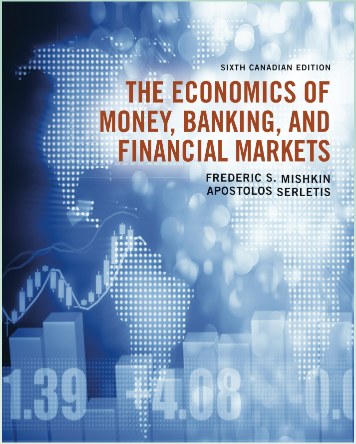
Mishkin/Serletis

The Economics of Money, Banking, and Financial Markets

Sixth Canadian Edition



Chapter 10

Economic Analysis of Financial Regulation

Learning Objectives

1. Identify the reasons for and the forms of a government safety net in financial markets

2. List and summarize the types of financial regulation and how each reduces asymmetric information problems

Bank Panics and the Need for Deposit Insurance

- **Bank failure:** when a bank is unable to meet its obligations, so must go out of business
- Asymmetric information may lead to a **bank panic**
  - *Before deposit insurance, depositors would have to wait until the bank was liquidated*
  - *Unable to asset quality of bank assets, depositors would withdrawal money even from good banks*
  - *This is described as a* ***bank run***
- Methods to handle a failed bank
  - *Payoff Method*
  - *Purchase and assumption method*

contagion effect : the risk that financial difficulties at one or more bank(s) spill over a large number of other banks or the financial system as a whole

Bank panics.

Payoff method: The bank is allowed to fail and the depositors are paid off according to CDIC regulations. Once the banks' assets have been liquidated, other creditors are paid off in some portion.

Purchase and Assumption Method.

Another bank takes over the liabilities of the failed bank. Depositors and creditors are uneffected.

Lender of Last Resort:

An important function of the Bank of Canada. BoC can lend to banks to avert a financial crisis and maintain the stability of the financial sector.

Other Forms of the Government Safety Net

- The central bank can provide support to troubled institutions by acting as a **lender of last resort**
- The government can provide direct financial support to troubled institutions
  - *The Canada Mortgage and Housing Corporation did this*
  - *The U.S. Treasury (and others) did this as well*
- Governments can also take over (nationalize) troubled institutions and guarantee all creditors' loans will be paid in full

Moral Hazard and Adverse Selection Issues

A government safety net can be a mixed blessing

- Moral Hazard
  - *Depositors do not impose discipline of marketplace*
  - *Financial institutions have an incentive to take on greater risk*

- Adverse Selection
  - *Risk-lovers find banking attractive*
  - *Depositors have little reason to monitor financial institutions*

Moral Hazard:

The chance that an individual will have an incentive to act in the way detrimental to anothe party.

In banking

Depositor know they will not suffer losses if the FI fails so they do not monitor the activities of the FI and they do not withdraw their funds if the FI is engaging in too much risk.

Adverse Selection:

The problem that people who are the greatest risk seeking the greatest protection.

In banking.

people who are bad risks are more likely to acquire loans.

"Too Big to Fail" Quandary

- Regulators are reluctant to close down large financial institutions and impose loses on their creditors because doing so might precipitate a financial crisis
  - *Support is therefore given to institutions, even if they are not entitled to it but merely because they are "too big"*

- Increases moral hazard problems at big banks
  - *Once large depositors and creditors know that a bank is too big to fail, they have no incentive to monitor the bank*

Financial Consolidation and the Government Safety Net

- Larger and more complex financial organizations challenge regulation

- Leads to increased “too big to fail” problem

- Extends safety net to new activities, increasing incentives for risk taking in these areas
  - *Securities underwriting, insurance, real estate activities*

Securities Underwriting refers to the process by which investment banks raise investment capital. from investors on behalf of corporations and governments. that are issuing securities (equities and capital) The services of an underwriter. are typically used during a public offering.

Types of Financial Regulation

1. Restrictions on asset holdings
2. Capital requirements
3. Prompt corrective action
4. Chartering and examination
5. Assessment of risk management
6. Disclosure requirements
7. Consumer protection
8. Restrictions on competition

Restrictions on Asset Holdings

- Attempts to restrict financial institutions from too much risk taking
- Hard for depositors and creditors to monitor banks, so regulations restrict certain types of asset holds
  - *Prohibit holdings of common stock*
- Promote diversification of assets
  - *Reduces risk by limiting the amount of load in particular categories or to individual borrowers*

Capital Requirements

Leverage Ratio = $\frac{\text{Capital}}{\text{Total Assets}}$.

- There are two forms:

1. **Leverage ratio**, capital divided by the bank's total assets
   - *A "well capitalized" bank has a leverage ratio above 5%;*
   - *Lower leverage ratios, especially below 3%, trigger increased regulatory restrictions*
2. **Risk-based capital requirements**
   - *The **Basel Accord**, requires banks hold as capital at least 8% of their risk-weighted assets*

- Other issues
  - ***Off-balance-sheet activities***
  - ***Regulatory arbitrage***

Leverage Ratio:

Companies rely on a mixture of owner's equity and debt to finance their operations. A leverage Ratio is any one of several financial instruments that look at how much capital comes in the form of debt (loans), or assesses the ability of a company to meet financial obligation.

Financial Supervision: Chartering and Examination

- Two main forms of **financial supervision**

1. Chartering
   - *Screen proposals for new institutions, then assign **charters***
   - *Prevents adverse selection problem*
   - *After receiving a charter, banks required to file periodic **call reports** that reveal its assets and liabilities*

2. On-Site Examination
   - *Examiners give banks a **CAMELS rating**: **C**apital adequacy, **A**sset quality, **M**anagement, **E**arnings, **L**iquidity, **S**ensitivity to market risk*

Assessment of Risk Management

- Greater emphasis on evaluating soundness of management processes for controlling risk
- Risk rating based on
  1. *Quality of oversight provided*
  2. *Adequacy of policies and limits for all risky activities*
  3. *Quality of the risk measurement and monitoring systems*
  4. *Adequacy of internal controls*
- Interest-rate risk limits
  - *Internal policies and procedures*
  - *Internal management and monitoring*
  - *Implementation of* ***stress testing*** *and* ***Value-at risk (VAR)***

Other issues:

1. Off-balance-sheet activities – do not appear on bank's balance sheet but still exposes bank to risk.
eg: trading financial instruments. generating income from fee.

2. Regulatory Arbitrage: manipulating spreed sheet items to take adv of loop-holes in the regulations.

3. Prompt Corrective Action
CDIC is required to intervence at an early stage. when a bank appears to be in trouble.

What does it mean to chater a bank?

A chartered bank is a financial institution whose primary roles are to accept and safeguard monetary deposits from individuals and organizations and to lend money out. The details vary from country to country but usually a chartered bank in operation has obtained goverment permission on some level to do business in banking sector.

In Canada, a charter can be obtained thr an Act of parliament or an Application to the minister of finance.

CAMELS rating.

Soundness of a bank measured on a scale of 1 (strongest) to 5 (weakest). Bank examiners (trained and employed by the country's central bank) award these ratings on the basis of the adequacy and quality of bank.

* Capital adequacy
* Asset quality (loans and investments
* Management.
- Earnings
- Liquidity
- sensitivity (to systemic-risk)

Systemic Risk

In Finance, systemic risk is the risk of collapse of an entire financial system or entire market.

Or

The risk inherent to the entire market or an entire market segment. Systematic risk affects the overall market. not just a particular stock or industry.

Assessment of Risk Management.

A much greater emphasis on evaluating a bank's management and its ability to recognize, evaluate and control risk.

It is the "M" in the CAMELS rating. Based on 4 elements listed on slide 10-12.

Stress testing and Value at Risk ~~are techniq~~ are techniques using probability to evaluate losses under worst-case scenarios.

Disclosure Requirements

- Requirements to adhere to standard accounting principles and to disclose wide range of information
- The Basel 2 accord and provincial securities commissions put a particular emphasis on disclosure requirements
- Bill 198 increased incentives to produce accurate audits of corporate income statements and balance sheets, and put in place regulations to limit conflicts of interest in the financial services industry
- Move to **mark-to-market (fair-value) accounting**

Disclosure Requirements.

FIs. are monitored to see they are producing reliable info and they are protecting investors.

Bill 198 (Ont. Government Oct 2002) introduces stringent accounting practices.

Market-to-market accounting : value assets at market prices

Consumer Protection

- Requires lenders to provide information to consumers on the costs of borrowing ("truth in lending")
  - *Must provide information to consumers about the cost of borrowing, as a standardized* ***APR***
- Requires provision of information on the method of assessing finance charges
- Requires that billing complaints be handled quickly

Restrictions on Competition

- Competition may increase moral hazard problems
  - *Declining profitability from increase competition could tip the incentives of financial institutions toward assuming great risk in an effort to maintain profit levels*

- Disadvantages
  - *Higher consumer charges*
  - *Decreased efficiency*

Summary:

Regulation is difficult in practice.

1. FIs. have strong incentives to avoid regulations and search for loopholes of which they can take advantage. So, regulation often occurs with a lag.

2. Unless written just right, regulation can sometimes have unintended consequences.

3 FIs have a strong lobby which works to shape regulation in their favor.

Macroprudential Vs. Microprudential Supervision

- Before the global financial crisis, the regulatory authorities engaged in **microprudential supervision**, which is focused on the safety and soundness of *individual* financial institutions

- The global financial crisis has made it clear that there is a need for **macroprudential supervision**, which focuses on the safety and soundness of the financial system *in the aggregate*

Major Financial Legislation in Canada

TABLE 10-1 Major Financial Legislation in Canada

Bank of Canada Act (1934)
- Created the Bank of Canada following the recommendations of the Macmillan Commission of 1933.

Bank Act of 1936
- Prohibited banks from issuing banknotes
- Imposed reserve requirements on depository institutions to be held with the Bank of Canada

Bank Act of 1954
- Increased reserve requirements on depository institutions
- Allowed chartered banks to offer mortgages issued under the National Housing Act

Canada Deposit Insurance Corporation Act (1967)
- Created the CDIC to insure deposits with all federally chartered banks and near banks

Bank Act of 1967
- Removed the 6% loan interest-rate ceiling
- Restricted foreign competition
- Imposed secondary reserve requirements on depository institutions
- Put chartered banks and near banks on equal footing regarding mortgage lending

Bank Act of 1981
- Created the Canadian Payments Association to operate the national payments system and plan its development
- Lowered reserve requirements on Canadian-dollar deposits
- Increased competition by introducing a less complicated procedure for obtaining a licence to operate as a bank
- Allowed foreign banks to establish subsidiaries in Canada, subject to reciprocal treatment of Canadian banks
- Extended banks' business powers to include financial leasing, factoring, and data processing
- Redesigned corporate clauses to ensure consistency between the Bank Act and the Canada Business Corporations Act
- Provided a simpler incorporation method for new banks (letters patent) while retaining incorporation through a special Act of Parliament

Office of the Superintendent of Financial Institutions Act (1987)
- Created the OSFI to succeed two separate federal regulatory bodies (the Department of Insurance and the Inspector General of Banks) in the supervision of financial institutions

(*continued*)

Major Financial Legislation in Canada

TABLE 10-1 *(continued)*

Financial Institutions and Deposit Insurance System Amendment Act (1987)

- Allowed chartered banks to own investment banking subsidiaries, thereby initiating the merging of the four pillars

Savings and Credit Union Act of the Province of Québec (1988)

- Set rules for credit unions, federations, and confederations, with specific reference to the *Mouvement Desjardins* (Desjardins Group)

Bank Act of 1992

- Comprehensive banking law
- Allowed chartered banks to own trust companies
- Allowed trust companies to make commercial loans
- Made provisions for the phasing out of reserve requirements
- Set rules regarding the supervisory role of the Bank of Canada and the OSFI with respect to chartered banks
- Reset the "sunset" clause from 10 years to 5 years to address the changing Canadian financial services marketplace

Cooperative Credit Associations Act (1992)

- Replaced the Cooperative Credit Association Act of 1952–1953 and set rules for federally chartered credit unions
- Followed the same format as the Bank Act

Insurance Companies Act (1992)

- Replaced the Canadian and British Insurance Companies Act and the Foreign Insurance Companies Act, both passed in 1932
- Set rules for life insurance companies and property and casualty (P&C) insurance companies
- Allowed insurance companies to own Schedule II chartered banks
- Followed the same format as the Bank Act

Trust and Loan Companies Act (1992)

- Replaced the Trust Companies Act and the Loan Companies Act, both passed in 1914
- Set rules for federally incorporated Trust and Mortgage Loan Companies (TMLs) and provincially incorporated TMLs reporting to the OSFI
- Required large, formerly closely held TMLs to become 35% widely held
- Followed the same format as the Bank Act

Bank Act of 1997

- Yielded minor changes because the government was waiting for the recommendations of the MacKay Task Force

Bank Act Reform of 2001 Details in Ch11

- Set new ownership rules
- Established a process for reviewing mergers involving large banks
- Allowed bank financial groups to organize under a holding company structure
- Allowed greater flexibility for bank involvement in the information technology area
- Allowed non-deposit-taking financial institutions access to the payments and clearance systems

Financial System Review Act (FSRA) of March 29, 2012

- Amendments to the Bank Act and other associated statutes

CDIC Deposit Insurance Coverage

- Federal: Canada Deposit Insurance Corporation
- Quebec: Quebec Deposit Insurance Board

- Differential Premium
  - *After May 1999, CDIC premiums were tied a the risk profile of financial institutions*
  - *Banks assigned to one of four categories, based on whether a bank is well-capitalized or not*
  - *Today, 90% of CDIC members are Category 1 or 2 (Best/Good)*

CDIC Deposit Insurance Coverage.

What's covered?

* Eligible deposits at each member institution. are covered up to a max of $100,000.

* Deposits must be payable in Canada and in Canadian currency.

* Eligible deposits include.
  * saving accounts.
  * chequing accounts
  * Term deposits (term to maturity less than 5 Y)
  * Money orders and bank drafts.
  * certified draft and cheques
  * traveller's cheques

Not covered

* Term deposits (term to maturity greater 5 Y)

* Treasure bills.
* Bonds and ~~be~~ debentures issued by, governments and corporations

* Mutual Funds (including MMMF), stocks, bonds

* Mortgages

Premium Structure and Rates for CDIC Member Institutions in 2014

TABLE 10-2 Premium Structure and Rates for CDIC Member Institutions in 2014

Category	Premium Rate (as a Percentage of Insured Deposits)
1	1/36 of 1%, or 0.02778
2	1/18 of 1%, or 0.05556
3	1/9 of 1%, or 0.11111
4	2/9 of 1%, or 0.22222

Source: CDIC website: www.cdic.ca.

- After May 1999, premium is tied to risk profile.
- 90% in Category 1 or 2

CDIC Deposit Insurance Coverage

- Opting Out
  - *Schedule III banks that primarily accept wholesale deposits (deposits of more than $150,000) can opt out of CDIC*
  - *Opted-out banks must inform all depositors*
  - *Increases incentives of uninsured depositors to monitor the risk-taking activities of banks, thereby reducing moral hazard*

Application: Evaluating CDIC Insurance Coverage and Other Proposed Reforms

- Limits on the Scope of Deposit Insurance
  - *Covers deposits only below certain thresholds*
  - *Proposed reform:* ***coinsurance****, only a percentage of a deposit (say, 90%) is covered by insurance*

- Prompt Corrective Action
  - *Requires regulators intervene early when bank capital falls*
  - *A CDIC provision that may substantially reduce bank risk taking incentives, reducing taxpayer losses*
  - *If capital ratio falls, subject to more onerous regulations*

Application: Evaluating CDIC Insurance Coverage and Other Proposed Reforms

- Risk-Based Insurance Premiums
  - *As we saw, different categories of banks (based on capitalization levels) pay different premiums*
  - *One problem is that determining risk may not be accurate*

- Other CDIC Provisions and Proposed Changes
  - *Frequent bank examinations, but this can sometimes make it harder to lend to small businesses*
  - *Proposals for regulatory consolidation, where CDIC and OSFI could be amalgamated (or, at least, not overlap)*