Chapter

1

Investments: Background and Issues

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Essentials of Investments

Tenth Edition

1.1 Real versus Financial Assets

- Nature of Investment: Reduce current consumption for greater future consumption

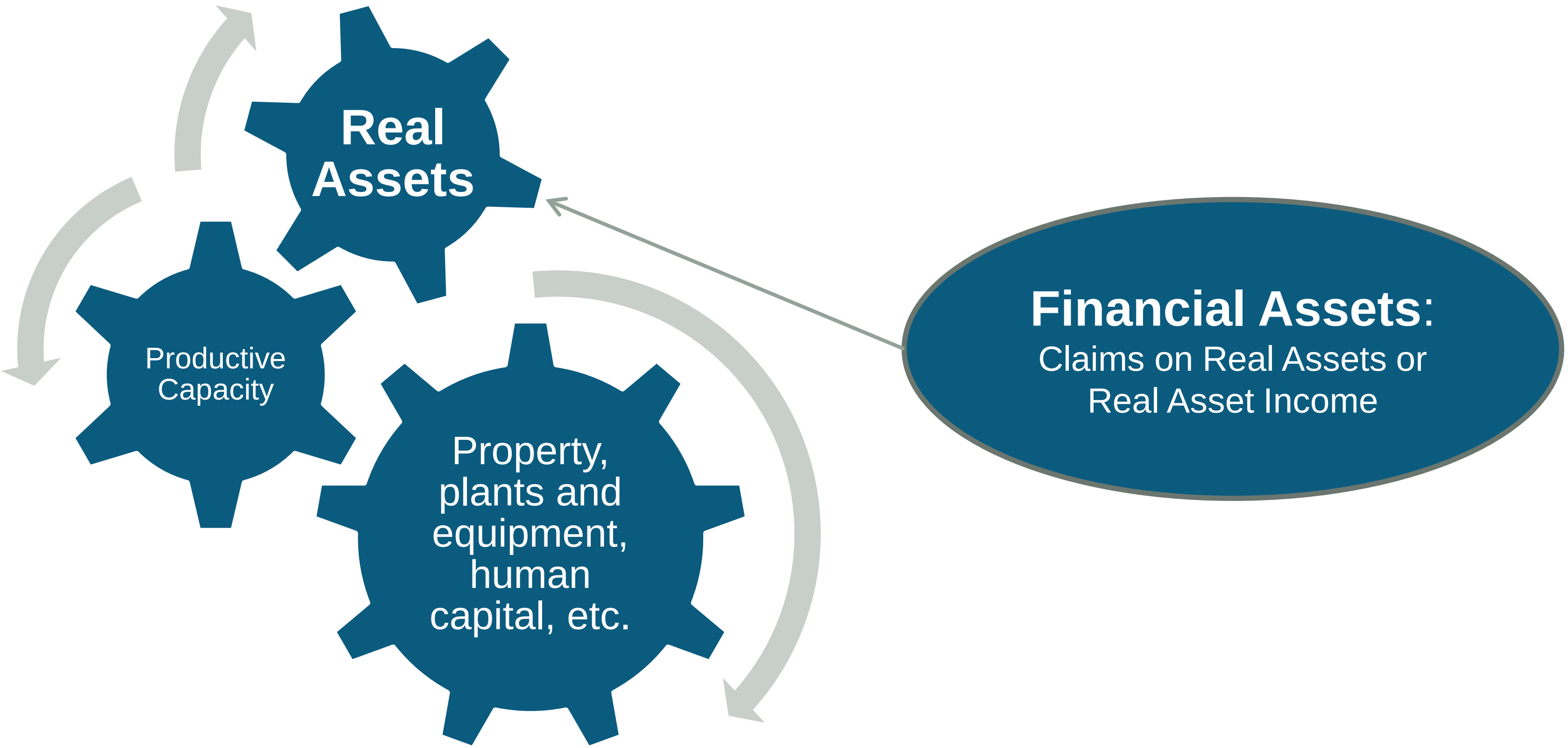


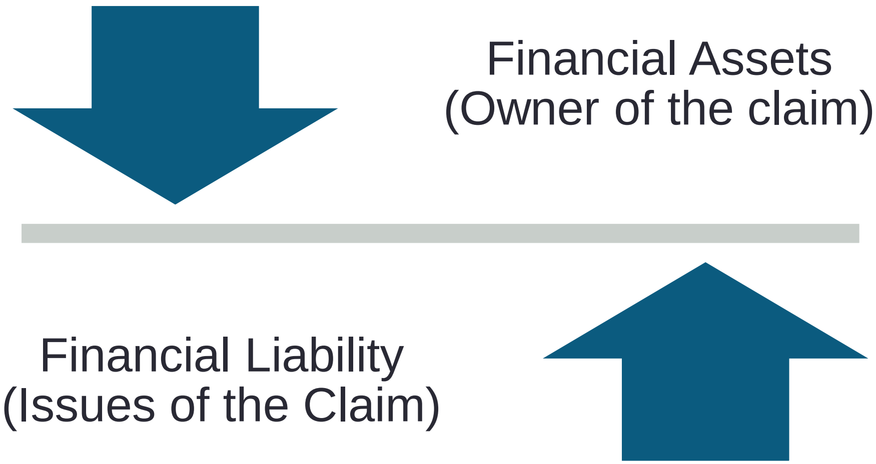
Table 1.1 Balance Sheet, U.S. Households, 2014

Assets	$ Billion	% Total	Liabilities and Net Worth	$ Billion	% Total
Real assets					
Real estate	$22,820	23.9%	Mortgages	$9,551	13.3%
Consumer durables	5,041	5.3%	Consumer credit	3,104	4.3%
Other	468	0.5%	Bank and other loans	493	0.7%
Total real assets	$28,330	29.6%	Security credit	352	0.5%
			Other	286	0.4%
			Total liabilities	$13,785	19.2%
Financial assets					
Deposits	8,038	11.2%			
Life insurance reserves	1,298	1.8%			
Pension reserves	13,419	18.7%			
Corporate equity	8,792	12.2%			
Equity in noncorp. business	6,585	9.2%			
Mutual fund shares	5,050	7.0%			
Debt securities	4,129	5.7%			
Other	1,536	2.1%			
Total financial assets	48,847	67.9%	*Net worth*	58,147	80.8%
TOTAL	71,932	100.0%		$71,932	100.0%

Note: Column sums may differ from total because of rounding error.
SOURCE: *Flow of Funds Accounts of the United States,* Board of Governors of the Federal Reserve System, June 2014.

1.1 Financial Assets = Financial Liabilities

- Financial Assets and Liabilities must balance.



- Thus, when all balance sheets are aggregated, only real assets remain
- Domestic Net Worth = Sum of real assets

1.2 Financial Assets

Asset Classes

Common Stock

Ownership stake in entity, residual cash flow

Fixed Income Securities

Money market instruments, Bonds, Preferred stock

Derivative Securities

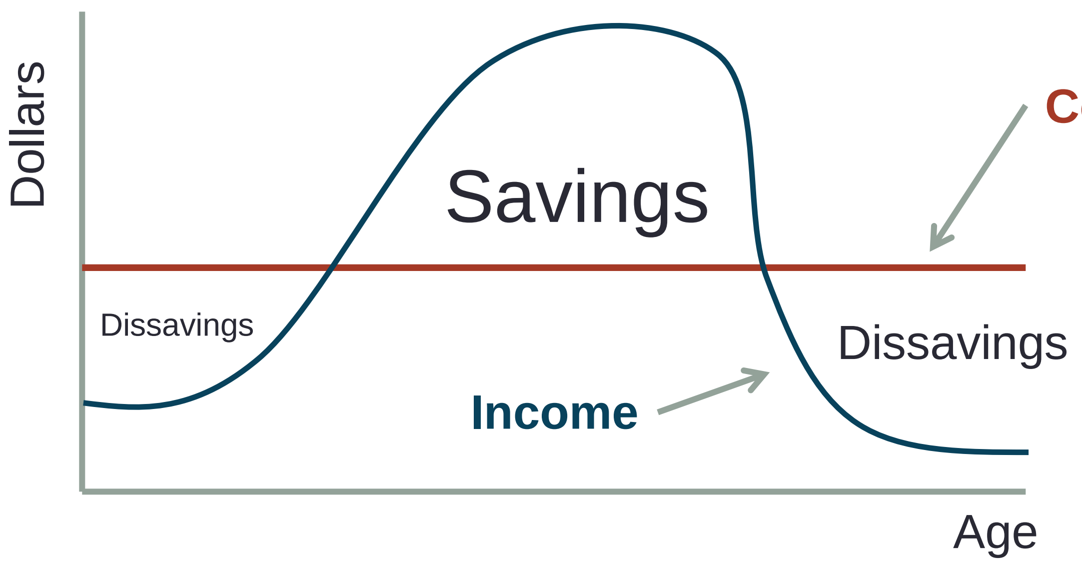
Contract, value derived from underlying market condition

1.3 Financial Markets and the Economy

- Informational Role of Financial Markets
  - Do market prices equal the fair value estimate of a security's expected future risky cash flows?
  - Can we rely on markets to allocate capital to the best uses?
    - Other mechanisms to allocate capital?
    - Advantages/disadvantages of other systems?

1.3 Financial Markets and the Economy

- Consumption Timing
  - Consumption smoothes over time
  - When current basic needs are met, shift consumption through time by investing surplus



1.3 Financial Markets and the Economy

- Risk Allocation
  - Investors can choose desired risk level
    - Bond vs. stock of company
    - Bank CD vs. company bond
  - Is there always a Risk/Expected Return trade-off?

1.3 Financial Markets and the Economy

- Separation of Ownership and Management
  - Large size of firms requires separate principals and agents
- Separation → Agency Problems
  - Mitigating Factors
    - Performance-based compensation
    - Boards of directors may fire managers
    - Threat of takeovers

1.3 Financial Markets and the Economy

- Agency Problems: Example 1.1

In February 2008, Microsoft offered to buy Yahoo! by paying its current shareholders $31 for each of their shares, a considerable premium to its closing price of $19.18 on the day before the offer. Yahoo!'s management rejected that offer and a better one at $33 a share; Yahoo!'s CEO Jerry Yang held out for $37 per share, a price that Yahoo! had not reached in over two years. Billionaire investor Carl Icahn was outraged, arguing that management was protecting its own position at the expense of shareholder value. Icahn notified Yahoo! that he had been asked to "lead a proxy fight to attempt to remove the current board and to establish a new board which would attempt to negotiate a successful merger with Microsoft."[3] To that end, he had purchased approximately 59 million shares of Yahoo! and formed a 10-person slate to stand for election against the current board. Despite this challenge, Yahoo!'s management held firm in its refusal of Microsoft's offer, and with the support of the board, Yang managed to fend off both Microsoft and Icahn. In July, Icahn agreed to end the proxy fight in return for three seats on the board to be held by his allies. But the 11-person board was still dominated by current Yahoo! management. Yahoo!'s share price, which had risen to $29 a share during the Microsoft negotiations, fell back to around $21 a share. Given the difficulty that a well-known billionaire faced in defeating a determined management, it is no wonder that proxy contests are rare. Historically, about three of four proxy fights go down to defeat.

1.3 Financial Markets and the Economy

- Corporate Governance and Corporate Ethics
  - Businesses and markets require trust to operate efficiently
    - Without trust additional laws and regulations are required
    - Laws and regulations are costly
  - Governance and ethics failures cost the economy billions, if not trillions
    - Eroding public support and confidence

1.3 Financial Markets and the Economy

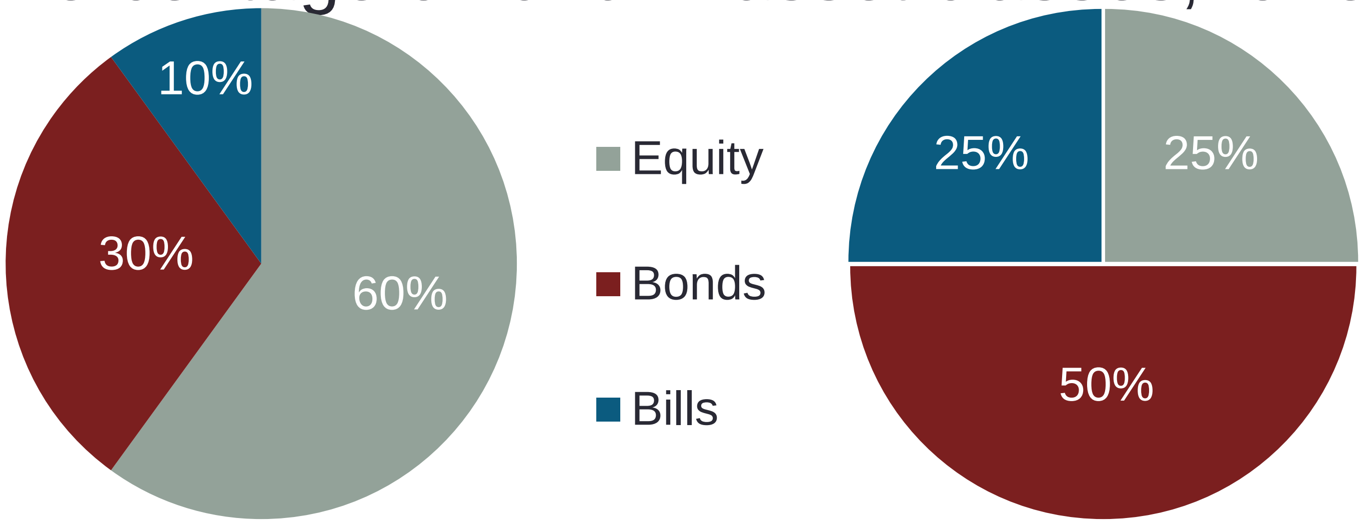
- Corporate Governance and Corporate Ethics
  - Accounting scandals
    - Enron, WorldCom, Rite-Aid, HealthSouth, Global Crossing, Qwest
  - Misleading research reports
    - Citicorp, Merrill Lynch, others
  - Auditors: Watchdogs or consultants?
    - Arthur Andersen and Enron

1.3 Financial Markets and the Economy

- Corporate Governance and Corporate Ethics
  - Sarbanes-Oxley Act:
    - Requires more independent directors on company boards
    - Requires CFO to personally verify the financial statements
    - Created new oversight board for the accounting/audit industry
    - Charged board with maintaining a culture of high ethical standards

1.4 The Investment Process: Asset Allocation

- Asset Allocation
  - Primary determinant of a portfolio's return
  - Percentage of fund in asset classes, for example:



  - Top Down Investment Strategies starts with Asset Allocation

1.4 The Investment Process: Security Selection

- Security Selection
  - Choice of particular securities within each asset class
  - Security Analysis
    - Analysis of the value of securities.
  - Bottom Up Investment Strategies starts with Security Selection

1.5 Markets Are Competitive

- Risk-Return Trade-Off
  - Assets with higher expected returns have higher risk

	Average Annual Return	Minimum (1931)	Maximum (1933)
Stocks	About 12%	−46%	55%

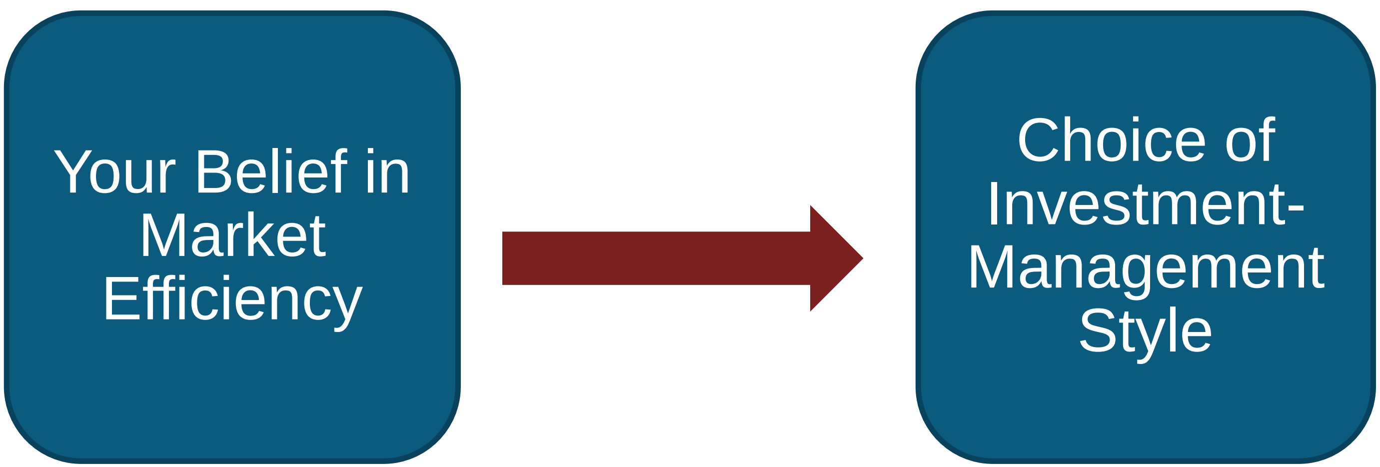
  - Stock portfolio loses money 1 of 4 years on average
  - Bonds
    - Have lower average rates of return (under 6%)
    - Have not lost more than 13% of their value in any one year

1.5 Markets Are Competitive

- Risk-Return Trade-Off
  - How do we measure risk?
  - How does diversification affect risk?

1.5 Markets Are Competitive

- In Efficient Markets Securities should
  - be neither underpriced nor overpriced on average
  - reflect all information available to investors



1.5 Markets Are Competitive

	Active Management	Passive Management
Markets are…	Inefficient	Efficient
Security Selection:	Actively Seeking Undervalued Stocks	No Attempt to Find Undervalued Securities
Asset Allocation	Market Timing	No Attempt to Time Market

1.6 The Players

- Business Firms (net borrowers)
- Households (net savers)
- Governments (can be both borrowers and savers)
- Financial Intermediaries (connectors of borrowers and lenders)
  - Commercial banks
  - Investment companies
  - Insurance companies
  - Pension funds
  - Hedge funds

1.6 The Players

- Investment Bankers
  - Firms that specialize in primary market transactions
  - Primary market
    - Newly issued securities offered to public
    - Investment banker typically “underwrites” issue
  - Secondary market
    - Preexisting securities traded among investors

1.6 The Players

- Investment Bankers
  - Commercial and investment banks' functions and organizations separated by law 1933-1999
  - Post-1999: Large investment banks independent from commercial banks
    - Large commercial banks increased investment-banking activities, pressuring investment banks' profit margins
  - September 2008: Mortgage-market collapse
    - Major investment banks bankrupt; purchased/reorganized

1.6 The Players

- Investment Bankers
  - Investment banks may become commercial banks
    - Obtain deposit funding
    - Have access to government assistance
  - Major banks now under stricter commercial bank regulations

Table 1.3 Balance Sheet of Commercial Banks, 2014

Assets	$ Billion	% Total	Liabilities and Net Worth	$ Billion	% Total
Real assets			**Liabilities**		
Equipment and premises	$120.7	0.8%	Deposits	$11,490.3	75.8%
Other real estate	27.9	0.2%	Debt and other borrowed funds	888.2	5.9%
Total real assets	$148.6	1.0%	Federal funds and repurchase agreements	366.7	2.4%
			Other	703.2	4.6%
			Total liabilities	$13,448.4	88.7%
Financial assets					
Cash	$1,843.1	12.2%			
Investment securities	3,113.1	20.5%			
Loans and leases	8,111.2	53.5%			
Other financial assets	870.3	5.7%			
Total financial assets	$13,937.7	91.9%			
Other assets					
Intangible assets	$365.6	2.4%			
Other	712.7	4.7%			
Total other assets	$1,078.3	7.1%	*Net worth*	1,716.2	11.3%
TOTAL	$15,164.6	100.0%		$15,164.6	100.0%

Note: Column sums may differ from total because of rounding error.
SOURCE: Federal Deposit Insurance Corporation, www.fdic.gov, Sept. 2014.

Table 1.4 Balance Sheet of Nonfinancial U.S. Business, 2014

Assets	$ Billion	% Total	Liabilities and Net Worth	$ Billion	% Total
Real assets			**Liabilities**		
Equipment and software	$6,200	17.7%	Bonds and mortgages	$7,905	22.6%
Real estate	10,166	29.0%	Bank loans	654	1.9%
Inventories	2,203	6.3%	Other loans	1,072	3.1%
Total real assets	$18,569	53.1%	Trade debt	1,996	5.7%
			Other	4,275	12.2%
Financial assets			*Total liabilities*	$15,902	45.4%
Deposits and cash	$1,040	3.0%			
Marketable securities	838	2.4%			
Trade and consumer credit	2,581	7.4%			
Other	11,969	34.2%			
Total financial assets	$16,428	46.9%			
TOTAL	$34,997	100.0%	*Net worth*	19,094	54.6%
				$34,997	100.0%

Note: Column sums may differ from total because of rounding error.
SOURCE: *Flow of Funds Accounts of the United States*, Board of Governors of the Federal Reserve System, June 2014.

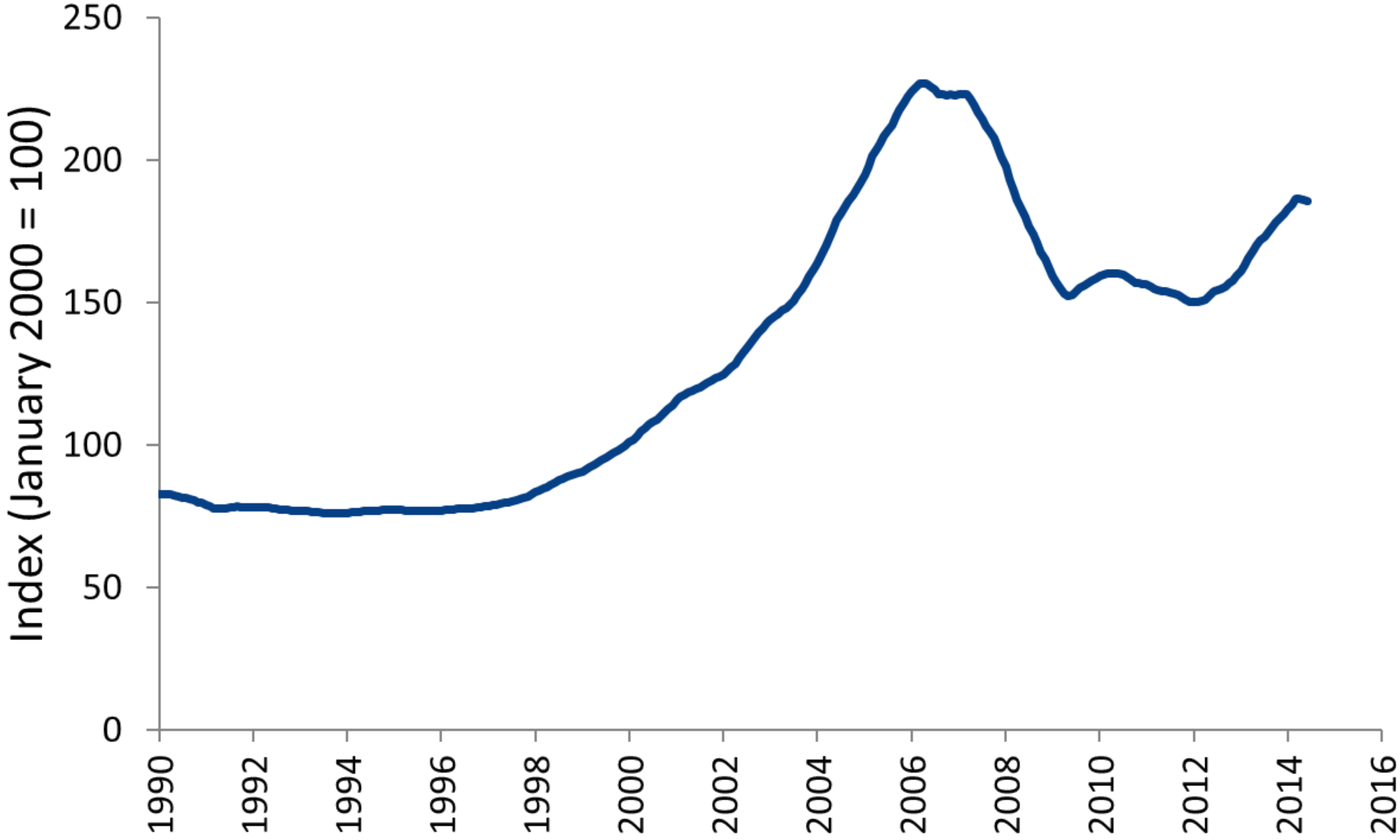
1.6 The Players

- Venture Capital and Private Equity
  - Venture capital
    - Investment to finance new firm
  - Private equity
    - Investments in companies not traded on stock exchange

1.7 The Financial Crisis of 2008

- Changes in Housing Finance
  - Low interest rates and a stable economy created housing market boom, driving investors to find higher-yield investments
  - 1970s: Fannie Mae and Freddie Mac bundle mortgage loans into tradable pools (securitization)
  - Subprime loans: Loans above 80% of home value, no underwriting criteria, higher default risk

Figure 1.3 Case-Shiller Index of U.S. Housing Prices



1.7 The Financial Crisis of 2008

- Mortgage Derivatives
  - CDOs: Consolidated default risk of loans onto one class of investor, divided payment into tranches
  - Ratings agencies paid by issuers; pressured to give high ratings

1.7 The Financial Crisis of 2008

- Credit Default Swaps
  - Insurance contract against the default of borrowers
  - Issuers ramped up risk to unsupportable levels
  - AIG sold $400 billion in CDS contracts

1.7 The Financial Crisis of 2008

- Systemic Risk
  - Risk of breakdown in financial system — spillover effects from one market into others
  - Banks highly leveraged; assets less liquid
  - Formal exchange trading replaced by over-the-counter markets — no margin for insolvency protection

1.7 The Financial Crisis of 2008

- The Shoe Drops
  - September 7, 2008: Fannie Mae and Freddie Mac put into conservatorship
  - Lehman Brothers and Merrill Lynch verged on bankruptcy
  - September 17: Government lends $85 billion to AIG
  - Money market panic freezes short-term financing market

1.7 The Financial Crisis of 2008

- Dodd-Frank Reform Act
  - Called for stricter rules for bank capital, liquidity, risk management
  - Mandated increased transparency
  - Clarified regulatory system
  - Volcker Rule: Limited banks’ ability to trade for own account

Figure 1.1 Short-Term LIBOR and Treasury-Bill Rates and the TED Spread

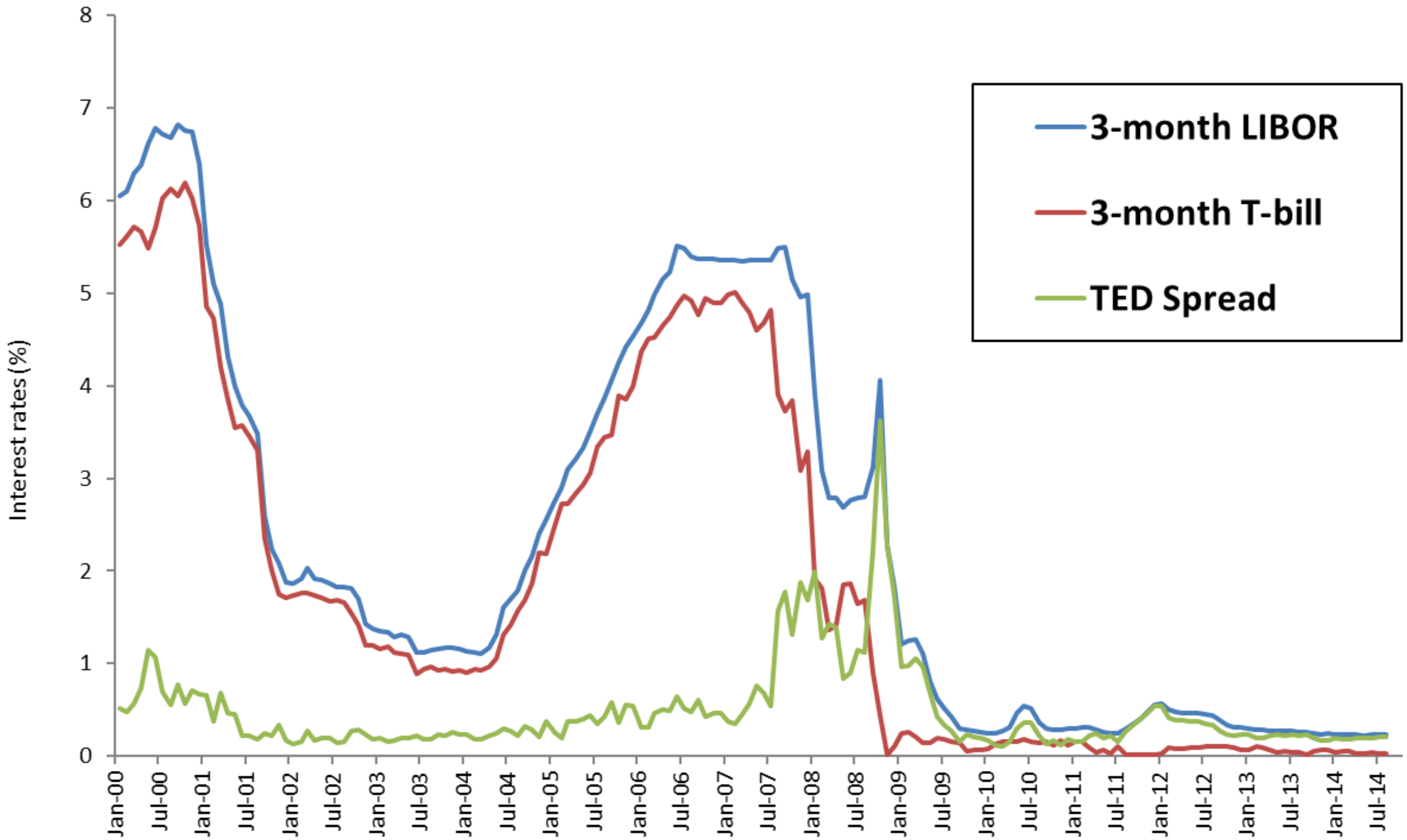
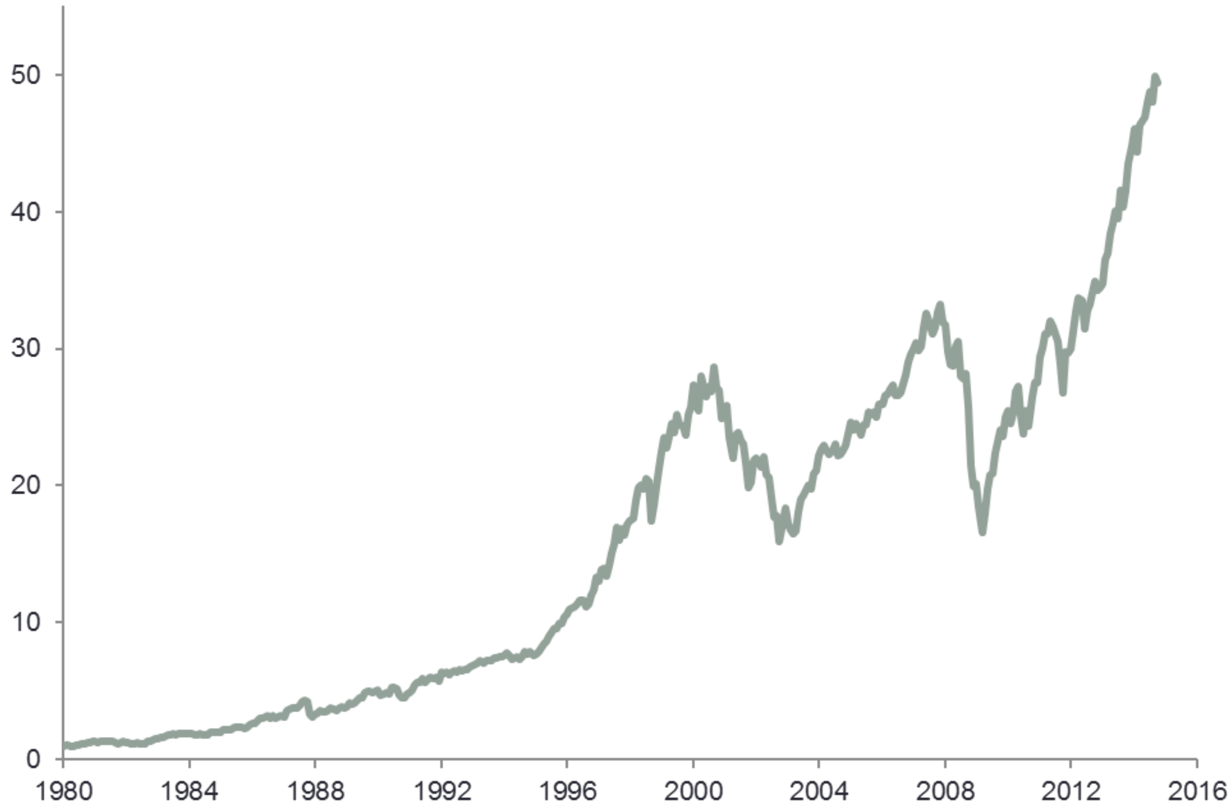


Figure 1.2 Cumulative Returns

Cumulative returns on a $1 investment in the S&P 500 index



1.8 Text Outline

- Part One: Introduction to Financial Markets, Securities, and Trading Methods
- Part Two: Modern Portfolio Theory
- Part Three: Debt Securities
- Part Four: Equity Security Analysis
- Part Five: Derivative Markets
- Part Six: Active Investment Management Strategies: Performance Evaluation, Global Investing, Taxes, and the Investment Process