

Discussion of
Credit Fire Sales:
Captive Lending as Liquidity in Distress

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What's the Basic Idea?

- Firms can respond to liquidity needs by relaxing **pricing standards** on real goods/services
- This paper: captive lenders allow firms to also change **lending standards** to get liquidity:
 - lend to riskier borrowers (more down payments)
 - decrease LTV (lower loan amounts and bigger down payments)
 - Increase Rate/decrease Maturity (shorten duration)

Comments Outline

- I really like the proposal - I think it's a novel mechanism for firm liquidity management
- Outline for my thoughts:
 - Contribution/background/motivation
 - Identification & Interpretation
 - Smaller Thoughts

Background

- Papers showing that liquidity needs are **positively** correlated with tightening credit standards (for banks), including reduced loan size:
 - Gete & Reher (2020), Paravisini (2008), Khwaja & Mian (2008), Schnabl (2012), Iyer, Peydró, Da-Rocha-Lopes, & Schoar (2014)
- But none of this literature really gets at the question asked by this paper: do *captive* lenders use their unique position to manage the liquidity needs of their parent manufacturer?
- But how important is it to understand captive lenders?
Experian data in the US for Q4 2021:
 - For **new** auto loans: really important. Captive financing made **51.7%** of originated loans.
 - For **used** auto loans: meh. Captive financing made **8.7%** of originated loans. (that's still a big chunk of capital!)
 - Total market share: **26.6%**

Specification

- The bulk of the paper is conducted using this specification

$$y_{ilbmt} = \alpha \text{Manuf.CDS}_{bt} \times \text{Captive}_t + \theta X_{ilt} + \gamma_I + \gamma_{bmt} + \epsilon_{ilbmt}.$$

- The authors also split the sample into manufacturers with high and low *liquidity needs* (measured as the ratio of maturing to outstanding bonds).
- This is effectively a triple difference, so why not just fully saturate a triple diff model:

$$y_{ilbmt} = \alpha \frac{\text{Maturing_bonds } (\text{€})_{lt}}{\text{Total_bonds } (\text{€})_{lt}} \times \text{Manuf.CDS}_{bt} \times \text{Captive}_t + \dots + \epsilon_{ilbmt}$$

- I could imagine nonlinear elasticities here...

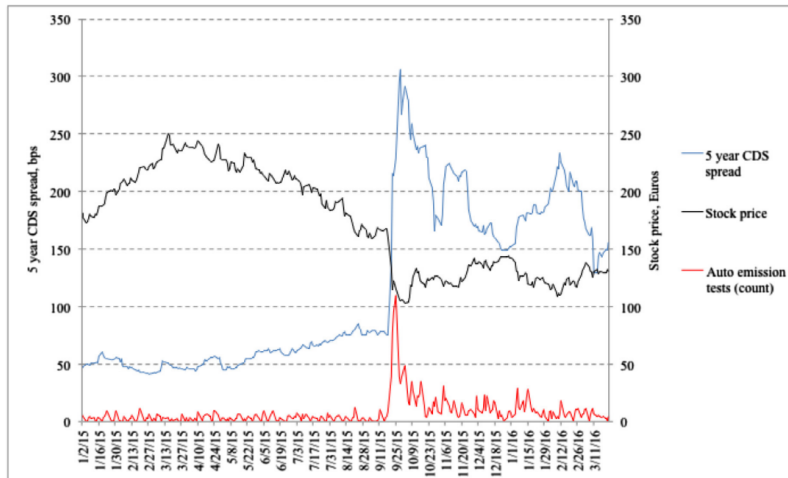
Identification

- But all of this is prologue for the main event (since manufacturer distress is endogenous):
- The authors instrument for manufacturers' funding costs using the Volkswagen emission scandal in September of 2015:

$$\begin{aligned}
 y_{ilbmt} = & \alpha Post_t \times Captive_t \\
 & + \theta X_{ilt} \\
 & + \gamma_l + \gamma_{bmt} + \epsilon_{ilbm}
 \end{aligned}$$

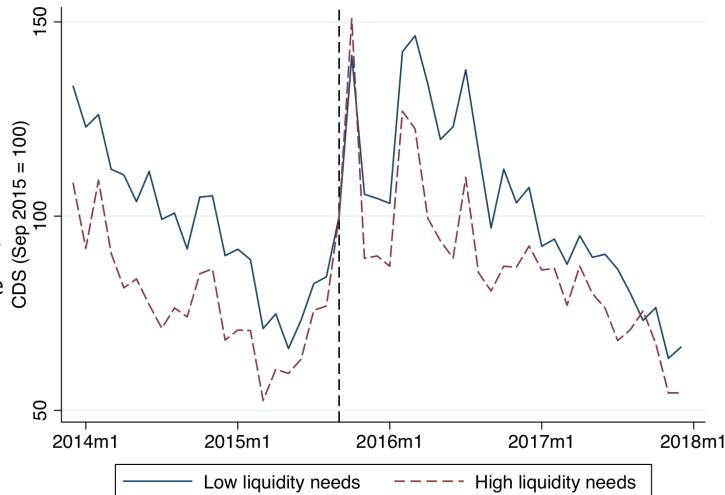
P.A. Griffin, D.H. Lont

Journal of Contemporary Accounting & Economics 14 (2018) 175



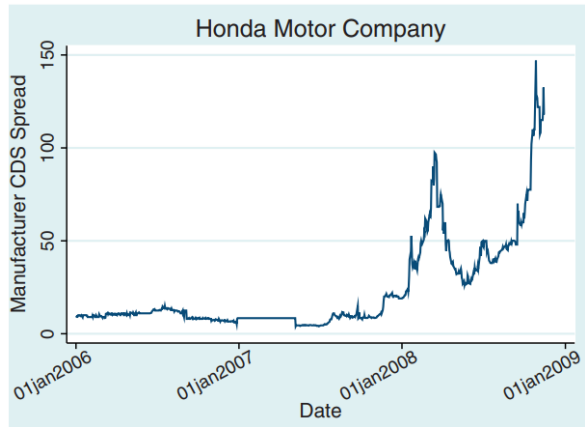
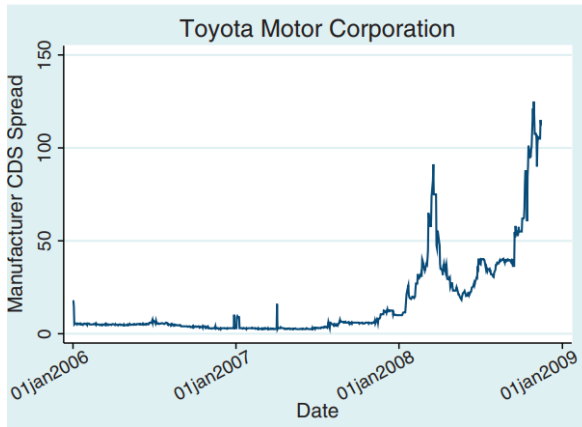
Internal Relevancy

- The CDS spike from VW seemed to dissipate quickly.
- Compare this to the magnitude of the effect on CDS spreads for other manufacturers (both those with low and high *liquidity needs*) within the same dataset (1/2):



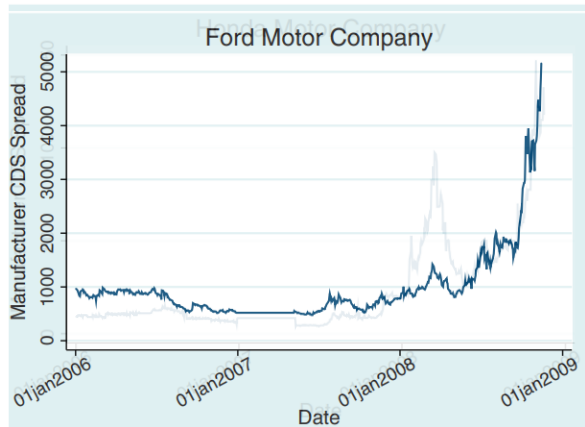
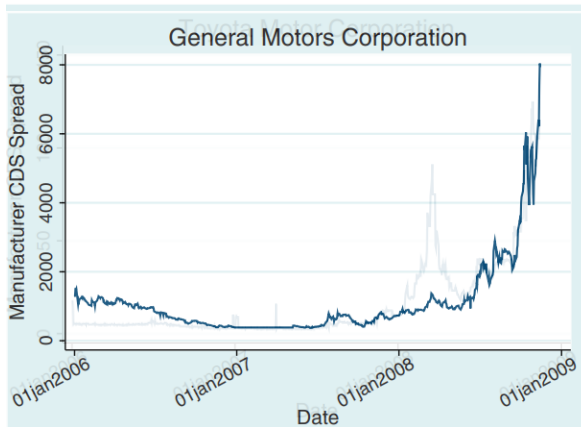
External Relevancy

- And also (2/2), compare this to the magnitude of the CDS spread in Hortaçsu et al. (2013):



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Analysis of the Instrument

- In addition to the VW figure, looking at this relationship in a regression framework could be illuminating (I want to know about conditional magnitudes and partial-F stats).
- This is an instrument for manufacturer distress, but the measure of *liquidity needs* (i.e., fraction of maturing bonds) is also not random, e.g. firms that are more likely to finance themselves with higher-turnover debt likely experienced more distress than low *liquidity need* firms.
- How to think about the imbrication of liquidity needs and “distress” ?
- The standard DiD pretrends analysis is also relevant.

Pontificating on Point Estimates

	<u>Loan Terms</u>				<u>Loan Standards</u>				
	Rate (%)	Maturity (log)	LTV (%)	Loan size (log)	Car value (log)	Income (log)	Other Employ (dum)	Income Verified (dum)	Arrears (dummy)
High Liq. Need									
$Post_t \times$ $Captive_t$	0.37*** [0.068]	-0.08*** [0.016]	-2.19*** [0.732]	-0.1*** [0.029]	-0.045 [0.029]	-0.027** [0.012]	-0.004 [0.014]	0 [0.000]	0.019** [0.009]
Low Liq. Need									
$Post_t \times$ $Captive_t$	0.092 [0.081]	-0.036** [0.016]	-0.641 [0.624]	-0.031 [0.020]	-0.013 [0.016]	-0.003 [0.015]	0.015 [0.010]	0.040*** [0.013]	-0.009 [0.017]

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Potential Path after Pontificating on Point Estimates

- Much smaller coefficients (including car value) if we exclude months right around the scandal (September, October, November of 2015), but that's a bit of a blessing and a curse.
- Manufacturing-year/lender-time FEs
- I wonder if limiting yourself to manufacturers that are the most direct competitors of VW would get there; the tradeoff is external validity for a potentially easier/more consistent story to tell

Magnitude of Effect

- Credit fire sales (by captive lenders) when experiencing a liquidity need and being capable of sustaining short-term losses, generate €4.21M
- Volkswagen group (around the time of the scandal) had ~ €86-108B in total debt.
- Should I think of this as a dimension that is applicable when formal debt markets are not accessible? (though that is difficult given that the increase in CDS spreads was modest).

Smaller Thoughts

- Why the 75/25 definition of high liquidity needs? How sensitive are the results to this definition?
- How much of this effect is driven by distress vs liquidity?
- Why is *verified income* collinear with the FEs in Table 8?

Conclusion

- This is a really cool paper examining the existence of an alternative mechanism for firm liquidity management: captive lenders and lending policy.
- I think more can be done to shore up the instrument to help guide the narrative.
- I'd like more help calibrating the magnitudes and the interpretation of the results.