# Overview of Research on Corporate Liquidity, Risk, and the Financial Crisis

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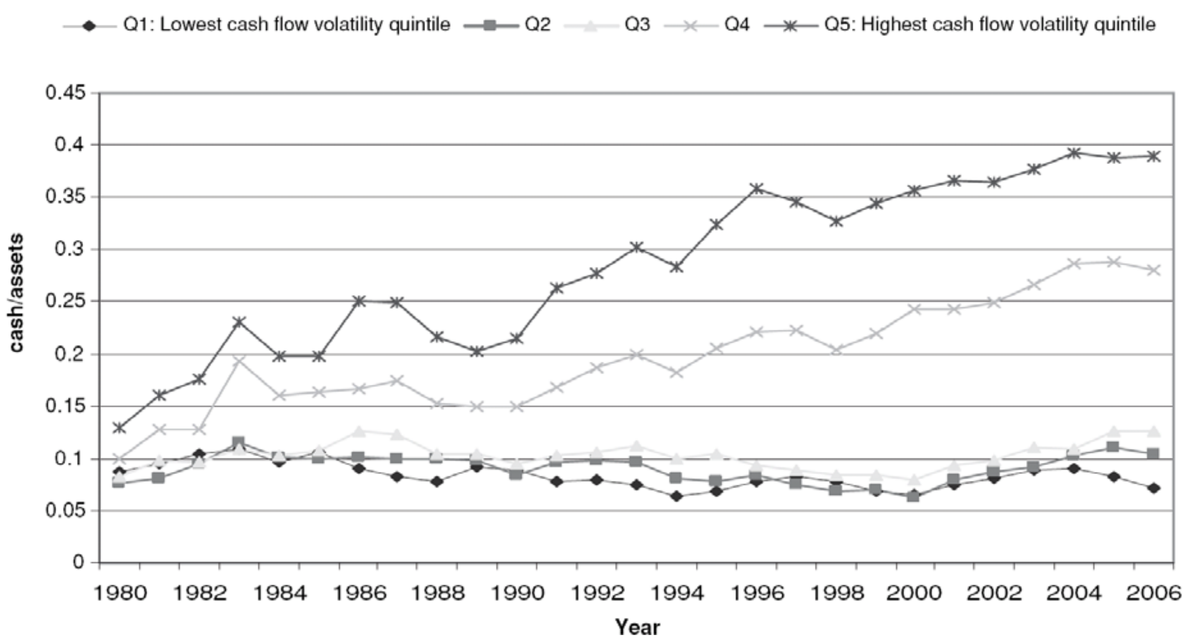
# What we knew about liquidity before 2008

- The Financial (*Liquidity*) Crisis thought us a few lessons on the importance of access to liquidity
- *But* researchers already knew a few important things
- Observing firm (cash) data we already figured…
  - Firms save cash "excessively" because markets are "imperfect"
  - Firms often have a fantastic new project/idea, but capital markets "can't see it", "don't believe it", "don't trust firm", "can't liquidate assets"
  - Almeida, Campello, and Weisbach (*JF*, 2004; *JCF*, 2011)
  - Acharya, Almeida, and Campello (*JFI*, 2007)

| Dependent Variable $\Delta CashHoldings$ | Independent Variables | | | |
|---|---|---|---|---|
| | *CashFlow* | *Q* | *Size* | $R^2$ |
| Financial Constraints Criteria | | | | |
| 1. Payout ratio | | | | |
| Constrained firms | 0.0593 | 0.0029 | 0.0019 | 0.28 |
| | (4.53)* | (2.41)** | (0.61) | |
| Unconstrained firms | −0.0074 | 0.0001 | 0.0001 | 0.28 |
| | (−0.28) | (0.01) | (0.05) | |
| 2. Firm size | | | | |
| Constrained firms | 0.0620 | 0.0016 | −0.0014 | 0.26 |
| | (4.12)* | (1.65) | (−0.28) | |
| Unconstrained firms | 0.0099 | 0.0015 | −0.0035 | 0.17 |
| | (0.47) | (1.52) | (−1.55) | |

# What we knew about liquidity before 2008

- We also noticed that firms were accumulating cash as never before in the years leading up to the crisis
- Accumulation was pronounced across "riskier firms" [Bates, Khale, and Stulz (*JF*, 2009)]
- *Rationale*: "Overall economy is switching to a service economy, where firms are fast-growing, start early/small, at the cutting edge of technology, have little hard assets to serve as collateral"



# Liquidity: Lessons from the Financial Crisis

- *Then there is a systemic liquidity crisis!*
- The news brought about by the crisis is that capital markets can fail altogether: Lehman-type events can happen
- *External liquidity may just disappear!*
- Firms with more internal savings (*cash*) did better in the crisis
  - Campello, Graham, and Harvey (*JFE*, 2010)
  - Duchin, Ozbas, and Sensoy (*JFE*, 2010)

*Panel A: Cash reserves and average investment*

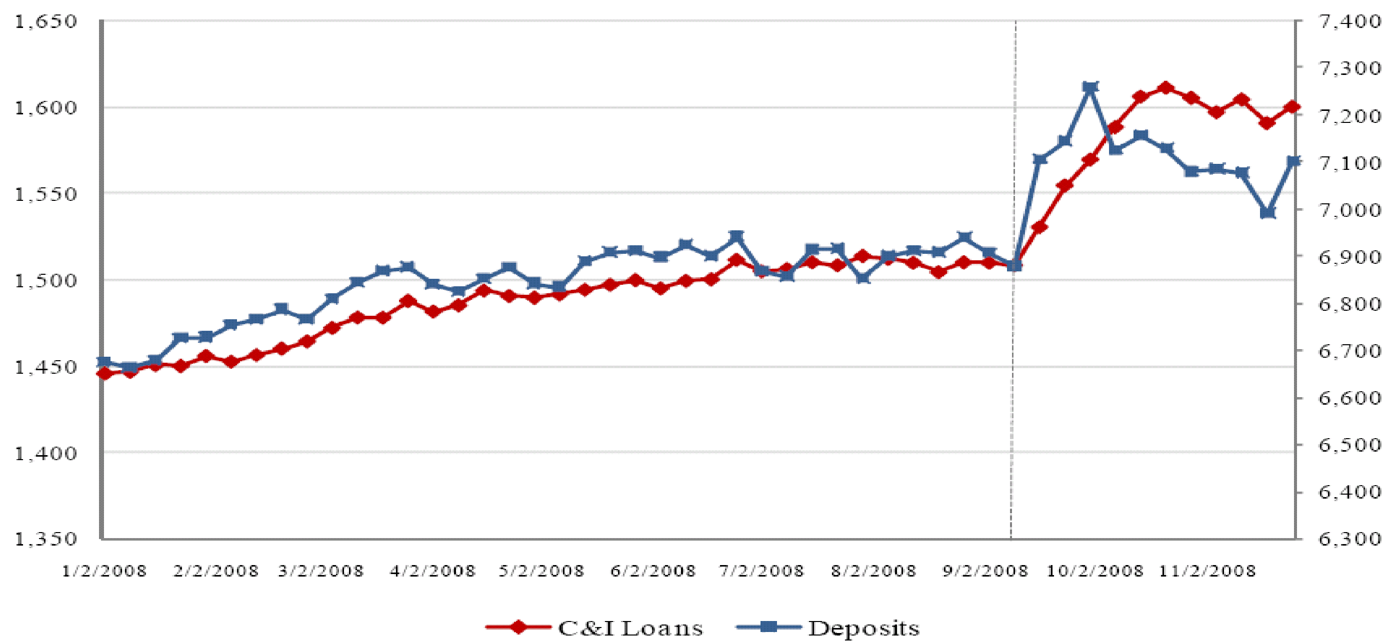
| | Before crisis | After crisis | *t*-Statistic (difference) |
|---|---|---|---|
| Low cash reserves | 2.010 | 1.758 | 2.707 |
| Medium cash reserves | 1.875 | 1.795 | 0.937 |
| High cash reserves | 1.346 | 1.344 | 0.022 |

# Liquidity: Lessons from the Financial Crisis

- Cash was fairly abundant, but not everywhere, and firms quickly ran out of cash… *Enter Lines of Credit*
- *No new lending! Just firms drawing down on their pre-existing LCs!* [Ivashina and Scharfstein (*JFE*, 2010)]

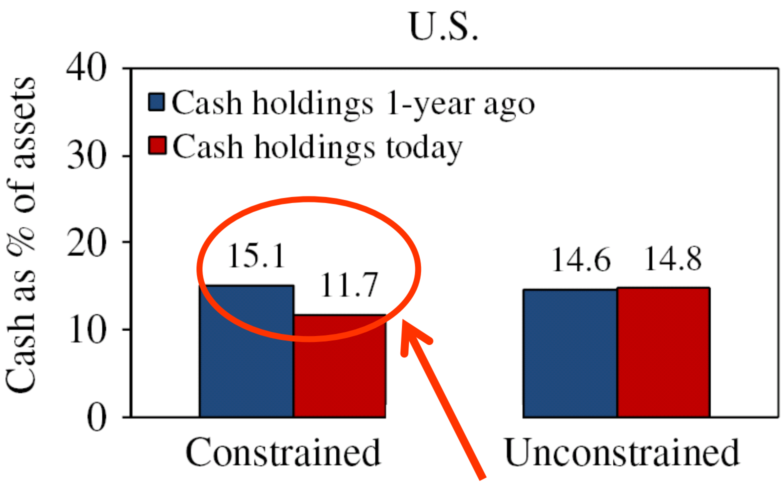
**Figure 5: Commercial and Industrial Bank Credit and Deposits (Billion USD)**

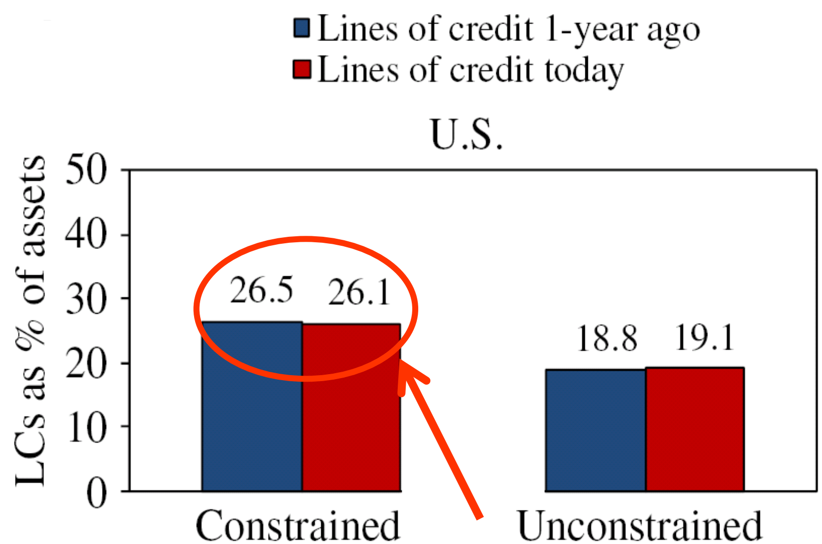
Compiled from Federal Reserve Statistical Release, includes commercial banks in United States (seasonally adjusted).



# Liquidity: Lessons from the Financial Crisis

- As it tunred out, access to LCs was *crucial* for corporate liquidity management during the crisis
- Campello, Graham, and Harvey (*JFE*, 2010) ask 1,050 CFOs in 40 countries about their cash and LCs in Jan. 2009 (*pretty bad!*)
- *And U.S. CFOs say*:




*One year into FC cash down by 25%!*

*LCs remain constant*

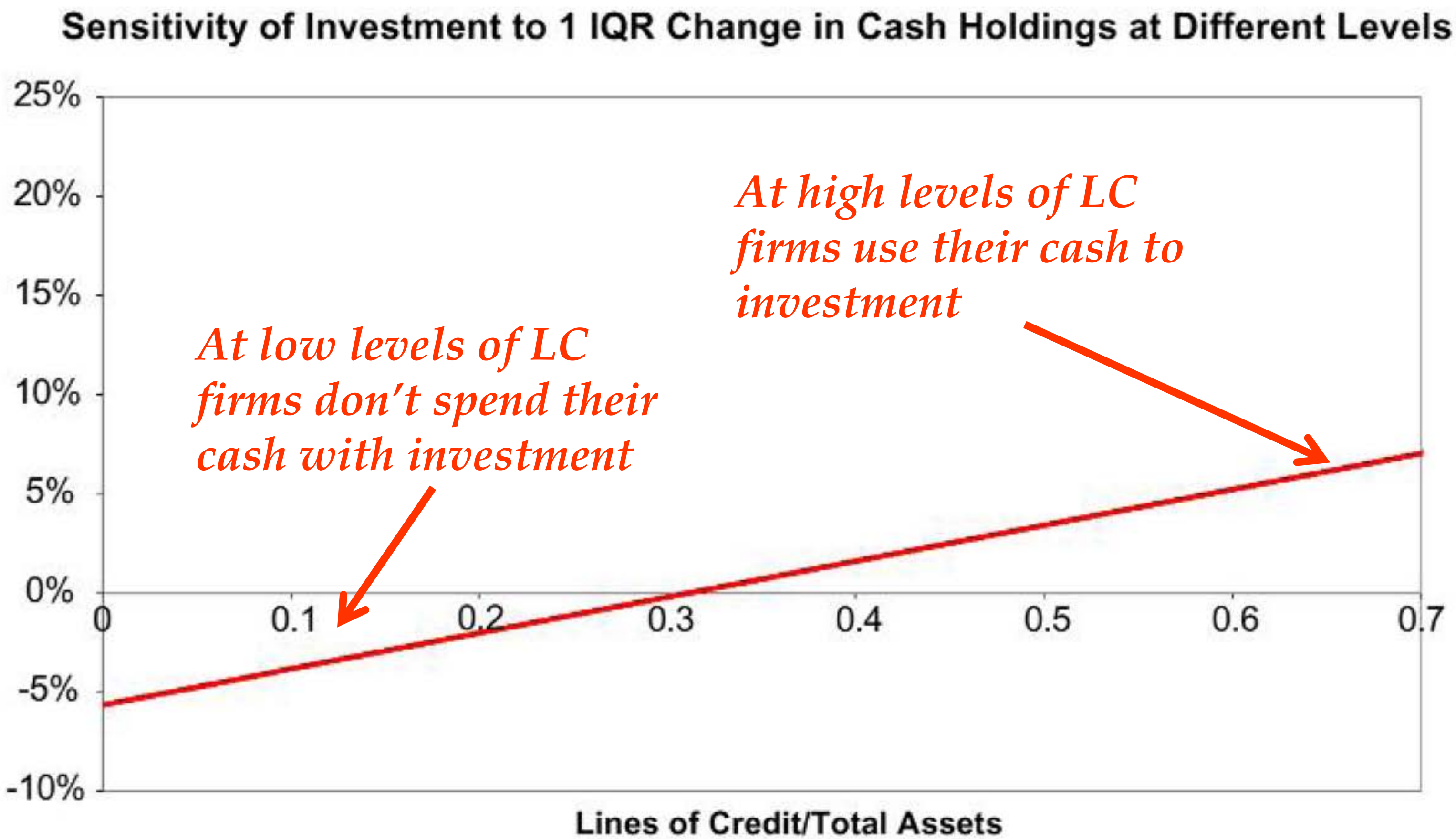
# Liquidity: Lessons from the Financial Crisis

- *OK*: LCs were available
- *But*: Did firms really draw down LCs? Did the terms change?
- What did firms do with liquidity under LCs?
- Campello, Giambona, Graham, and Harvey (*RFS*, 2011; *RF*, 2012) ask CFOs in the U.S. and Europe

| Panel A: Basis Point Markup on LIBOR/Prime Rate | In 2009 | In 2008 | Difference 2009 − 2008 |
|---|---|---|---|
| Small | 196.790 | 127.511 | 69.278*** |
| Large | 152.300 | 109.272 | 43.028** |
| Diff. Small − Large | 44.490 | 18.239 | |
| Private | 195.229 | 124.340 | 70.889*** |
| Public | 161.963 | 123.360 | 38.603** |
| Diff. Private − Public | 33.266 | 0.980 | |
| Non-Investment Grade | 189.299 | 119.179 | 70.120*** |
| Investment Grade | 184.074 | 155.037 | 29.037 |
| Diff. Non-Inv. − Inv. Grade | 5.225 | −35.858 | |

# Liquidity: Lessons from the Financial Crisis

- What do firms do with LC liquidity?
- Does it work together with cash in overall firm liquidity?
- Does it affect *real-side decisions*; e.g., investment, hiring, R&D?



# Perverse feedback into the Crisis

- We learned that LCs worked as *liquidity insurance* in FC! *Great!*
- But, firms did draw down their LC funds "strategically" (*even when they didn't need, just for fear banks will run out of funds*)
  - Ivashina and Scharfstein (*JFE*, 2010); Campello et al. (*JFE*, 2010)

| Policy | Constrained | Unconstrained | Diff. const. – unconst. |
|---|---|---|---|
| Liquidity needs | 0.504*** | 0.282*** | 0.222*** |
| | (10.77) | (13.34) | (4.62) |
| Strategic timing | 0.165*** | 0.059*** | 0.106*** |
| | (4.75) | (5.35) | (3.76) |

- Riskier firms' strategic behaviors, in turn, created problems for financial institutions with a lot of LC outstanding
  - Think, among others, CIT Group (bankruptcy in Nov., 2009)
  - LCs, too, may create pervesive incentives