# Risk Shifting and Regulatory Arbitrage: Evidence from Operational Risk

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# Summary

- Capital constrained banks took on operational risk to shift their risk profiles and effectively engage in regulatory arbitrage.

- Show weaknesses in regulations provide incentives for banks to shift their risks towards less regulated risk type – operational risk.

- Using operational risk as a mechanism for risk arbitrage leads to its rise as a leading risk type.

- Banks operating closer to their regulatory capital minimums exhibit more risk shifting behavior.

# Data

- Unique data set of operational risk events from large U.S. banks (cross-sectional nature) covering the entire “parallel run” period.

- Detailed information of each loss event: occurrence date, discovery date, and accounting date.

- Representative – 64% of the total commercial banking assets in the U.S. over the sample period

# Method

$$OpsExposure_{it} = \alpha_i + \delta_t + \beta CapitalRatio_{it-1} + \gamma X_{it-1} + \epsilon_{it}$$

- Two measures of risk exposure: 1) equally weighted 2) cumulative
- Two measures of capital ratio: 1) tier one regulatory capital ratio 2) leverage ratio

# Contribution

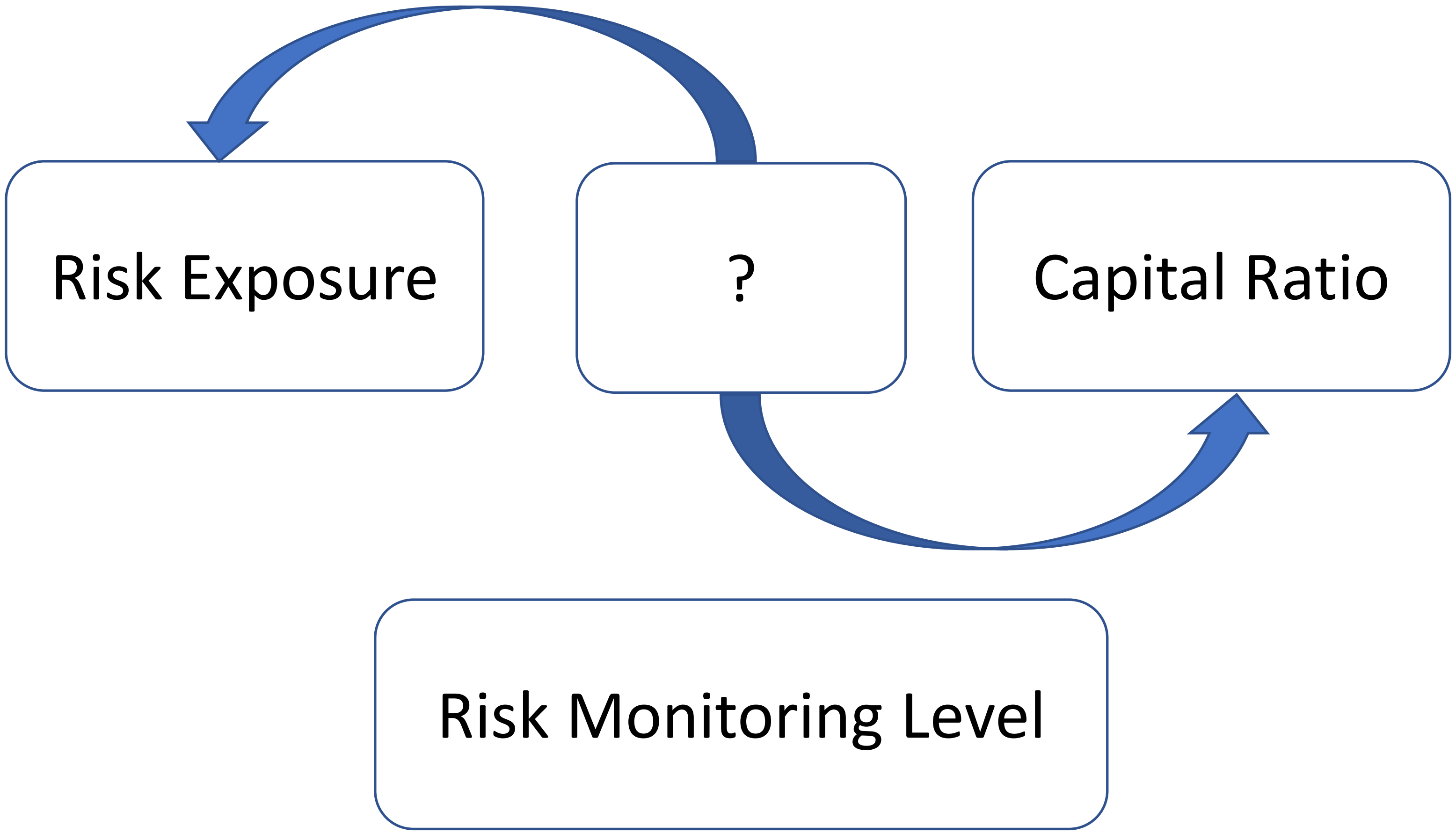
- Financial regulation literature – operational risk allows banks to leverage up while still complying with regulations
- Regulatory arbitrage literature – regulatory arbitrage in the banking industry does not necessarily have to involve complex financial instruments

# Highlights

- An important question – 25% of large banks' risk profile
- Operational risk as a mechanism for risk arbitrage -- no need of complicated/innovative financial products/instruments (the paper explains clearly how operational risk acts as a channel to affect the entire economy)
- Considerable amount of mergers and acquisitions – manually search for the acquisition date for every loss that was coded as being from an acquisition, and then drop losses whose accounting date is prior to the acquisition
- Very thorough robustness checks from multiple perspectives

# Suggestions

- Relationship between risk exposure and capital ratio – complicated behavior issues



# Suggestions

- Details of risk events – maybe categorize the event types and incorporate some event specific covariates, more detailed explanation on what type of events

- More explanation on control variables in the regression function – features of different banks, cross-sectional data

- Operational risk exposure – 1) spread loss event amounts between the loss occurrence and discovery dates (continuous?) 2) assume banks take operational risk as a fixed proportion of total assets (more references?)

# Potential Future Directions

- Internal bank data to study other root causes of operational risk events – combine with bank operations data (workload, employee stress, incentive issues)

- Study the data after 2012 Q4, see whether risk shifting behaviors have been changed

- Look into patterns of time lag between occurrence date and discovery date – combine with other factors to understand the causes of different time lag (how and who)

# The End