Banker Compensation and Bank Risk Taking: The Organizational Economics View

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Discussion by

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Day Ahead Conference, January 2, 2014, Philadelphia

Summary

- Compensation of bank employees

- The literature usually focuses on a single-agent (CEO)

- This paper focuses on a multi-agent model

- Compensation of bank employees below the CEO level

- Compensation to encourage/discourage risk and correlation in bank returns

<u>Summary</u>

- Organization is more complex that cannot be captured by single-agent models.

- Loan officer originates the loan.

- This is reviewed by a loan reviewer (underwriter).

- How should we design compensation to incentivize different agents?

Loan officers

- A continuum of loan officers.

- Return from the loan depends on an idiosyncratic factor (specific to the loan officer) and an aggregate factor.

- Loan officer has a reservation utility so needs to be compensated accordingly.

- Loan officer is risk-averse.

Bank

- The bank is mostly financed with insured deposits.

- Limited liability + deposit insurance = incentive to shift the risk to the deposit insurance fund.

- Action taken by the loan officer affects the return.

- Higher action a results in higher outcomes but is costly for the loan officer ($V(a)$).

Compensation problem

- Max Bank's profits

  s.t.

- Participation constraint of the loan officer

- Incentive compatibility constraint of the loan officer to implement the desired action

Compensation problem

- Higher actions have higher returns.

- LR = Likelihood of a return r under a lower action compared to a higher action.

- Standard moral hazard problem: Compensation decreases as the likelihood ratio increases.

- Social welfare requires high action.

- Bank may prefer low action if it allows the bank to shift the risk to the deposit insurer.

Compensation problem (Correlation)

- Multi-agent problem where correlation becomes important.

- Independent returns:

- Law of Large Numbers: The bank's return is deterministic.

- Implement the action that maximizes bank profits.

- Loan officer action and bank risk are unrelated.

- Bank cannot shift risk to the deposit insurer. Outcome socially optimal, no need to regulate.

Compensation problem (Perfect correlation)

- No idiosyncratic risk, only aggregate risk factor θ.

- Bank can infer the action chosen and pay a wage if that is the required action (relative performance contract)

- Bank return is uncertain so the bank can shift the risk to the deposit insurer.

- Bank chooses an action that is less than the socially optimal (risk shifting).

Compensation problem (Partial correlation)

- Effort affects **mean return**. Implementing high action requires:

  – Contract pays a constant compensation when the return is high.

  – When the return is low, pays a lower compensation when the bank return is higher.

- Effort affects **correlation**. Safe (low correlation) project:

  – Bank rewards no correlation and punishes high correlation.

  – Bank can reward poor performance more than high performance.

Loan review and team production

- For both loan officers and loan reviewers, optimal compensation depends on the return r as a function of the LR.

- Action of the other agent affects compensation.

- Loan reviewer process is another important factor that can help control risk.

Overview

- The paper provides an analysis of compensation schemes to induce certain behavior.

- More importantly, the compensation scheme depends on the organization of the institution.

- Hence, we cannot think of compensation in isolation.

- How is correlation determined? Industries/sectors, regions bank operates in? Effect of compensation?

Overall

- The paper focuses on an important question and brings in interesting insights.

- Some compensation schemes are more realistic than others (pay less when the employee does well when the bank performs poorly to induce low correlation).

- Compensation and short horizon.

- Can have parallels with herding literature.