Credit Misallocatin During the European Financial Crisis

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Disclaimer: The views expressed in this presentation are my own and do not necessarily represent the views of the Bank of England

This paper

Two questions:

- ✓ Do banks with low capital engage in zombie lending?
- ✓ What is the economic cost?
  - Impact on performance of healthy firms?
    - Absolute terms, not only relative to zombies
  - Impact on allocative efficiency?

Data

- ✓ Universe of Italian firms 2007-2013
  - Credit registry: all loans granted by Italian banks →bank-firm link
  - Firm registry: balance sheet all firms
  - Supervisory data: balance sheet all banks

- ✓ Main advantages
  - Small and large (publicly listed) firms
  - All lending (not only syndicated loans)
  - Control for demand for credit (Khwaja & Mian, 2008)
  - Real effects

Main findings

- ✓ LowCap banks extended relatively more credit to zombies relative highCap banks
  - Credit misallocation
- ✓ Economic cost
  - Increased failure rate healthy firms and reduced for zombies
  - No impact on performance healthy firms
  - No impact on TFP dispersion
- ✓ Conclusion: capital misallocation because weak banks engaged in zombie lending has at best been modest

What I like

- ✓ Extremely relevant topic
- ✓ Comprehensive
- ✓ Easy to read
- ✓ Tight identification
  - Very detailed data
  - Additional evidence
- ✓ Both relative and absolute performance of healthy firms
- ✓ Study all firms, not only large firms

My comments

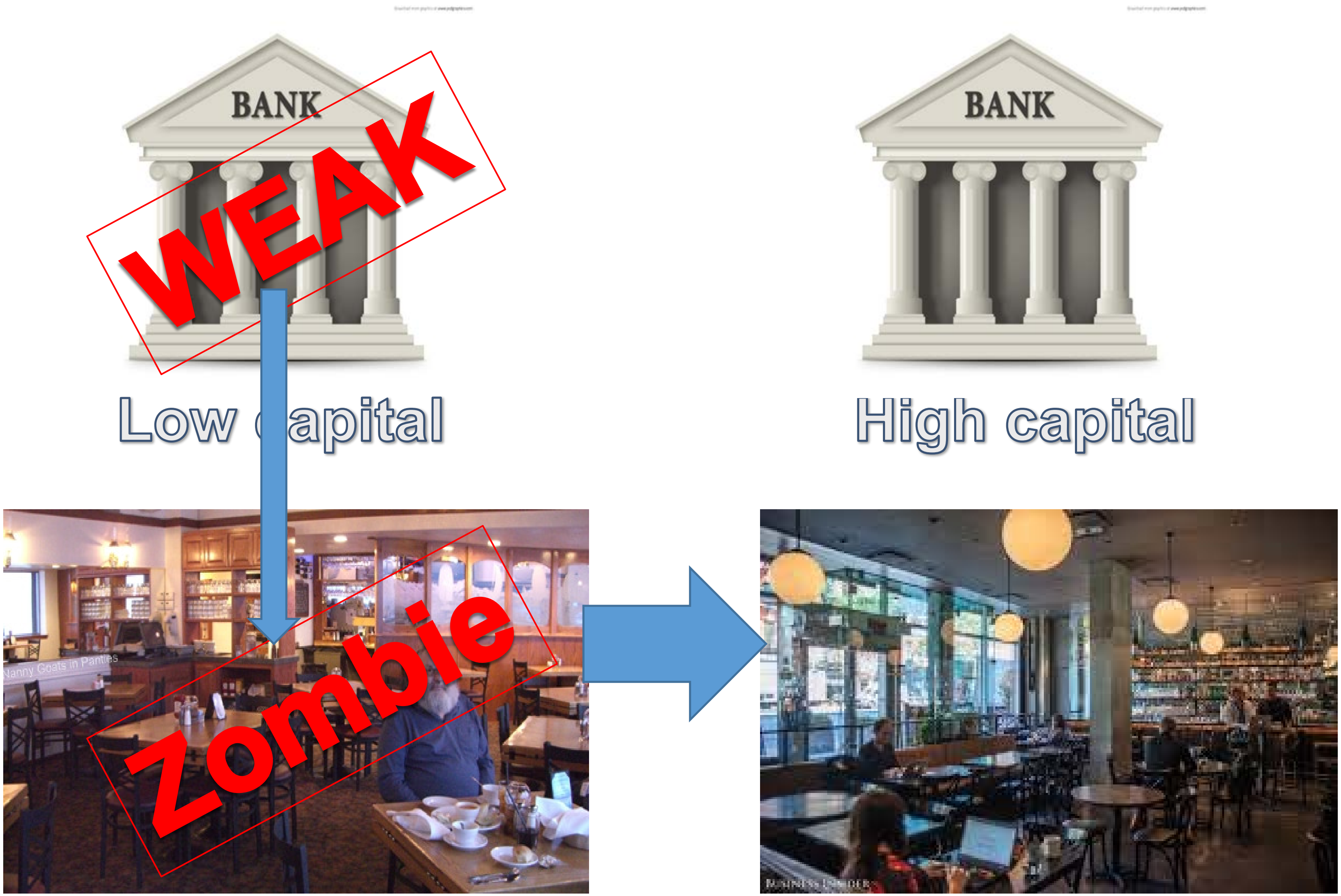
- ✓ What is a LowCap bank?
- ✓ What is a zombie?
- ✓ Why no impact on performance?

Paper in a nutshell

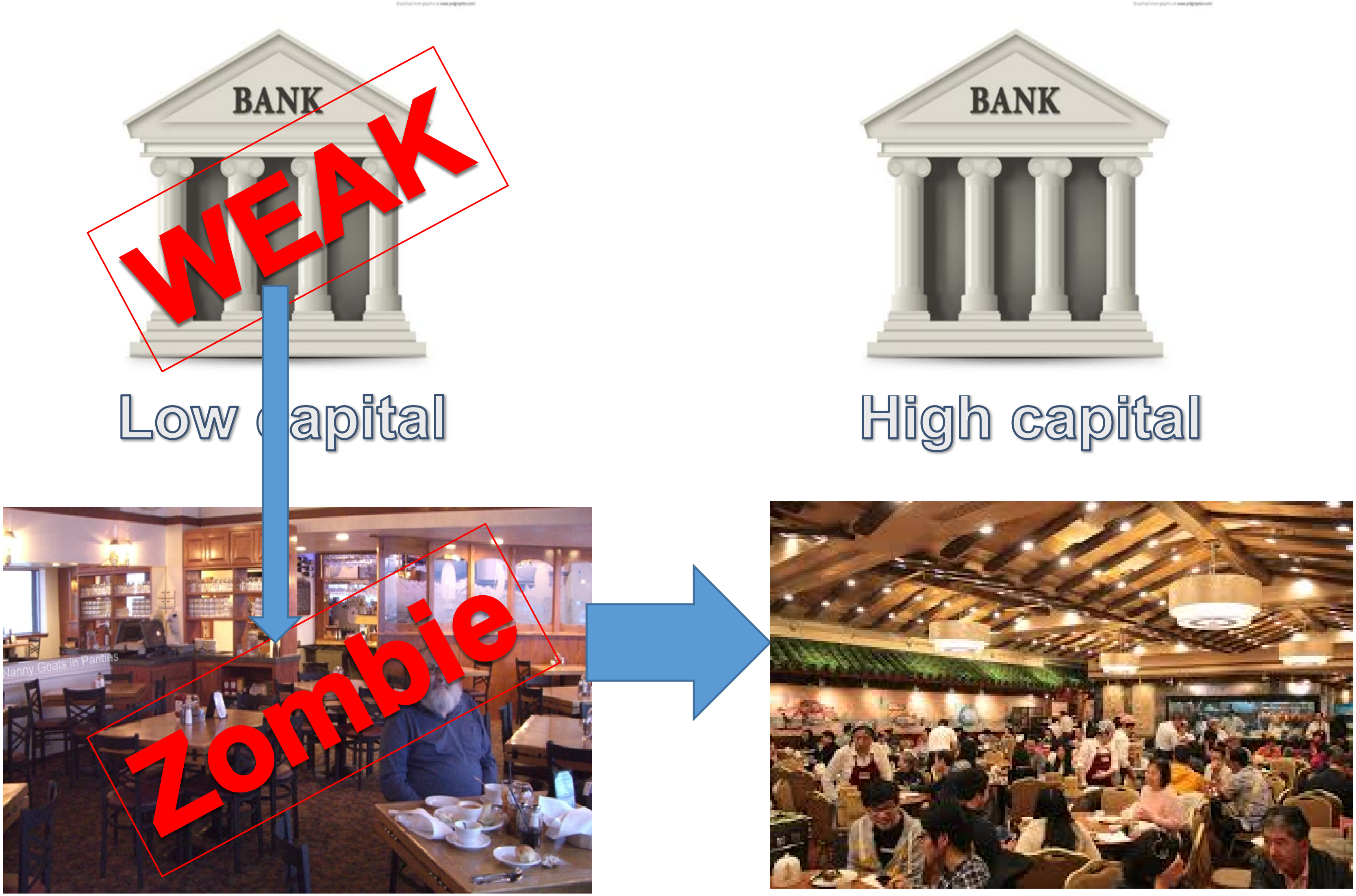
Low capital

High capital

Paper in a nutshell



Paper in a nutshell



Does LowCap really mean weak?

- ✓ HighCap banks can be weak
  - During this crisis period many Italian banks under strong pressure to boost their capital
- ✓ LowCap banks can be strong
  - Some large international banks
  - Foreign owned banks
- ✓ Not so clear that LowCap proxies for weakness
- ✓ Alternative stories

Role of foreign banks

	Mean	St. Dev.	Median	p25	p75	Obs
Bank regressors:						
LowCap	0.241	0.428	0	0	0	2,287,690
Capital Ratio	11.32	11.09	10.16	12.09	2.36	2,287,690
LowCap yby	0.44	0.5	0	0	1	2,287,690
Liquidity ratio	7.14	6.66	4.2	10.15	4.56	2,287,690
Interbank ratio	7.92	5.94	3.56	9.06	8.14	2,286,616
Bank roa	0.03	0.22	0.07	0.44	0.66	2,286,616
Bank size	11.58	11.8	10.4	13.3	1.82	2,287,690

Suggest some/all foreign banks are LowCap

Role of foreign banks

- ✓ Trade collapse during global financial crisis
- ✓ Exporters lower demand for credit
- ✓ And exporters more likely relationship with foreign bank (Claessens & Van Horen, 2016)
- ✓ If exporters more likely healthy
- ✓ Could explain reduction in lending to healthy firms relative to zombies without misallocation of credit

Zombie firms

- Zombie-lending: loans granted to firms that clearly are no longer viable
  - Firm unable to meet its financial obligations
- Three definitions
  - ROA < Prime + Leverage > Threshold (preferred)
    - ROA = 3-year average of EBIT over TA
  - Profit/interest payment <1 + Leverage > Threshold
  - PC of continues zombie and leverage variables

Zombie firms

- ✓ Prime rate: average interest rate on new loans granted to safest firms
- ✓ Safe based on Z-score
  - Profitability, leverage, liquidity, solvency & activity
- ✓ Interest rates also determined by size, age, sector (presence collateral)
- ✓ Benchmark full sample, not comparable firms
- ✓ Suspect: some small/young zombies classified as healthy
  - Actual interest rate expenses higher for these firms

Zombie firms

- ✓ Start-ups/high growth firms
  - High leverage and negative profits (investment)
  - But high-growth and high expected marginal returns
  - Classified as zombies
- ✓ 3-year *average* growth rate revenues much lower for zombies
  - Not enough to rule out some zombies are actually high growth firms
- ✓ Drop start-ups altogether /Add condition?
  - 3-year average growth rate? (similar to zombie3)
- ✓ Negative profit but limited leverage = healthy

Bank-firm relationships

- ✓ Hypothesis: weak banks helping zombies to avoid or delay recapitalization imposed by regulators
- ✓ Expect especially if bank has more to lose when firm fails
- ✓ But, no differential impact for zombies that receive large share credit from LowCap
- ✓ Loan relative to total lending bank, not total borrowing firm
  - Differentiate between clients whose default would matter more for the bank

Impact performance healthy firms

- ✓ Misallocation credit towards zombies can affect healthy firms
  - ✓ (-) implicit subsidy
  - ✓ (-) Crowding out
  - ✓ (+) Aggregate demand externalities
- ✓ No impact on performance, different from the literature
- ✓ Why?

Impact performance healthy firms

- Importance aggregated demand externalities
  - Tradable vs non-tradable sector
  - Exploit input/output tables
- Importance crowding out
  - Only if credit is truly scarce
  - Financial crisis vs sovereign debt crisis
    - Impact QE and LTROs?
    - SAFE Surveys to assess the credit conditions
    - Are results different when credit indeed scarce?

Conclusion

- ✓ Great paper
- ✓ More evidence that LowCap banks are truly weak and zombies are truly zombies
- ✓ Reasons why healthy firms not affected

THANK YOU