Credit Fire Sales:
Captive Lending as Liquidity in Distress

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Summary

- <u>Narrative</u>: When CDS spreads increase for a car manufacturer, especially when that firm has lots of maturing debt, their captive financing arms adjust credit terms and lending standards for used car loans to generate cash for the parent manufacturer.

- <u>Causal question</u>: How does car manufacturer financial distress affect captive financing loan terms?

- <u>Strategy</u>: Use VW scandal industry-wide increase in CDS in diff-in-diff with (captive lender) * (post VW scandal).

- <u>Findings</u>: Relative to non-integrated lenders, captives
  1. Increase downpayments by 10%
  2. Increase interest rates by 36 bp   Generate cash
  3. Decrease maturity by 4 months
  4. Decrease average borrower income 2.5%
  5. Increase ex-post borrower default rate from 3.4% to 4.6%   Generate sales

Evaluating paper's main claim

- "We have shown that captive lenders…

1. decrease loan amounts and relax lending standards relative to stand-alone lenders ✓

2. <u>to generate liquidity</u> for the parent manufacturers…" ?

Outline of Comments

Is this really about generating liquidity for car manufacturers?

1. Capital Markets angle

2. Magnitudes

3. More plausibly about sales or quarterly earnings?

1. Capital Markets Details

Logic in the paper

Manufacturer CDS prices ↑

→ cost of financing ↑

→ especially bad when lots of debt maturing

→ manufacturer needs liquidity

→ captive adjusts credit terms and standards to
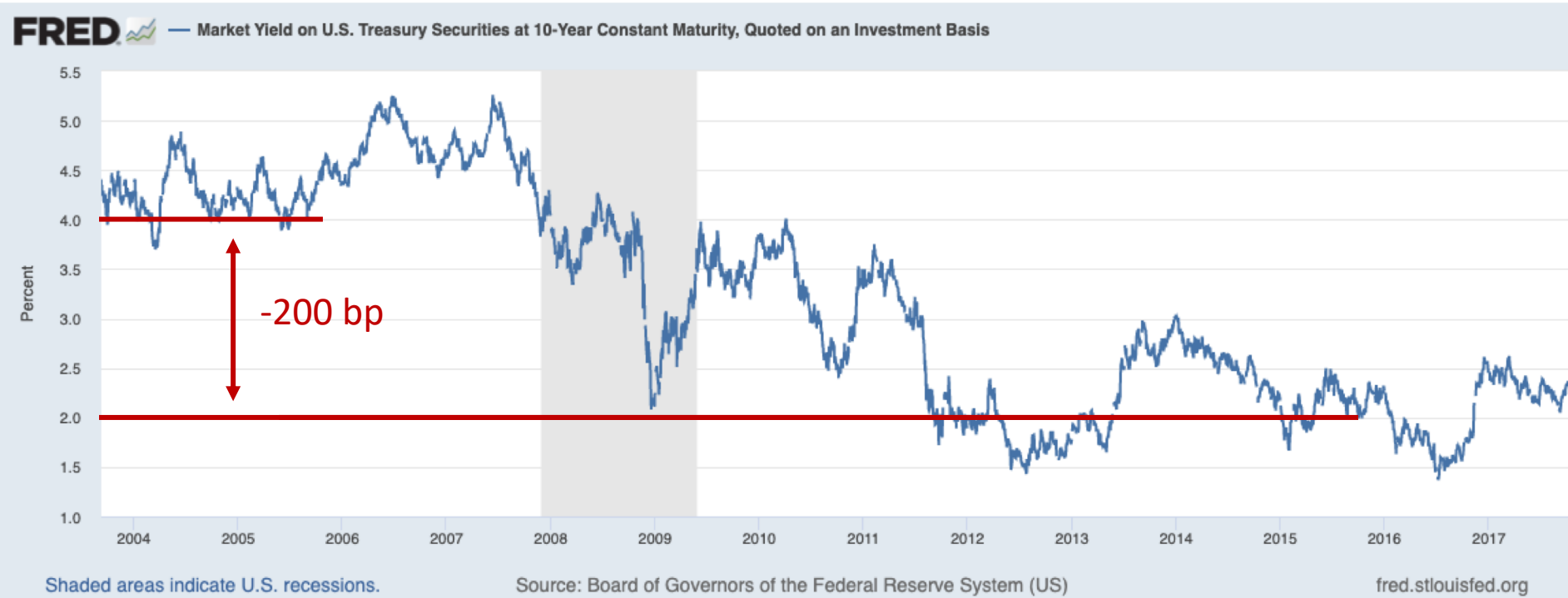
a) sell more cars

b) get more cash flow from car loans

Effect of CDS spreads on cost of financing?

Δ cost of financing = (rolling over debt) * Δr

- Quite plausible that if CDS spreads ↑ then issuance yields (Δr) ↑
- …but CDS-bond basis jumps around lots! (e.g., Mota, 2021)
- Would be nice to see for this set of firms at this time.
- Not necessarily a "sharp increase in cost of external funding"

- Moreover, because risk-free rates fell, fixed-rate bonds in ~2015 likely much cheaper than 2005-vintage maturing bonds

Decrease in long-run r* > increase in CDS

FRED — Market Yield on U.S. Treasury Securities at 10-Year Constant Maturity, Quoted on an Investment Basis

-200 bp

Shaded areas indicate U.S. recessions.

Source: Board of Governors of the Federal Reserve System (US)

fred.stlouisfed.org

Decrease in long-run r* > increase in CDS

FRED — Long-Term Government Bond Yields: 10-year: Main (Including Benchmark) for Germany

-250 bp

Source: Organization for Economic Co-operation and Development

fred.stlouisfed.org

Effect of CDS spreads on cost of financing?

- Not a foregone conclusion that liquidity needs actually went up.

- CDS → bond yield @ issuance passthrough not 1-1

- Long-run risk-free rates fallen

- However, this is observable! Straightforward to verify whether ~2015 issuance yields actually higher than issuance yields on 2005-vintage debt

- Useful to document the funding cost shock more.

2. Magnitudes

- Magnitudes seem small but could use more guidance on this.

- Change in lending practices by captives generates +€3.2 **million**/month for the average manufacturer

- Is this material to the average manufacturer? Relative to amount of rolling over debt and change in cost of that debt?

- Seems too small to matter by orders of magnitude, but fleshing out and roughly estimating the funding cost shock would help a ton

Credit fire sale vs. car fire sale magnitudes

- The rationale for credit fire sale seems straightforward because it's apparently so much cheaper than discounting cars

- Surprising given how elastic car buyers are to price! $\epsilon \sim$ -4
- Why isn't discounting the car the most effective thing given that elasticity? Implies 2% discount increases revenue by 0.98*1.08 = 6%
- Benefit of discounting cars in the model is only from captive sales

$$\overbrace{\Delta p \times \frac{M}{N}\alpha A(\bar{s}_j)(1-\theta)}^{\Delta p \times q:\ \text{Losses from inframarginal buyers}} \quad \overbrace{-\epsilon \times \Delta p \times \frac{M}{N}\alpha A(\bar{s}_j)(1-\theta),}^{\Delta q \times p:\ \text{Gains from marginal buyers}} \qquad (14)$$

- But given assumption of no price discrimination, should get increased revenue from sales financed by stand-alone lenders with no (1-θ) term

3. Plausible alternative stories

- Not clear actually a liquidity shock
- Not clear cash $\uparrow$ enough to matter
- Why not sell whole loans?
- So what else could be going on?
- Only 8 manufacturers so it's harder to average out unobserved shocks

- Posturing to increase sales or meet quarterly earnings? Help dealers?
- Parallel trends violation?

"I don't care how you do it, just sell more cars!"

Conclusion

- Captive financing subs. offer producers additional degrees of freedom
- When car manufacturer CDS spreads increase, seem to prefer changing lending terms and standards over cutting prices
- Holds after VW scandal shock to CDS prices, too

- Is this behavior really "to generate liquidity for parent manufacturer?"
- Do they need liquidity? Does this help? Other motivations?
- All addressable!