Essentials of Investments 12th edition Bodie Solutions Manual

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Introduction to the Instructor's Manual

Congratulations! You have thoughtfully selected *Essentials of Investments* by Bodie, Kane, and Marcus, the superlative textbook for undergraduate finance. Welcome to the Instructor's Manual (IM) for the twelfth edition. Its purpose is to help you, the instructor, build an effective approach for preparing students for a career in the investment industry. Though written primarily for newer instructors, veteran professors may benefit by seeing the evolution of the text as well as learning about the new resources offered by *Essentials of Investments*.

McGraw-Hill and the authors are committed to providing up to date information and cutting-edge pedagogical advancements. Recent times have been instructive on the need for versatile and nimble education, with an emphasis on the ability to adapt to a variety of scholastic challenges. Adaptability must never come at the cost of the rigor that has made *Essentials of Investments* (and its graduate level counterpart, *Investments*) an essential tome for modern practitioners. This edition retains that level of quality while adding several new technology-driven features on our Connect online learning platform. The three major additions to the *Essentials of Investment* battery of learnings tools are Digital Faculty Consultants, Integrated Excel, and Application Based Activities; all discussed below.

The IM makes extensive reference to the companion PowerPoint (PPT) files. In the PPT, we have chosen to provide high-level information while streamlining many of the slides. This promotes a more seamless quality in presentation delivery and does not over-crowd each slide, a complaint consistently present in student feedback. We have added additional examples to aid in concept digestion.

Every chapter has been updated to reflect developments and changes in the field of finance. All data have been updated and sections added that cover new information on topics such as the roots of the financial crisis of 2008, the fallout from the crisis; changes to the hedge fund industry and the rise of financial technology (fintech).

Many students request a study guide to prepare for examinations. Saving the PPT as a PDF in the "Outline" view is an easy way to accommodate student demand while maintaining the integrity of the content. You may also wish to consider printing the slide view of the PPT as a PDF and posting the electronic file online for student review.

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Course Design and Digital Faculty Consultants

The chapters in *Essentials of Investments* could form the basis of several different courses. For example, Parts One (Elements of Investments), Three (Debt Securities), and Four (Investments Securities) can be combined to an excellent Introduction to Investments Course. Adding to that Part Five (Derivative Markets) and Chapter 18 (Evaluating Investment Performance) creates a robust two semester sequence on Investments. An excellent Portfolio Theory course can be built from Parts Two (Portfolio Theory) and Six (Active Investment Management). Students preparing to sit for the Chartered Financial Analysis exam can use the entire textbook as a resource or study guide.

With so many options, McGraw Hill recognizes that course construction can seem daunting. To assist you, **Digital Faculty Consultants** (DFC) are available to help design the course and fill out its content. DFCs are dedicated instructors who are passionate about the effectiveness of *Essentials of Investments.* They can help you anticipate and overcome many of the pitfalls that emerge when teaching this challenging material. They can assist you by hosting one-on-one or group webinars and many have experience presenting at pedagogical conferences and workshops. They also can connect directly with you by phone and email. They act as liaisons to the McGraw Hill technology team to develop innovative and continually evolving digital content which can be shaped by your feedback. If you are new instructor, or are looking for some feedback on the current structure of your course, please consider connecting with a McGraw Hill Digital Faculty Consultant: www.mheducation.com/highered/explore/digital-faculty-consultants.html

McGraw-Hill Connect

Connect is a course management and adaptive learning solution. It provides a useful learning platform that enhances your unique voice and teaching style. It houses the eBook version of *Essentials of* Investments, its PowerPoint Presentations, student Excel templates, and Smartbook 2.0. In addition, it is filled with content including a robust Test Bank, algorithmic problems to further challenge students, media on a variety of topics, and a test building function. It will also feature two new learning tools, Integrated Excel and Application Based Assignments, both debuting fall of 2021. Visit Connect at: www.mheducation.com/highered/connect

Integrated Excel

Integrated Excel is a web-based, self-contained application that is built directly into Connect. Instructors will not need to upload or download any files. Student will be solving problems directly on the browser. The instructor sets grading options - correct answer or a correct formula.

This latter option requires students to learn Excel functionality, a skill in high demand among employers. There are currently more than 125 Excel formulae accepted by Integrated Excel, with more being added monthly. Integrated Excel comes prebuilt with several questions per chapter, but as instructor, you will have the option of building your own questions. Integrated Excel will be ready fall of 2021.

Application Based Activities

Application Based Activities (ABA) are another new Connect feature introduced with *Essentials of Investments, 12ed.* They allow students to be immersed in interactive problem-solving. ABAs provide students valuable practice using problem-solving skills to apply their knowledge to realistic scenarios. Students progress from understanding basic concepts to more complex problems of increased sophistication. A built-in hint feature will allow progressively stronger hints to be displayed each time a wrong answer is entered. Like Integrated Excel and all the other tools on Connect, you can grade these or use these as practice. Many of the ABA questions will be algorithmic. ABA will also be ready for use by fall of 2021.

Part One: Elements of Investments

The first part of the text builds the foundational groundwork for the investment process with easy to access chapters on asset classes, financial instruments, securities markets, trading mechanisms and investment vehicles such as mutual funds. These first four chapters are presented in a nontechnical manner. They make it possible for instructors to assign term projects analyzing securities early in the course.

Chapter 1: Investments: Background and Issues – Basic overview of the investment landscape. Includes sections on securitization, the rise of fintech, the roots of the financial crisis, and the fallout from the crisis.

Chapter 2: Asset Classes and Financial Instruments – Presents the major asset classes and the financial instruments within each class.

Chapter 3: Securities Markets: Introduces the types of markets, basic security trading (limit orders and market orders), as well as buying on margin and short sales. Extensive coverage of the rise of electronic markets, algorithmic and high-speed trading, and changes in market structure.

Chapter 4: Mutual Funds and Other Investment Companies – Introduces pooled investment strategies such as mutual funds, their fee structure, and their performance. Includes coverage of innovations in exchange-traded funds.

Chapter 1

Investments: Background and Issues

Chapter Overview

This chapter introduces the student to the general concept of investing, which is to forgo consumption today so that future consumption can be preserved and hopefully increased in the future. Real assets are differentiated from financial assets, and the major categories of financial assets are defined. The chapter presents the risk/return tradeoff, the concept of efficient markets, and current market trends. The role of financial intermediaries like investment banks, is discussed, as well as some of the recent changes to the industry from the financial crisis of 2007-2008.

Learning Objectives

Students should recognize the overall investment process and the key elements involved (e.g., asset allocation and security selection). They should differentiate between debt, equity, and derivatives securities and understand the fundamental difference between financial and real assets. Students will be able to identify the major market players, differentiate between primary and secondary market activity, and describe some of the features of securitization and globalization. The chapter concludes with the origins of the financial crisis of 2008-2009 as well as the fallout that followed.

LO 1-1 Define an investment.

LO 1-2 Distinguish between real assets and financial assets.

LO 1-3 Explain the economic functions of financial markets and how various securities are related to the governance of the corporation.

LO 1-4 Describe the major steps in the construction of an investment portfolio.

LO 1-5 Identify different types of financial markets and the major participants in each of those markets.

LO 1-6 Explain the causes and consequences of the financial crisis of 2008–2009.

Learning Objectives

1.1 Real versus Financial Assets

PPT 1-2 through PPT 1-6

Investing involves sacrifice. An investor gives up some current consumption to consume more in the future (or at least preserve capital). Investable assets include real assets (assets with productive capacity) and financial assets (claims on the productive capacity of real assets). A financial asset represents a ready vehicle to transfer consumption (and wealth) through time and may be more appealing than real assets for many investors. The distinctions between real and financial assets (see below) can be used to discuss key differences in their nature and in their appropriateness as investment vehicles. For instance, financial assets are more liquid and often have more transparent pricing since they are traded in well-functioning markets. However, real-assets generate growth in the capital stock and thus allow a society to become wealthier over time.

The material wealth of a society will be a function of the inputs to production, including quality and quantity of its capital stock, the education, innovativeness and skill level of its people, the efficiency of its production, the rule of law, and so called "providential" factors such as location on a global trade route. The quantity and quality of its real assets will be a major determinant of that wealth. Real assets include land, buildings, equipment, human capital, knowledge, etc. They can be both tangible and intangible; students will often forget the latter category. Real assets have productive capacity, meaning they can be used to produce goods and services. Financial assets represent claims on real assets or the income produced by real assets. Real assets are used to generate wealth for the economy. Financial assets are used to allocate the wealth among different investors and to shift consumption through time.

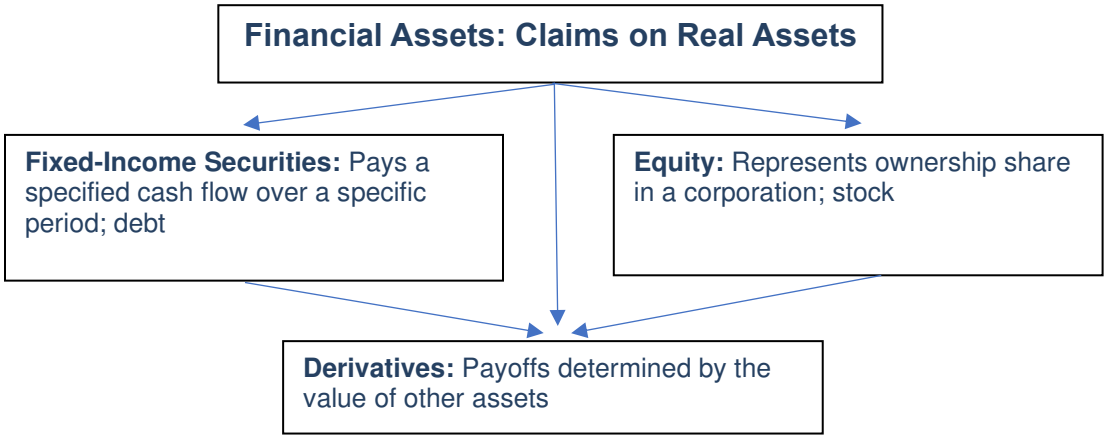
Students may be surprised to learn that financial assets of households comprise about 71% of total assets in 2019, though the single largest assets on the balance sheet of U.S. households (Table 1.1) is real estate. Domestic net worth (Table 1.2) has risen over the years, totaling $69,667 billion in 2019 (e.g., $67,786 billion in 2017 and $57,873 billion in 2014). The discussion of real and financial assets can be used to assess key differences in the assets and their appropriateness as investment vehicles. For instance, financial assets are more liquid and often have more transparent pricing since they are traded in well-functioning markets.

1.2 Financial Assets

PPT 1-6

Fixed-income securities include both long-term and short-term instruments. The essential element of debt securities and the other classes of financial assets is the fixed or fixed-formula payments that are associated with these securities. Common stock, on the other hand, features uncertain residual payments to the owners. Typically, preferred stock pays a fixed dividend but is riskier than debt because there is no principal repayment and preferred stock has a lower claim on firm

assets in the event of bankruptcy. A derivative is a contract for which the value is derived from some underlying market condition such as the price of another security.



The instructor may wish to briefly describe an option or a futures contract to illustrate a derivative. In a listed-call stock option the option buyer has the right, but not the obligation, to purchase the underlying stock at a fixed price. Therefore, one of the determinants of the value of the call option will be the value of the underlying stock price.

1.3 Financial Markets and the Economy

PPT 1-7 through PPT 1-12

Financial markets play several crucial roles in countries with well-developed financial markets.

The Informational Role of Financial Markets

This question asks whether markets are informationally efficient. The evidence indicates that markets generally move toward the ideal of efficiency but may not always achieve that ideal due to market psychology (behavioralism), privileged information access or some trading cost advantage (more on this later).

A related question may be stated as "Can we rely on markets to allocate capital to the best uses?" This refers to allocational efficiency and is related to the informational efficiency arguments above. If we don't believe the markets allocate efficiently then we need to discuss what other mechanisms should be used to allocate capital and the advantages and disadvantages of these. Because it is likely that any other system of allocation will be far more inefficient, we will likely conclude that a market-based system is still the best even if it's not perfectly efficient.

Consumption Timing

Financial markets allow investors to shift and perhaps to increase their consumption capability over time.

Allocation of Risk

Markets allow investors to choose their desired risk level. A widow may choose to invest in a company's bond, rather than its stock, but a younger, upwardly mobile person may choose to invest in the same company's stock in the hopes of higher return. A risk-intolerant investor may choose to invest in a government-insured CD to protect her principal. Of course, the less risk an investor takes, the lower the expected return.

Separation of Ownership and Management

The large size of firms requires separation of ownership and management in today's corporate world. The text states that in 2019 ExxonMobil had over $350 billion in assets ($250 billion worth of property, plant, and equipment). With tens of thousands of stockholders, it is unrealistic for these individual stockholders to actively participate in the management of the firm. This gives rise to potential **agency problems** because the owners' interests may not align with managers' interests. There are mitigating factors that encourage managers to act in the shareholders' best interest:

- Performance based compensation
- Boards of Directors may fire managers
- Threat of takeovers

Instructors might engage in a conversation on other solutions and other manifestations of agency problems (consider the relationship between an investor and stock broker). Also, instructors should ask students to read the imbedded *On the Market Front* article entitled "Should Firms Maximize Value." Consult Example 1.1 for activist investors and compare this list to contemporaries in the news.

Corporate Governance and Ethics

Businesses and markets require trust to operate efficiently. Without trust additional laws and regulations are required and all laws and regulations are costly. Governance and ethics failures have cost our economy billions if not trillions of dollars and, even worse, are eroding public support and confidence in market-based systems of wealth allocation. Consider engaging the students in a discussion on some of the bigger scandals from 2000-2002 (e.g., Enron, WorldCom, Rite Aid, HealthSouth, Global Crossing, and Qwest Communication). PPT slide 1-12 lists some examples of the major effects of the Sarbanes-Oxley Act.

1.4 The Investment Process

PPT 1-13 through 1-14

The two major components of the investment process are described in PPT 1-14/15, namely **asset allocation** and **security selection**. Asset allocation is the primary determinant of a portfolio's return. Security selection is process of choosing specific securities within asset classes. Students will learn the difference between "top-Down" portfolio construction and "bottom-up" portfolio construction. This section introduces the term **security analysis** as the broad concept of valuing securities and comparing to other investment opportunities.

1.5 Markets are Competitive

PPT 1-15 through PPT 1-18

The Risk-Return Trade-Off

Previewing the concept of **risk-return trade-off** is important for the development of portfolio theory and to build the correct frame of mind when learning about security analysis.

Efficient Markets

The discussion of **active management** and **passive management** styles relates to the concept of market efficiency. The discussion of market efficiency ties directly with the decision to pursue an active-management strategy. If you believe that the markets are efficient then a passive-investment-strategy is appropriate for you. If markets are efficient, markets and prices reflect all relevant information. In an efficient market, an active management strategy will not consistently outperform a passive investment strategy from a risk-return standpoint. Active strategies assume that trading will result in an improvement in the risk-return tradeoff of a passive strategy after subtracting trading costs.

The two major elements of active management are security selection and timing. Material in later chapters can be previewed in terms of emphasis on elements of active management. The essential element of passive management is related to holding an efficient portfolio. The elements are not limited to pure diversification concepts. Efficiency also is related to appropriate risk level, the cash flow characteristics and the administration costs.

1.6 The Players

PPT 1-18 through PPT 1-25

Section 1.6 presents the three major participants in the financial markets:

1. Firms as net demanders of capital.
2. Households as suppliers of capital.
3. Governments as borrowers or lenders. (Instructors may want to emphasize that governments allocate rather than create capital)

This section introduces **investment companies**. There are several chapters devoted to investment companies later in the text (e.g., Chapter 4 Mutual Funds and Chapter 20 Hedge Funds), but it might be useful to present the framework in broad strokes here.

Investment Bankers

The three major participants have a wide variety of **financial intermediaries**, or connectors of borrowers and lenders. **Investment bankers** bring issuers and investors together. Here instructors can introduce the **primary markets** and **secondary markets** as well as the underwriting function of investment banks.

Instructors may want to discuss some of the history of the separation of commercial and investment banking, the changes resulting from regulatory changes, and the collapse of the major investment banks in the recent crisis. The *On the Market Front* article, Separating Commercial Banking form the Investment Banking Industry, is a useful resource and summary. Summary statistics for commercial banks' and non-finance U.S. business' balance sheets for 2019 are displayed in PPT 1-23 and in PPT 1-24.

Venture Capital and Private Equity
Any investments in companies that have shares not traded in public stock markets is called **private equity. Venture capital** is private equity invested to finance a new, privately held firm.

Fintech and Financial Innovation
Fintech is the application of technology to financial markets. It is changing many things financial markets take for granted. Financial disintermediaries link lenders and borrowers directly, foregoing intermediaries. Cryptocurrencies directly challenge conventional centralized financial networks. The *On the Market Front* article "Cryptocurrencies" provides a basic primer on the nature of cryptocurrency and blockchain technology. Instructors may want to explore the different implication of financial technology and how we have come a long way from debit cards.

1.7 The Financial Crisis of 2008

PPT 1-26 through PPT 1-36

Antecedents of the Crisis
From 2001 to 2004 the Federal Reserve aggressively lowered interest rates. In 2007 the TED Spread, which measures the spread between LIBOR and Treasury-bill rate, common measure of credit risk, was around .25%, which is low.

Changes in Housing Finance
Low interest rates and a stable economy created a boom in the housing market, and drove investors to find higher-yield investments. In the 1970s Fannie Mae and Freddie Mac bundled mortgage loans into tradable pools by a process called securitization. The securitization model led to the development of subprime loans (loans above 80% of home value, with no underwriting criteria, and higher default risk). These loans were traded in private-label pools in which investors bore the risk of default. By 2006, a majority of subprime borrowers purchased houses by borrowing the entire purchase price. Another factor which led to the crisis was the prevalence of Adjustable Rate Mortgages (ARMs), which offered low initial interest rates, but eventually reset to current-market interest yields.

Mortgage Derivatives
Investment banks used risk-shifting tools to carve AAA securities from "junk" loans. The securities were called CDO's, or Collateralized Debt Obligations, and they consolidated the default risk of the loans on one class of investors. CDO's divided the pool of loan repayments into "tranches". Senior tranches paid out first, junior tranches later. Ratings agencies dramatically

underestimated the credit risk in these securities because they were paid to provide ratings by the issuer of the securities, and thus pressured to rate securities generously.

Credit Default Swaps
Credit Default Swaps also contributed to the financial crisis. Credit default swaps are insurance contracts against the default of borrowers. However, many CDS issuers ramped-up their risk exposure to unsupportable levels without sufficient capital to back their obligations. AIG sold $400 Billion in CDS contracts on subprime mortgages.

The Rise of Systemic Risk
Systemic Risk is the risk of breakdown in the financial system, particularly due to spillover effects from one market into others. By 2007, banks were highly leveraged, with increasingly illiquid assets. In addition, formal exchange trading was being replaced by over-the-counter markets, which did not require any margin to protect against insolvency.

The Shoe Drops
On September 7, 2008 Fannie Mae and Freddie Mac were put into conservatorship. By the second week of September both Lehman Brothers and Merrill Lynch verged on bankruptcy. On September 17, The U.S. Government lent $85 Billion to AIG. The potential insolvency of these banks led to a panic in the money markets, which in turn froze the short-term financing market.

Dodd-Frank Reform Act
The Dodd-Frank Reform Act imposes stricter rules for bank capital, liquidity, and risk management. It also mandates increased transparency, and clarifies the regulatory system. In addition the Volcker Rule limits a bank's ability to trade for its own account.

1.8 Outline of the Text
Chapter 1 concludes with an outline of the text, focusing on six distinct parts. Instructors can use this section to help organize the structure of the course. The six parts are:

Part 1: Elements of Investments
Part 2: Portfolio Theory
Part 3: Debt Securities
Part 4: Equity Analysis
Part 5: Derivative Markets
Part 6: Active Investment Management

CHAPTER 01
INVESTMENTS: BACKGROUND AND ISSUES

1. Equity is a lower-priority claim on earnings (expressed as dividends) that represents an ownership share in a corporation. Fixed-income (debt) security is a higher-priority claim that legally obligates the issuer to pay the holder of the debt, but does not have an ownership interest. Fixed-income securities typically pay a specified cash flow at pre-contracted time intervals until the last payment on the maturity date. Shares of equity have an indefinite life.

2. A primary (financial) asset has a claim on the real assets of a firm, whereas a derivative asset provides a payoff that depends on the prices of a primary asset but does not include the claim on the real assets.

3. Asset allocation is the allocation of an investment portfolio across broad asset classes. Security selection is the choice of specific securities within each asset class.

4. Agency problems are conflicts of interest between managers and stockholders. They can be addressed through corporate governance mechanisms, such as the design of executive compensation, oversight by the Board, and monitoring from the institutional investors.

5. Real assets have productive capacity; they are assets used to produce goods and services. Real assets can be tangible (e.g., machinery) or intangible (e.g., a patent). Financial assets are claims on real assets or the income generated by them.

6. Investment bankers are firms specializing in the sale of new securities to the public, typically by underwriting the issue. Commercial banks accept deposits and lend the money to other borrowers. After the Glass-Steagall Act was repealed in 1999, some commercial banks started transforming to “universal banks” which provide the services of both commercial banks and investment banks. With the passage of the Dodd–Frank Wall Street Reform and Consumer Protection Act in 2010, Glass-Steagall was partially restored via the Volcker Rule (which generally prohibits commercial banks from conducting certain investment activities with their own accounts and investing in hedge funds and private equity funds). In 2018, Congress passed The Economic Growth, Regulatory Relief, and Consumer Protection Act established a threshold ($10 billion) for banks to be exempt from the Volcker Rule.

7. Financial and Real Assets

a. Toyota creates a real asset—the factory. The loan is a financial asset that is created in the transaction.

b. When the loan is repaid, the financial asset is destroyed but the real asset continues to exist.

c. The cash is a financial asset that is traded in exchange for a real asset, inventory.

8. Real Estate as a Real Asset

a. No. The real estate in existence has not changed, only the perception of its value has.

b. Yes. The financial asset value of the claims on the real estate has changed, and thus the balance sheet of individual investors has been reduced.

c. The difference between these two answers reflects the difference between real and financial asset values. Real assets still exist, yet the value of the claims on those assets or the cash flows they generate do change. Thus, there is the difference.

9. Real and Financial Assets

a. The bank loan is a financial liability for Lanni. Lanni's $50,000 IOU is the bank's financial asset. The cash Lanni receives is a financial asset. The new financial asset created is Lanni's promissory note held by the bank.

b. The cash paid by Lanni (both the loan and its own cash) is the transfer of a financial asset to the software developer. In return, Lanni gets a real asset, the completed software. No financial assets are created or destroyed. Cash is simply transferred from one firm to another.

c. Lanni sells the software, which is a real asset, to Microsoft. In exchange Lanni receives a financial asset, 1,000 shares of Microsoft stock. If Microsoft issues new shares in order to pay Lanni, that would be the creation of a new financial asset.

d. In selling 1,000 shares of stock for $140,000, Lanni is exchanging one financial asset for another. In paying off the IOU with $50,000, Lanni is exchanging financial assets. The loan is "destroyed" in the transaction since it is retired when paid.

10.

a.

Assets		*Liabilities & Shareholders' Equity*	
Cash	$70,000	Bank loan	$50,000
Computers	30,000	Shareholders' equity	50,000
Total	$100,000	Total	$100,000

$$\text{Ratio of real to total assets} = \frac{\$30,000}{\$100,000} = 0.3$$

b.

Assets		*Liabilities & Shareholders' Equity*	
Software product*	$70,000	Bank loan	$50,000
Computers	30,000	Shareholders' equity	50,000
Total	$100,000	Total	$100,000

*Value at cost

$$\text{Ratio of real to total assets} = \frac{\$100,000}{\$100,000} = 1.0$$

c.

Assets		*Liabilities &*	
Microsoft shares ($70/share)	$140,000	Bank loan	$50,000
Computers	30,000	Shareholders' equity	120,000
Total	$170,000	Total	$170,000

$$\text{Ratio of real to total assets} = \frac{\$30,000}{\$155,000} = 0.2$$

Conclusion: When the firm starts up and raises working capital, it will be characterized by a low ratio of real to total assets. When it is in full production, it will have a high ratio of real assets. When the project "shuts down" and the firm sells it, the percentage of real assets to total assets goes down again because the product is again exchanged into financial assets.

11. Passed in 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act proposed several mechanisms to mitigate systemic risk. The act attempts to limit the risky activities in which the banks can engage and calls for stricter rules for bank capital, liquidity, and risk management practices, especially as banks become larger and their potential failure becomes more threatening to other institutions. The act seeks to unify and clarify the lines of regulatory authority and responsibility in government agencies and to address the incentive issue by forcing employee compensation to reflect longer-term performance. It also mandates increased transparency, especially in derivatives markets.

12. a. For commercial banks, the ratio is: $\frac{\$184.2}{\$18,090.1} = 0.0102$

    b. For non-financial firms, the ratio is: $\frac{\$23,907}{\$45,643} = 0.5238$

    c. The difference should be expected since the business of financial institutions is to make loans that are financial assets.

13. National wealth is a measurement of the real assets used to produce GDP in the economy. Financial assets are claims on those assets held by individuals.

    Financial assets owned by households represent their claims on the real assets of the issuers, and thus show up as wealth to households. Their interests in the issuers, on the other hand, are obligations to the issuers. At the national level, the financial interests and the obligations cancel each other out, so only the real assets are measured as the wealth of the economy. The financial assets are important since they drive the efficient use of real assets and help us allocate resources, specifically in terms of risk return trade-offs.

14. Compensation and Agency Problems
    a. A fixed salary means compensation is (at least in the short run) independent of the firm's success. This salary structure does not tie the manager's immediate compensation to the success of the firm, and thus allows the manager to envision and seek the sustainable operation of the company. However, since the compensation is secured and not tied to the performance of the firm, the manager might not be motivated to take any risk to maximize the value of the company.

b. A salary paid in the form of stock in the firm means the manager earns the most when shareholder wealth is maximized. When the stock must be held for five years, the manager has less of an incentive to manipulate the stock price. This structure is most likely to align the interests of managers with the interests of the shareholders. If stock compensation is used too much, the manager might view it as overly risky since the manager's career is already linked to the firm. This undiversified exposure would be exacerbated with a large stock position in the firm.

c. When executive salaries are linked to firm profits, the firm creates incentives for managers to contribute to the firm's success. However, this may also lead to earnings manipulation or accounting fraud, such as divestment of its subsidiaries or unreasonable revenue recognition. That is what audits and external analysts will look out for.

15. Even if an individual investor has the expertise and capability to monitor and improve the managers' performance, the payoffs would not be worth the effort, since his ownership in a large corporation is so small compared to that of institutional investors. For example, if the individual investor owns $10,000 of IBM stock and can increase the value of the firm by 5%, a very ambitious goal, the benefit would only be: $10,000 x 5% = $500.

    In contrast, a bank that has a multimillion-dollar loan outstanding to the firm has a big stake in making sure the firm can repay the loan. It is clearly worthwhile for the bank to spend considerable resources to monitor the firm.

16. Since the traders benefited from profits but did not get penalized by losses, they were encouraged to take extraordinary risks. Since traders sell to other traders, there also existed a moral hazard since other traders might facilitate the misdeed. In the end, this represents an agency problem.

17. Securitization requires access to many potential investors. To attract these investors, the capital market needs:
    (1) Strong business laws; low probability of confiscatory taxation/regulation;
    (2) A well-developed investment banking industry;
    (3) A well-developed system of brokerage and financial transactions;
    (4) Well-developed media, particularly financial reporting.

    These characteristics are found in (and make for) a well-developed financial market.

18. Progress in securitization facilitates the shifting of default risk from the intermediates to the investors of such a security. Since the intermediates no longer bear the default risk, their role and motivation in assessing and monitoring the quality of the borrowers is mitigated. For example, when the national market in mortgage-backed securities becomes highly developed, local banks can easily sell their claims on mortgages to the issuers of mortgage-backed securities and then use the money they receive to create more mortgages because the local banks make profits both from making loans and selling loans to the issuers of mortgage-backed securities. This way the local banks are incentivized by the volume of the loan that they lend out and not by the quality of the loan, and thus they become less cautious in originating subprime mortgages.

19. (answers will vary)

    Mutual funds accept funds from small investors and invest, on behalf of these investors, in the national and international securities markets.

    Pension funds accept funds and then invest, on behalf of current and future retirees, thereby channeling funds from one sector of the economy to another.

    Venture capital firms pool the funds of private investors and invest in start-up firms.

    Banks accept deposits from customers and loan those funds to businesses or use the funds to buy securities of large corporations.

20. Even if the firm does not need to issue stock in any particular year, the stock market is still important to the financial manager. The stock price provides important information about how the market values the firm's investment projects. If the stock price rises considerably, managers might conclude that the market believes the firm's future prospects are bright (and generally supports the actions of management). This might be a useful signal to the firm to proceed with an investment such as an expansion of the firm's business.

    Since shares can be easily traded in the secondary market it makes them more attractive to investors since investors know that they will be able to sell their shares quickly. This makes investors more willing to buy shares in a primary offering, and thus improves the terms on which firms can raise money in the equity market.

21. Treasury bills serve a purpose for investors who prefer a low-risk investment. The lower average rate of return compared to stocks is the price investors pay for predictability of investment performance and portfolio value.

22. You should be skeptical. If the author actually knows how to achieve such returns, one must question why the author would then be so ready to sell the secret to others. Financial markets are very competitive; one of the implications of this fact is that riches do not come easily. High expected returns require bearing some risk, and obvious bargains are few and far between. Odds are that the only one getting rich from this book is its author.