Financial Market Failures

Economics 301: Money and Banking

1

1.1 Goals

Goals and Learning Outcomes

- Goals:
  - Learn about the types of problems (market failures) that can be inherent in financial markets.
  - Learn about solutions to these problems.
- Learning Outcomes:
  - LO1: Understand and appreciate the importance of financial markets for the overall functioning of the economy.

1.2 Reading

Reading

- Read Hubbard and O'Brien, Chapter 9.

2 Limitations of Financial Markets

2.1 Transaction and Information Costs

Transaction and Information Costs

- **Transaction costs:** Explicit costs carrying out financial transactions. Often times the term means to generally include implicit information costs.
- **Information costs:** Includes time and resources spent investigating risks and profitability of financial investments.
- Imagine you have $500 to save, want to earn interest. Imagine no financial intermediaries.

  - Buy stocks directly from companies. Adequate diversification involves prohibitively high transaction costs for every purchase.
  - Contribute to car loans or home loans.
  - Make direct loans to local small businesses or entrepreneurial projects.
  - Pool money with other savers. Transaction costs in forming contracts.

2.2 Financial System Functions

Financial System Functions

- Reduce transaction costs.
  - **Economies of scale:** as a financial institution gets larger, there is a reduction in the average transaction cost (transaction cost per dollar of financial investment).
  - Market-wide economies of scale: standardization of legal contracts and computer software, eg: mortgage.
- Risk Sharing
  - Depository institutions spread out risks of defaults across all its depositors.
  - Mutual funds allow for risk reduction through diversification.
  - CDOs and MBSs.

2.3 Asymmetric Information

Asymmetric Information

- **Asymmetric information:** situation when there are two parties involved in some sort of transaction, and one party does not have sufficient information about the other party to make an appropriate decision.
- Sometimes the presence of asymmetric information is recognized by parties before transactions are conducted
  - Adverse selection
  - Moral hazard
- Sometimes recognized only in hindsight = financial market reversals and financial crisis.

Goldman Sachs' CDO

- *Abacus 2007-AC1* was a CDO constructed from 90 MBS's, each constructed from thousands of individual mortgages.
- Only two buyers: other sophisticated financial intermediaries (IKB Deutsche Industriebank and ACA Capital).
- Moody's and S&P gave highest rating to the CDO.
- Goldman Sachs let execs from Paulson & Co. choose the MBS.
- Paulson & Co. chose MBSs with *greatest* probability of default.
- Paulson & Co. then purchased Credit Default Swaps (CDSs) on the CDO.

Goldman Sachs' SEC Lawsuit

- Mortgages defaulted, CDO lost value.
- Paulson & Co. earned over $1 billion.
- Buyers of CDO lost $1 billion within months.
- Seller of the CDS (ABN Arno) lost almost $1 billion.
- SEC sued Goldman Sachs in April 2010.
- Goldman Sachs settled for $500 million.

3 Adverse Selection

3.1 Adverse Selection in Loanable Funds Markets

Adverse Selection

- **Adverse selection:** occurs when asymmetric information exists regarding *before* a financial transaction takes place.
- Situation in which it is impossible for lenders to obtain *complete* information about the risk of potential borrowers.
- Lender necessarily makes interest rates too high for borrowers who privately know they have very low risk.
- Interest rates too low for borrowers who know they have relatively high risk.
- Borrowers who choose (*select*) to make loans more highly represented by those with high risks.

3.2 Credit Rationing

Adverse Selection and Credit Rationing

- In the presence of adverse selection, only relatively more risky borrowers make it to market.
- Interest rates are therefore higher.
- **Credit rationing:** Risk averse lenders may not raise interest rates in fear of attracting worse borrowers, and instead restrict lending.
- With credit rationing, both good and risky borrowers may have difficulty borrowing funds.

3.3 Methods to Reduce Adverse Selection

Methods to Reduce Adverse Selection

- Require **collateral**: assets that borrower promises to lender in the event of a default.
  - Passes on risk from lender to borrower
  - Can credibly communicate risk from borrower to lender.
- Communicate **net worth** of firms that are borrowing (difference between firm's assets and liabilities).
  - Firms with a higher net worth have more to lose.

4 Moral Hazard

4.1 Moral Hazard in Loanable Funds Markets

Moral Hazard

- **Moral Hazard:** occurs when asymmetric information exists *after* a financial transaction takes place.
- Often occurs when payouts are asymmetric for borrowers facing risk.
  - Good outcome: borrower earns a large profit.
  - Bad outcome: borrower would make a loss if paid back full loan, but defaults instead.
- Bond markets: borrowers make more risky decisions than if they were using their own funds.

4.2 Limiting Moral Hazard

Limiting Moral Hazard

- Methods to reduce moral hazard:
  - Require collateral.
  - Restrictive covenants
- **Restrictive covenants:** bond contracts that include restrictions on using the borrowed funds
  - Could restrict types of spending. Eg: can only use funds for a specified purpose, not for purchasing new real estate.
  - Require repayment of bond in event net worth falls below a certain level.

4.3 Financial Firms to Reduce Moral Hazard

Financial Firms to Reduce Moral Hazard

- **Venture capital firms:** raise funds from investors, and use funds to make investments in small start-up firms.
  - Venture capital firm ensures appropriate behavior of firm by taking a large role in day-to-day operations of the firm.
  - It's own employees serve on Board of Directors for the firm, or are even managers.
- **Private equity firms:** raise funds from investors, take controlling shares of mature firms.
  - Serve on Board of Directors
  - Replace top management