

An Analysis of Bank Closure Policy under Alternative Regulatory Structures

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Many countries have multiple regulatory agencies that oversee the activities of deposit-taking institutions (DTI). In Canada, for example, the Office of the Superintendent of Financial Institutions (OSFI) is responsible for prudential supervision, while the Canadian Deposit Insurance Corporation (CDIC) is responsible for managing the deposit insurance fund and for the resolution decision for a failed DTI. Multiple agencies are by no means the rule, however, and numerous countries have chosen to consolidate their bank regulatory regime. This raises the question of what trade-offs there might be from maintaining separate agencies versus amalgamation.

This study develops a theoretical model of banking under alternative regulatory regimes. These regimes are defined by their organizational structure, as well as by the closure and resolution policy. Closure policy is a set of rules that describe the conditions under which a regulator or supervisor will intervene in the operations of a bank. Resolution policy describes the way in which a bank will be wound up in the event that it is closed. Various resolution options are described below.

The study's purpose is to determine which delegation of responsibilities between supervisory authorities facilitates an efficient allocation of credit and proper risk management among banks. The effect of separating the closure and resolution decisions between two agencies (a dual regime) instead of keeping both decisions within a single institution (a meta-regulatory regime) is analyzed.

The study incorporates two standard features of banking models: moral hazard and market

discipline. Moral hazard exists because the owners of a bank can be tempted to choose an excessively risky loan portfolio. When the majority of its creditors (i.e., depositors) are insured by a third party (the deposit insurer), then the bank bears little of the downside risk associated with its lending choice and has an incentive to take such risks. If its loans perform badly, the owners of the bank have the option to exit, leaving the deposit insurer to bear the residual costs of the bank's failure.

A supervisor can mitigate these incentives by establishing capital requirements for banks. Binding capital requirements provide the bank with an incentive to more efficiently manage the risk inherent in its assets. In this case, if the loans perform poorly, the owners' capital will be exhausted first, before the deposit insurer incurs any losses. This study finds that higher capital requirements do, indeed, reduce risk shifting. However, the cost of increasing capital requirements is reduced intermediation. Namely, some welfare-enhancing projects will be abandoned by banks that are not willing to set aside the requisite amount of capital.

Market discipline, the second feature modelled in this study, is represented by the amount of uninsured deposits that a bank accepts relative to the amount of its insured deposits. Uninsured depositors bear some of the risk in a bank's lending decision, while insured depositors do not. Consequently, uninsured depositors will demand greater compensation for that risk. Since this increases the bank's cost of funding, it may reduce its incentives towards excessive risk taking.

Combinations of market discipline and capital regulation are interwoven in the various regulatory regimes. This research shows that although regulatory structure is important, effectiveness requires the presence of market discipline.

* This article summarizes a recently published Bank of Canada working paper (Caldwell 2005).

Closure and Resolution Policy

Regardless of the regulatory regime, regulators are modelled in this study as having to choose conditions under which a bank will be closed. The same factors that determine insolvency in a commercial enterprise affect the decision to shut down a bank. But concerns about financial stability, together with the perceived “specialness” of the banking sector further complicate the policy for closing a bank. More recently, a trend in developed countries has been towards early-intervention policies, whereby the bank is shut down by supervisory authorities well before it becomes insolvent.¹ This trend reflects several factors, including historical experience with forbearance, by regulators; excessive gambling by banks that were, in fact, insolvent; and a recognition that accounting measures of bank capital, based on historical costs, may be inaccurate and potentially misleading.

Once a bank is closed, the model enables the regime to choose between two resolution options: *liquidation*, whereby the bank's assets are sold off and funds are retrieved by creditors based on a predetermined ordering; or *purchase and assumption*, where the bank is recapitalized by authorities and then merged with a healthy bank. With the second option, there is a multitude of possible acquirers, but this is left unmodelled.²

Either resolution option has its trade-offs. If a closed bank is liquidated, there is an assumed recovery cost. This could be explained by asymmetric information problems with bank loans. In particular, the purchaser of the failed bank's loans does not know the quality of the borrowers as well as the originating bank. Consequently, liquidation can be costly since assets are sold off. If, instead, the bank is merged with another, there is less need to sell off the entire portfolio of assets. Creditors tend to receive more favourable payoffs under mergers.

1. In an early-intervention regime, a bank is closed if its capital falls below a predetermined threshold or if the supervisor judges that insolvency is a material risk. For a discussion of the evolution of the safety net in Canada including the early-intervention framework, see Engert (2005).
2. The bank could remain separate but with new management; another private bank could acquire it; or it could be nationalized. Each of these options share some notion of recapitalization.

These arguments suggest that merging a failed bank after closure is efficient. But this does not necessarily imply that a merger policy is optimal. If a bank's creditors do not believe that it will be liquidated, if closed, they will not demand as much compensation for risks incurred by the bank. Consequently, the incentives for the bank to take risks are heightened by the implicit guarantee associated with a resolution policy of mergers. This leads to increased risk, since the lending decisions of the banks will not be as prudent as they would if banks faced a greater likelihood of liquidation after closure.

Choice of Regulatory Regime

Given the choices involved in closure and resolution, what is the socially optimal regulatory regime for the various agencies that make these decisions? The academic literature provides some guidance about when to close a bank (Acharya and Dreyfus 1989) and whether a central bank or supervisor should have this responsibility (Repullo 2000; Kahn and Santos 2001). There is little guidance about the optimal resolution regime, however. On the policy side, Garcia (1999) discusses issues concerning coordination between supervisors, central banks, and deposit-insurance agencies. He concludes that there is considerable heterogeneity in regime choice across countries.

This study endogenizes the choice between two regimes: a dual regime and a meta-regulatory regime. In a dual regulatory environment there is a separation of responsibilities between the supervisor and the deposit insurer. The former is responsible for establishing minimum capital requirements and thresholds for intervention (i.e., closure). The latter is responsible for the resolution decision. In a meta-regulatory regime, all these responsibilities lie with a single supervisory agency.

Although regime is important, the objective or mandates of the decision makers also affect the eventual outcome. This study assumes that the supervisor is concerned with choosing the regulatory regime that maximizes the expected overall wealth of all participants. Better regimes have better possibilities for expected wealth, since banks are given incentives to take on efficient levels of risk. Namely, the private gains of bank intermediation are aligned with the public benefits.

Conversely, the deposit insurer's objective is to protect insured depositors but also to resolve closed banks in a manner that is the least costly to the agency. The result of these separate mandates is that when a deposit insurer must determine the resolution decision, it tends to lean more towards liquidation than a bank supervisor would. This tendency reflects the deposit insurer's narrower mandate for protecting insured depositors and itself from losses.

Conclusion

This study found that regimes that separate the supervisor from the deposit insurer always perform at least as well as the amalgamated meta-regulatory regime. The meta-regulator's objectives increase its proclivity towards the choice of merger for a failed bank. This weakens the incentives of uninsured creditors to discipline the bank's risk taking. The consequence is a greater likelihood of bank failure, unless the meta-regulator imposes stronger capital requirements.

The least costly resolution (the resolution objective of an independent deposit insurer) might not be as efficient a choice in a world where a bank has actually failed; however, this study found it to be more efficient prior to indications of a bank failure, since it mitigated excessive risk taking by banks. A further benefit is that the supervisor need not impose strong capital requirements to get the most efficient level of risk taking and credit allocation.

The dominance of the dual regulatory regime over meta-regulation was found to rest on the exercise of market discipline. If the proportion of uninsured to insured deposits reached a critical mass, then the dual regulatory regime outperformed the meta-regulator. Until this threshold was achieved, the greater threat of liquidation under a dual regulatory regime failed to have any impact on the incentives for risk taking by banks.

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