 = Chinese officials acknowledge that Covid-19 might be transmissible between humans; Mar-11 = WHO declares Covid-19 a pandemic.
SOURCE: Authors' calculations using data from TRACE, CRSP, and S&P's Compustat.

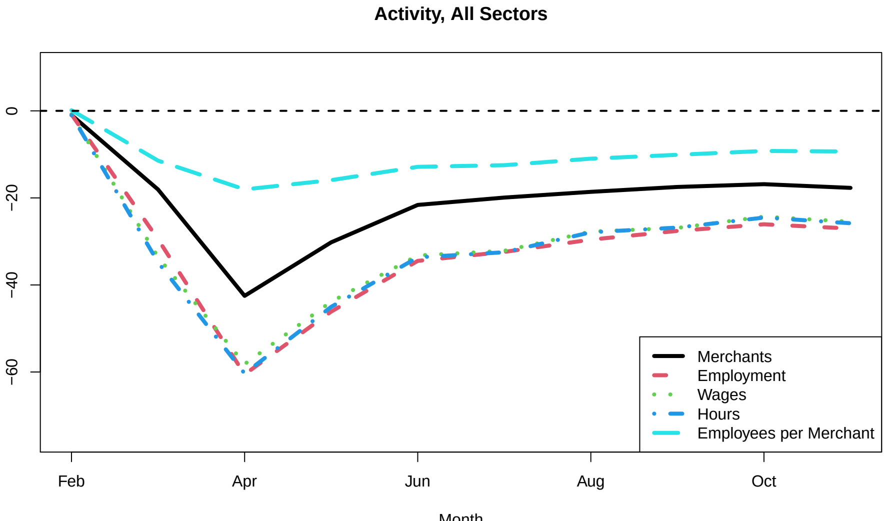
Small Business Activity: All Sectors

Homebase



Small Business Activity: Leisure & Hospitality

Homebase



This paper

- Estimate:

$$y_{it} = \beta lev_{it} 1(Covid) + \alpha x_{it} + d_{it} + e_{it}$$

  where
  - d_{it} industry-time and state-time fixed effects.
  - x_{it} firm-level controls.
- Intensive margin y_{it} = loan volume, spreads, credit-line utilization
- Extensive margin y_{it} = new loan relationship, credit-line refi
- Robustness: Interaction terms $x_{it} * 1(Covid)$ included in appendix.

Intensive margin effects

- Leverage matters for small-firm loan volume but effect is not large.
  - 2-std diff in leverage implies 1% diff in lending volume.
- Leverage does not matter for credit spreads or credit-line utilization rates.
  - Shouldn't constrained firms draw down credit lines?
- Robustness to interaction effects:
  - Leverage does not matter for volume in baseline specification.
  - Very high leverage (*lev* > 4) does matter for volume.

Extensive margin effects

- Leverage matters for propensity of small firms to establish a new banking relationship.
    - Coefficient is similar in magnitude to lending volume so relatively small.
- Leverage does not matter for loan-refinancing.
- Results are robust to inclusion of interaction effects.

Measurement

- Why is leverage measured as loans/earnings – not loans/assets?
- Concerns:
  - Results may be driven by firms with low earnings who are more likely to downsize or exit regardless of credit conditions.
- Truncation:
  - Drop firms with negative earnings – why not use the inverse of leverage?
  - Key findings driven by tail of the distribution so truncation may be an issue.

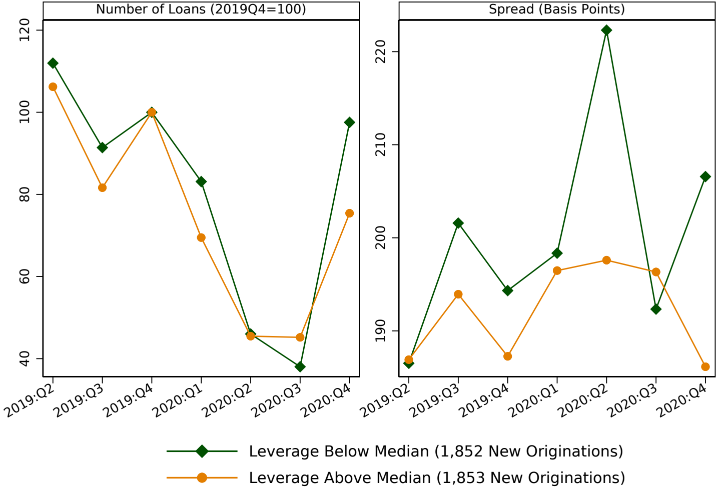
Interpretation

- Intensive margin effects are confounded by selection.
- So are extensive margin effects – who seeks to establish a new lending relationship and why?
  - Firms with low loan demand may not seek out a new relationship.
- Investment findins go against the basic premise that small firms with high leverage were doubly exposed.

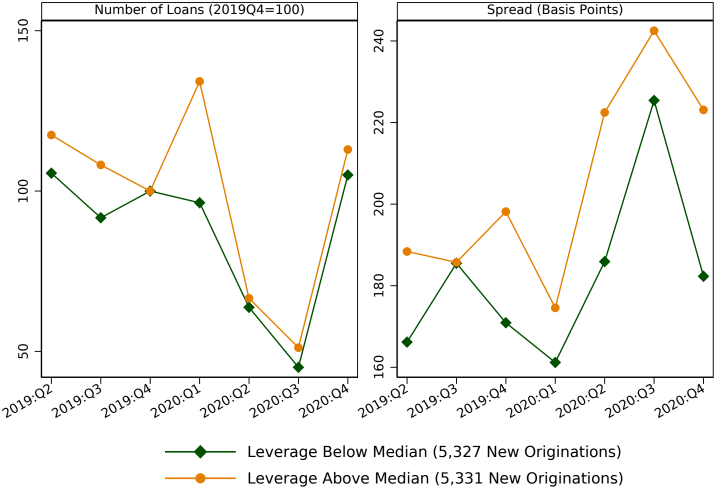
Selection effects and endogeneity concerns

- Who has high leverage?
- Who gets a loan?
- Who applies for a loan?
- Who survives the pandemic?

Why do low-leverage small firms see a spike in spreads?

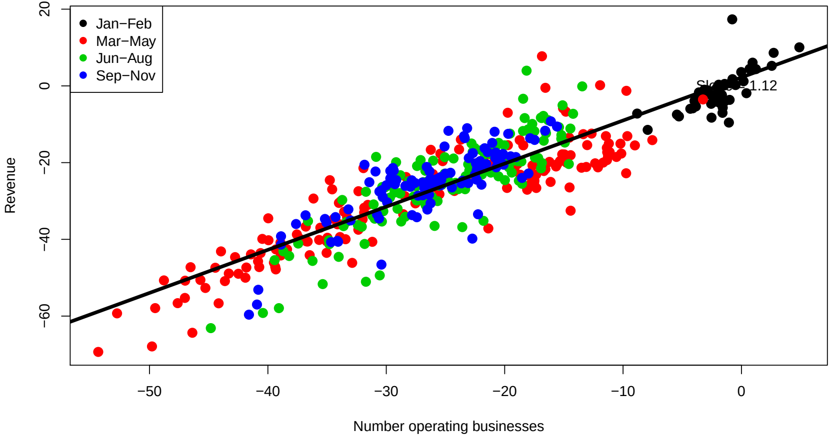


While high-leverage large firms see a drop in spreads?



Who survives the pandemic?

Merchants vs Revenue (Homebase)



Conclusion

- Careful study using Y14 data to examine the role of leverage.
- Results imply conflicting signals regarding role of leverage and hence no obvious first-order effects.
- Leverage is not a good proxy for risk however. It also may still matter going forward as higher rates cause interest payments to rise relative to earnings.