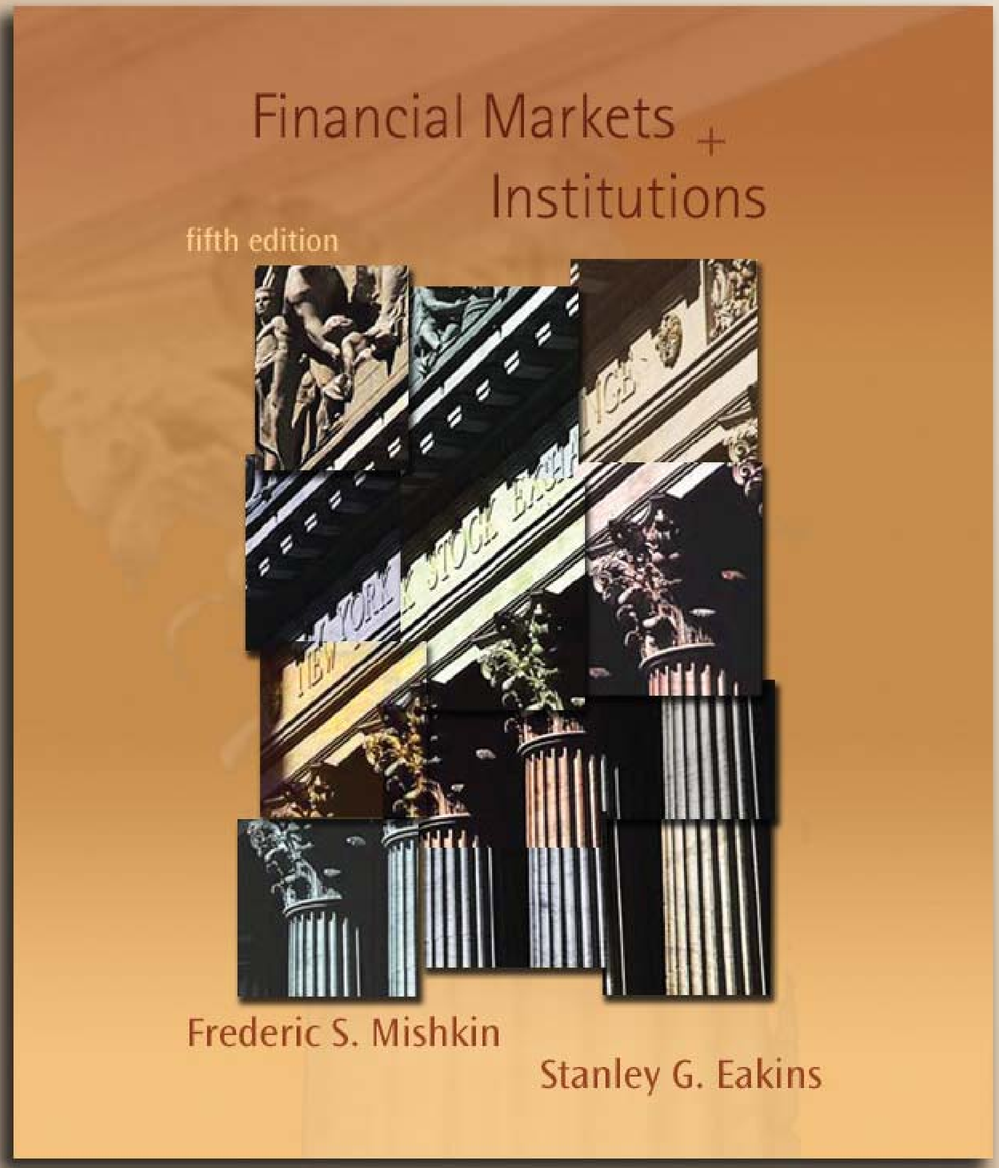


Class 5

Commercial and investment banks

PEARSON
Addison Wesley

Observed patterns of financing

- Issuing marketable debt and equity securities is not the primary source of funding
- The most important source of external funds: financial intermediaries
  - Esp. banks
- Only large, well-established corporations have easy access to securities markets

Sources of External Finance in U.S.

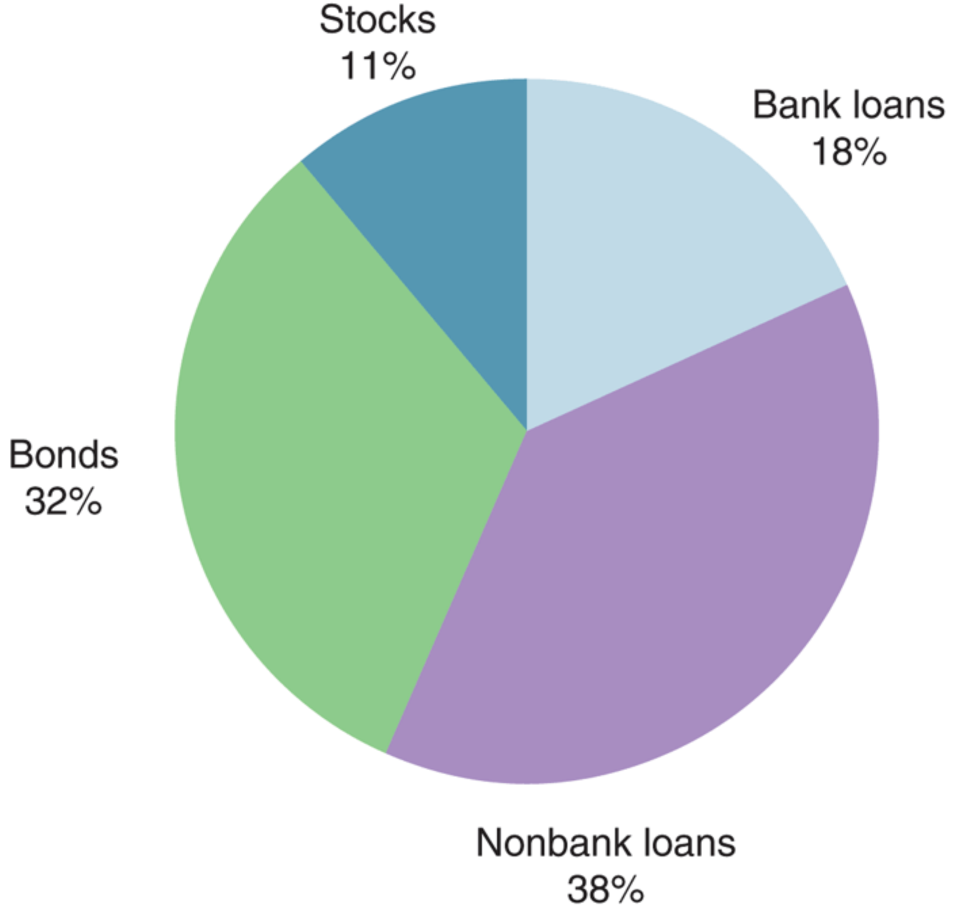


Figure 15.1 Sources of External Funds for Nonfinancial Businesses in the United States

Sources of Foreign External Finance

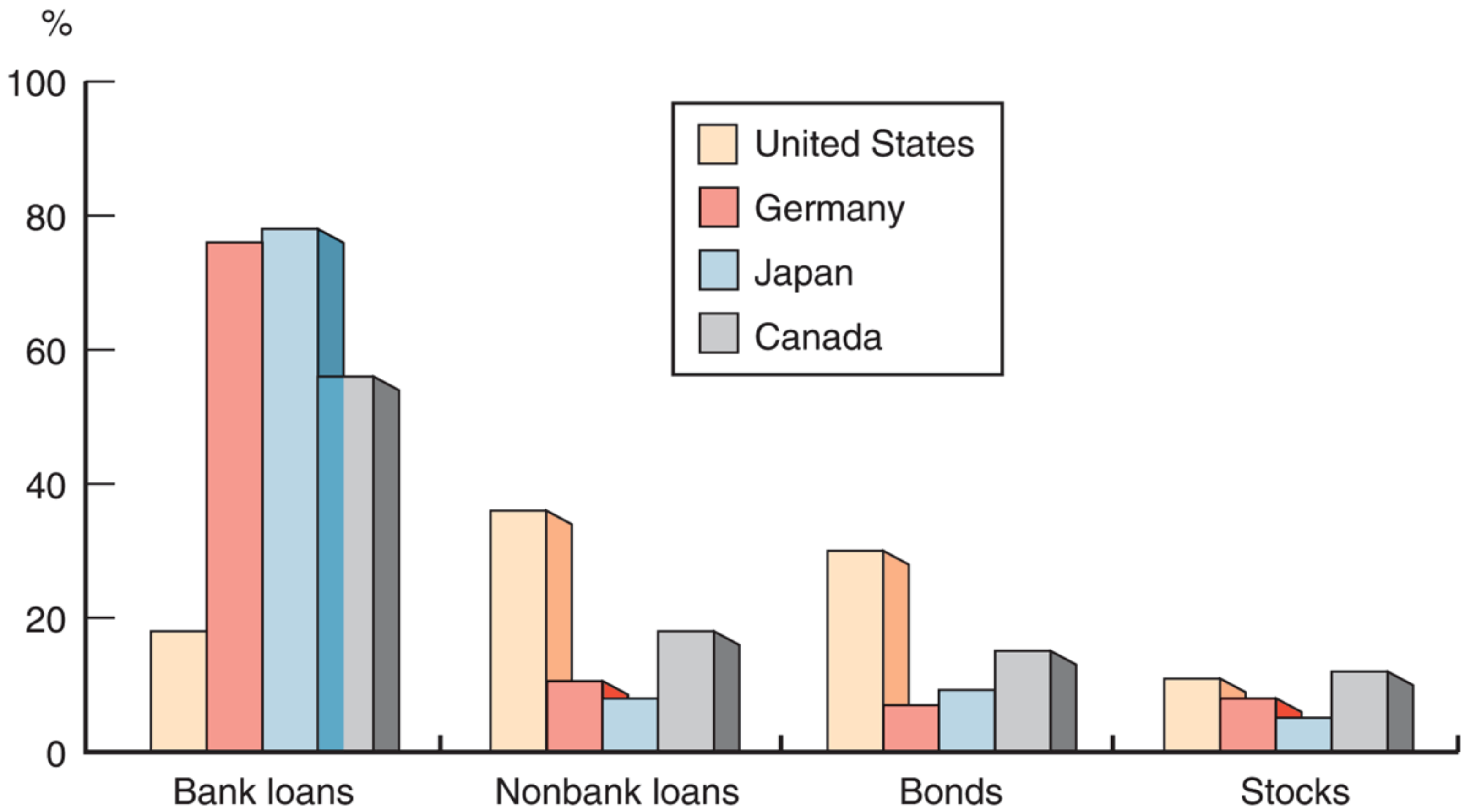


Figure 15.2 Sources of External Funds for Nonfinancial Businesses: A Comparison of the United States with Germany, Japan, and Canada

Rationales for the existence of financial intermediaries

- Reduce transaction costs
  - Economies of scale
  - Special human and technological skills
  - Cross-sectional and temporal reusability of information

Rationales for the existence of financial intermediaries

- Solve the asymmetric information problems
  - **Adverse selection**: *ex ante* problem, *before* giving a loan
    - How to distinguish between good and bad borrowers?
    - Lemons problem, e.g., the market for used cars
  - **Moral hazard**: *ex post* problem, *after* giving a loan
    - How to make sure that the borrower acts in your interest?
    - The principal-agent problem: e.g., separation of ownership and control between shareholders and managers

Rationales for the existence of financial intermediaries

- Market mechanisms may be unable to efficiently resolve the information problem
  - Free-rider problem among investors: who will invest in info?
  - Government regulation helps, but cannot eliminate the problem
- FIs acquire information about the borrowers and monitor their performance
  - Diversification benefits
- Who monitors the monitor?
  - Debt contract: bank deposits
  - Equity claim (in case of easily priced assets): mutual funds

Services of Financial Intermediaries

- **Brokerage**: bringing together providers and users of capital without modifying the claim
  - Transactions services (e.g., check-writing)
  - Financial advice (e.g., portfolio management)
  - Screening and certification (e.g., bond ratings)
- **Qualitative asset transformation**: transforming the financial claims on the way from borrowers to savers
  - Liquidity / Maturity / Denomination / Diversification
  - **Commercial banks:** long-term illiquid assets financed by short-term liquid deposits

Banks vs. Capital Markets

The intermediary charges an additional layer of costs	Lower interest, but larger initial (time / financial) costs
	Tough info requirements
Close monitoring of the borrower	Free-rider problem
Usually, not very large (except for syndicated loans)	Usually, large size
The form of credit may be very flexible and project-specific (e.g., credit line)	Usually, standard contract
May restructure the credit in the future	Harsh budget constraint
May extract information rent	

The Bank Balance Sheet

TABLE 1 ***Balance Sheet of All Commercial Banks (items as a percentage of the total, end of 2004; amounts in billions of dollars)***

Assets (Uses of Funds)*		Liabilities (Sources of Funds)	
Reserves and cash items	1	Checkable deposits	9
Securities		Nontransaction deposits	
U.S. government and agency	15	Small-denomination time deposits	
State and local government and other securities	8	(<$100,000) + savings deposits	46
		Large-denomination time deposits	15
Loans			
Commercial and industrial	8	Borrowings	24
Real estate	29	Bank capital	6
Interbank	16		
Other	3		
Other assets (for example, physical capital)	20		
Total	100	Total	100

*In order of decreasing liquidity.

Source: http://www.federalreserve.gov/releases/Z1/Current/z1r-4.pdf

Flow of funds (tab down to commercial banks)
http://www.federalreserve.gov/releases/z1/current/z1r-4.pdf

Bank Assets

- Reserves and cash
- Securities
  - Providing liquidity
- Loans
  - Commercial / real estate / interbank
  - The main source of income
- Other assets
  - E.g., physical capital

Bank Liabilities

- Checkable Deposits:
  - Low cost since depositors want safety and liquidity
- Nontransaction Deposits:
  - Higher cost since banks prefer more stable and predictable deposits
- Borrowings
  - From the Fed, other banks, and corporations
- Bank Capital:
  - Supplied by the bank owners: directly through shares or indirectly through retention of earnings

Off-Balance-Sheet Activities

- Fee income from
  - Foreign exchange trades for customers
  - Servicing mortgage-backed securities
  - Guarantees of debt
  - Backup lines of credit
- Financial futures and options
- Foreign exchange trading
- Interest rate swaps
- Loan sales

General Principles of Bank Management

- Liquidity management
  - What if many deposits are withdrawn?
  - Borrow from others, sell securities/loans
- Asset management
  - Earn the highest possible return on assets while minimizing the risk
  - Managing credit risk and interest-rate risk

General Principles of Bank Management

- Liability management
  - Managing the source of funds
- Managing capital adequacy
  - Bank capital is a cushion that prevents bank failure
  - Higher is bank capital, lower is return on equity

How to prevent bank runs?

- Capital requirements
  - But: may induce more risks
- Deposit insurance / central bank as a lender of last resort
  - But: may induce excessive risk-taking by the banks
- Interbank market
  - But: coordination problem among banks

Banks' Income Statement

TABLE 2 *Income Statement for All Federally Insured Commercial Banks, 2003*

	Amount ($ billions)		Share of Operating Income or Expenses (%)	
Operating Income				
Interest income		335.7		64.3
Interest on loans	265.9		50.9	
Interest on securities	54.1		10.4	
Other interest	15.7		3.0	
Noninterest income		186.5		35.7
Service charges on deposit accounts	31.7		6.1	
Other noninterest income	154.8		29.6	
Total operating income		522.2		100.0
Operating Expenses				
Interest expenses		95.7		25.4
Interest on deposits	63.0		16.7	
Interest on fed funds and repos	8.1		2.2	
Other	24.6		6.5	
Noninterest expenses		246.0		65.3
Salaries and employee benefits	107.8		28.6	
Premises and equipment	31.3		8.3	
Other	106.9		28.4	
Provisions for loan losses		34.8		9.3
Total operating expense		376.5		100.0
Net Operating Income		145.7		
Gains (losses) on securities		5.6		
Extraordinary items, net		0.0		
Income taxes		−49.2		
Net Income		102.1		

Source: www.fdic.gov/banks/statistical/statistics/0106/cbr

Banks Performance

- ***ROA*** = Net Profits/ Assets
- ***ROE*** = Net Profits/ Equity Capital
- ***NIM*** = [Interest Income - Interest Expenses]/ Assets

TABLE 3 *Measures of Bank Performance, 1980–2004*

Year	Return on Assets (ROA) (%)	Return on Equity (ROE) (%)	Net Interest Margin (NIM) (%)
1980	0.77	13.38	3.33
1981	0.79	13.68	3.31
1982	0.73	12.55	3.39
1983	0.68	11.60	3.34
1984	0.66	11.04	3.47
1985	0.72	11.67	3.62
1986	0.64	10.30	3.48
1987	0.09	1.54	3.40
1988	0.82	13.74	3.57
1989	0.50	7.92	3.58
1990	0.49	7.81	3.50
1991	0.53	8.25	3.60
1992	0.94	13.86	3.89
1993	1.23	16.30	3.97
1994	1.20	15.00	3.95
1995	1.17	14.66	4.29
1996	1.19	14.45	4.27
1997	1.23	14.69	4.21
1998	1.18	13.30	3.47
1999	1.31	15.31	4.07
2000	1.19	14.02	3.95
2001	1.15	13.09	3.90
2002	1.33	14.47	4.09
2003	1.40	15.31	3.83
2004*	1.36	14.84	3.70

*Projected by FDIC.

Source: http://www2.fdic.gov/qbp

Banking in the US

- 1927: the McFadden act
  - Prohibiting interstate banking
- 1933: the Glass-Steagall act
  - Separation of commercial and investment banking
  - CBs cannot own voting equity
- 1999: the Gramm-Leach-Bliley act
  - Allowed consolidation of CB, IB, and insurance companies

Why Separate Banking from Other Financial Service Industries?

- Pros
  - Allowing banks into underwriting is dangerous
  - Potential conflicts of interest
- Cons
  - Decreases competition
  - Unfair to banks
  - Hinders diversification

Banking Outside of the US

- Large universal banks
  - Full range of financial services
  - Nationwide branch network
- Substantial stock (cross) ownership
  - Active role in corporate management
- Smaller, but rising importance of security markets

Decline in Traditional Banking

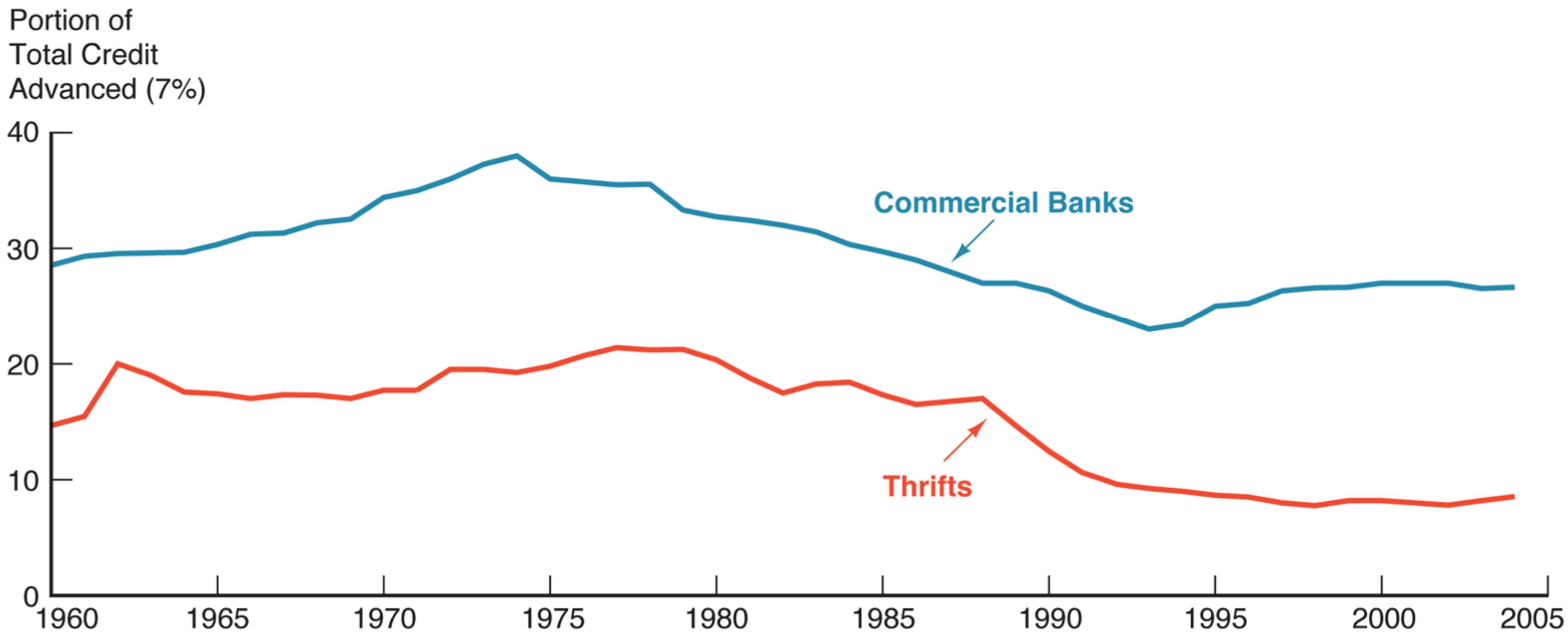


Figure 18.2 Bank Share of Nonfinancial borrowings, 1960–2004

Investment Banks

- Securities intermediary:
  - Underwriter the initial sale of stocks and bonds
  - Deal maker in equity sales, M&A, etc.
  - Private broker to the very wealthy
- Cyclical nature of earnings
  - Large profit in a strong market

Underwriting Stocks and Bonds

- Giving Advice
  - Choosing the type of security (equity, debt, etc.) to offer
  - When to issue, how much, at what price
- Filing Documents
  - SEC registration
  - Prospectus for the public
  - Debt: acquiring a credit rating, hiring a bond counsel, etc.
  - Equity: listing on the exchange(s)
- Underwriting

The Underwriting Methods

- Firm Commitment:
  - The IB purchases the entire offering at a fixed price and then resells the offering to the market
    - The issuer receives a fixed amount of money whether the securities are resold or not
    - The bank buys at "wholesale", tries to resell at "retail" price
  - The investment banks often form a syndicate to share risks

The Underwriting Methods

- Best Efforts:
  - The underwriter acts as an agent, receiving a commission for each share sold and making its “best effort” to sell the entire issue
  - This is more common for smaller and riskier issues (e.g., IPOs than for seasoned issues)

Equity Sales

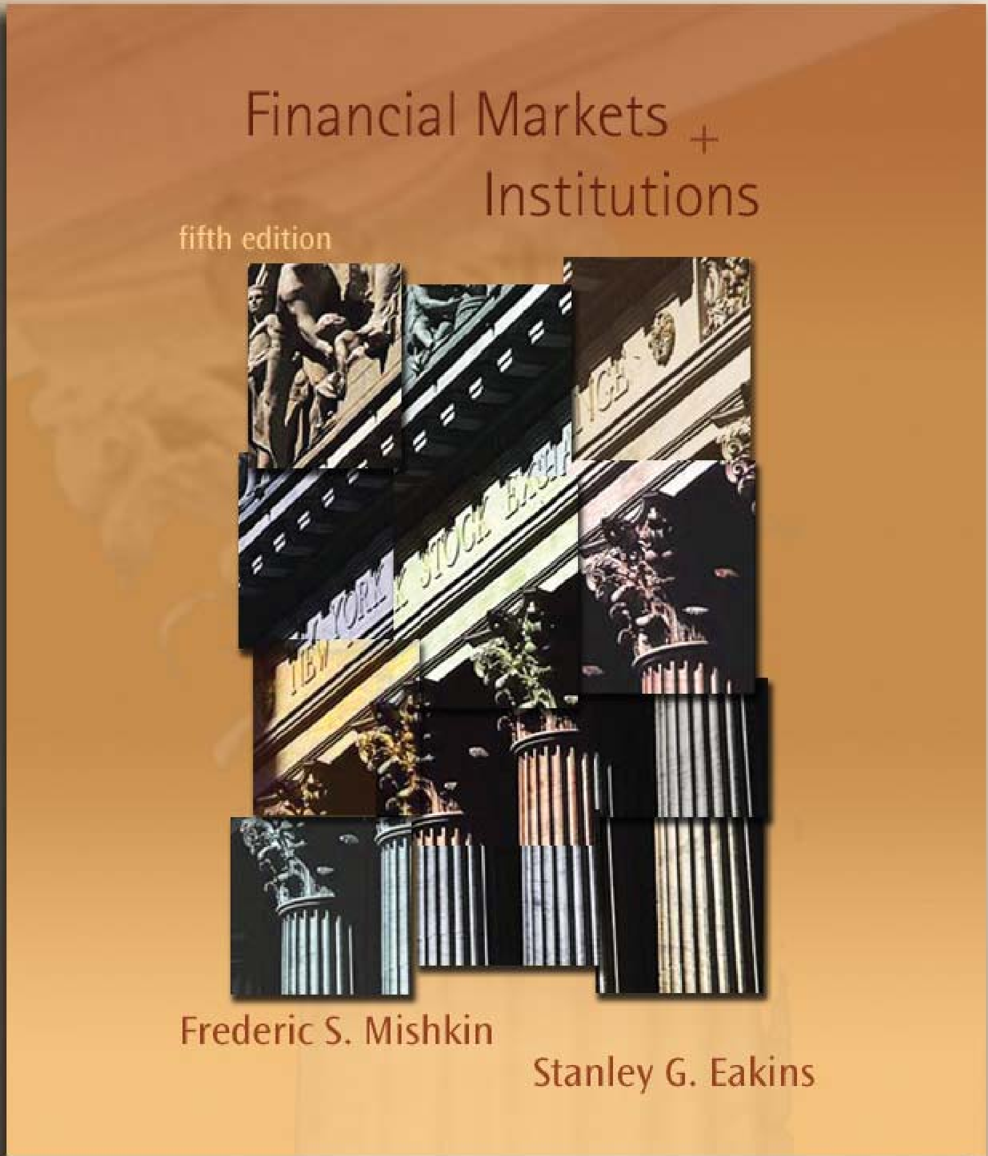
- Help to sell (part of) the firm
  - Assist in determining the value of the division or firm and find potential buyers
  - Develop confidential financial statements for prospective buyer (**confidential memorandum**)
  - Prepare a **letter of intent** to continue, assist with **due diligence**, and help reach a **definitive agreement**

Mergers and Acquisitions

- Assist both acquiring firms and potential targets
  - Although not both in the same deal
  - Deal may be a *hostile* takeover, where the target does not wish to be acquired
- Deal specifics, lining up financing, legal issues, etc.

Private Banking

- Asset management
  - Main goal: keep the wealth
  - Structured products
  - Alternative investments: wine, art, stamps
- Legal advice
  - Family and heritage
- Tax advice
  - Offshore schemes



Discussion topic

What is the difference between investment banking in Russia and abroad?