

*Solutions Manual for Financial Markets
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Answers to Chapter 1

Questions:

1.
 - a. primary
 - b. primary
 - c. secondary
 - d. secondary
 - e. secondary
2.
 - a. money market
 - b. money market
 - c. capital market
 - d. capital market
 - e. capital market
 - f. money market
 - g. money market
 - h. money market
 - i. capital market
 - j. money market
3. The capital markets are more likely to be characterized by actual physical locations such as the New York Stock Exchange. Money market transactions are more likely to occur via telephone, wire transfers, and computer trading.
4. According to Figure 1-4, federal funds and repurchase agreements, followed by Treasury bills, and negotiable CDs, had the largest amounts outstanding in 2021.
5. The major instruments traded in capital markets are corporate stocks, mortgages, corporate bonds, Treasury notes and bonds, state and local government bonds, U.S. government owned and sponsored agencies, and bank and consumer loans.
6. According to Figure 1-5, corporate stocks represent the largest capital market instrument in 2021, followed by Treasury securities, mortgages, and corporate bonds.
7. The bank would be most concerned about a depreciation of the yen against the dollar.
8. Financial institutions consist of:

Commercial banks - depository institutions whose major assets are loans and major liabilities are deposits. Commercial banks' loans are broader in range, including consumer, commercial, and real estate loans, than other depository institutions. Commercial banks' liabilities include more nondeposit sources of funds, such as subordinate notes and debentures, than other depository institutions.

Thrifts - depository institutions in the form of savings and loans, savings banks, and credit unions. Thrifts generally perform services similar to commercial banks, but they tend to concentrate their loans in one segment, such as real estate loans or consumer loans.

Insurance companies - financial institutions that protect individuals and corporations (policyholders) from adverse events. Life insurance companies provide protection in the event of untimely death, illness, and retirement. Property casualty insurance protects against personal injury and liability due to accidents, theft, fire, etc.

Securities firms and investment banks - financial institutions that underwrite securities and engage in related activities such as securities brokerage, securities trading, and making a market in which securities can trade.

Finance companies - financial intermediaries that make loans to both individual and businesses. Unlike depository institutions, finance companies do not accept deposits but instead rely on short- and long-term debt for funding.

Mutual funds and hedge funds - financial institutions that pool financial resources of individuals and companies and invest those resources in diversified portfolios of asset.

Pension funds - financial institutions that offer savings plans through which fund participants accumulated savings during their working years before withdrawing them during their retirement years. Funds originally invested in and accumulated in pension funds are exempt from current taxation.

9. If there were no FIs then the users of funds, such as corporations in the economy, would have to approach the savers of funds, such as households, directly in order to fund their investment projects and fill their borrowing needs. This would be extremely costly because of the up-front information costs faced by potential lenders. These include costs associated with identifying potential borrowers, pooling small savings into loans of sufficient size to finance corporate activities, and assessing risk and investment opportunities. Moreover, lenders would have to monitor the activities of borrowers over each loan's life span, which is compounded by the free rider problem. The net result is an imperfect allocation of resources in an economy.

10. There are at least three reasons for this. First, once they have lent money in exchange for financial claims, suppliers of funds need to monitor or check the use of their funds. They must be sure that the user of funds neither absconds with nor wastes the funds on projects that have low or negative returns. Such monitoring actions are often extremely costly for any given fund supplier because they require considerable time, expense, and effort to collect this information relative to the size of the average fund supplier's investment.

Second, the relatively long-term nature of some financial claims (e.g., mortgages, corporate stock, and bonds) creates a second disincentive for suppliers of funds to hold the direct financial claims issued by users of funds. Specifically, given the choice between holding cash and long-term securities, fund suppliers may well choose to hold cash for liquidity reasons, especially if they plan to use savings to finance consumption expenditures in the near future and financial markets are not very deep in terms of active buyers and sellers.

Third, even though real-world financial markets provide some liquidity services, by allowing fund suppliers to trade financial securities among themselves, fund suppliers face a price risk upon the sale of securities. That is, the price at which investors can sell a security on secondary markets such as the New York Stock Exchange (NYSE) may well differ from the price they initially paid for the security either because investors change their valuation of the security between the time it was bought and when it was sold and/or because dealers, acting as intermediaries between buyers and sellers, charge transaction costs for completing a trade.

11. A supplier of funds who directly invests in a fund user's financial claims faces a high cost of monitoring the fund user's actions in a timely and complete fashion after purchasing securities. One solution to this problem is for a large number of small investors to place their funds with a single FI serving as a broker between the two parties. The FI groups the fund suppliers' funds together and invests them in the direct or primary financial claims issued by fund users. This aggregation of funds resolves a number of problems. First, the "large" FI now has a much greater incentive to hire employees with superior skills and training in monitoring. This expertise can be used to collect information and monitor the ultimate fund user's actions because the FI has far more at stake than any small individual fund supplier. Second, the monitoring function performed by the FI alleviates the "free-rider" problem that exists when small fund suppliers leave it to each other to collect information and monitor a fund user. In an economic sense, fund suppliers have appointed the financial institution as a delegated monitor to act on their behalf. For example, full-service securities firms such as Morgan Stanley carry out investment research on new issues and make investment recommendations for their retail clients (or investors), while commercial banks collect deposits from fund suppliers and lend these funds to ultimate users such as corporations.

12. In addition to information costs, FIs help small savers alleviate liquidity and price risk. Often claims issued by financial institutions have liquidity attributes that are superior to those of primary securities. For example, banks and thrift institutions (e.g., savings associations) issue transaction account deposit contracts with a fixed principal value and often a guaranteed interest rate that can be withdrawn immediately, on demand, by investors. Money market mutual funds issue shares to household savers that allow them to enjoy almost fixed principal (depositlike) contracts while earning higher interest rates than on bank deposits, and that can be withdrawn immediately. Even life insurance companies allow policyholders to borrow against their policies held with the company at very short notice. Notice that in reducing the liquidity risk of investing funds for fund suppliers, the FI transfers this risk to its own

balance sheet. That is, FIs such as depository institutions offer highly liquid, low price-risk securities to fund suppliers on the liability side of their balance sheets, while investing in relatively less liquid and higher price-risk securities—such as the debt and equity—issued by fund users on the asset side.

13. As long as the returns on different investments are not perfectly positively correlated, by spreading their investments across a number of assets, FIs can diversify away significant amounts of their portfolio risk. Thus, FIs can exploit the law of large numbers in making their investment decisions, whereas due to their smaller wealth size, individual fund suppliers are constrained to holding relatively undiversified portfolios. As a result, diversification allows an FI to predict more accurately its expected return and risk on its investment portfolio so that it can credibly fulfill its promises to the suppliers of funds to provide highly liquid claims with little price risk. As long as an FI is sufficiently large, to gain from diversification and monitoring on the asset side of its balance sheet, its financial claims (it issues as liabilities) are likely to be viewed as liquid and attractive to small savers, especially when compared to direct investments in the capital market. A mutual fund invested in a diverse group of stocks and fixed income securities will best provide diversification for an investor.

14. If net borrowers and net lenders have different optimal time horizons, FIs can service both sectors by mismatching their asset and liability maturities. That is, by maturity mismatching, FIs can produce long-term contracts such as long-term, fixed-rate mortgage loans to households, while still raising funds with short-term liability contracts such as deposits. In addition, although such mismatches can subject an FI to interest rate, a large FI is better able than a small investor to manage this risk through its superior access to markets and instruments for hedging the risks of such loans.

15. Because they are sold in very large denominations, many assets are either out of reach of individual savers or would result in savers holding highly undiversified asset portfolios. For example, the minimum size of a negotiable CD is \$100,000; commercial paper (short-term corporate debt) is often sold in minimum packages of \$250,000 or more. Individual savers may be unable to purchase such instruments directly. However, by buying shares in a mutual fund with other small investors, household savers overcome the constraints to buying assets imposed by large minimum denomination sizes. Such indirect access to these markets may allow small savers to generate higher returns on their portfolios as well.

16. Other services provided by FIs that benefit the overall economy include:

Money Supply Transmission - Depository institutions are the conduit through which monetary policy actions impact the rest of the financial system and the economy in general.

Credit Allocation - FIs are often viewed as the major, and sometimes only, source of financing for a particular sector of the economy, such as farming and residential real estate.

Intergenerational Wealth Transfers - FIs, especially life insurance companies and pension funds, provide savers the ability to transfer wealth from one generation to the next.

Payment Services - The efficiency with which depository institutions provide payment services directly benefits the economy.

17. As financial institutions perform the various services described above, they face many types of risk. Specifically, all FIs hold some assets that are potentially subject to default or credit risk (such as loans, stocks, and bonds). As FIs expand their services to non-U.S. customers or even domestic customers with business outside the United States, they are exposed to both foreign exchange risk and country or sovereign risk as well. Further, FIs tend to mismatch the maturities of their balance sheet assets and liabilities to a greater or lesser extent and are thus exposed to interest rate risk. If FIs actively trade these assets and liabilities rather than hold them for longer-term investments, they are further exposed to market risk or asset price risk. Increasingly, FIs hold contingent assets and liabilities off the balance sheet, which presents an additional risk called off-balance-sheet risk. Moreover, all FIs are exposed to some degree of liability withdrawal or liquidity risk, depending on the type of claims they have sold to liability holders. All FIs are exposed to technology risk and operational risk because the production of financial services requires the use of real resources and back-office support systems (labor and technology combined to

provide services). Finally, the risk that an FI may not have enough capital reserves to offset a sudden loss incurred as a result of one or more of the risks it faces creates insolvency risk for the FI.

18. FIs provide various services to sectors of the economy. Failure to provide these services, or a breakdown in their efficient provision, can be costly to both the ultimate suppliers (households) and users (firms) of funds as well as the overall economy. For example, bank failures may destroy household savings and at the same time restrict a firm's access to credit. Insurance company failures may leave households totally exposed in old age to catastrophic illnesses and sudden drops in income on retirement. In addition, individual FI failures may create doubts in savers' minds regarding the stability and solvency of FIs in general and cause panics and even runs on sound institutions. FIs are regulated in an attempt to prevent these types of market failures.

19. A major event that changed and reshaped the financial services industry was the financial crisis of the late 2000s. As FIs adjusted to regulatory changes brought about by the likes of the FSM Act, one result was a dramatic increase in systemic risk of the financial system, caused in large part by a shift in the banking model from that of "originate and hold" to "originate to distribute." In the traditional model, banks take short term deposits and other sources of funds and use them to fund longer term loans to businesses and consumers. Banks typically hold these loans to maturity, and thus have an incentive to screen and monitor borrower activities even after a loan is made. However, the traditional banking model exposes the institution to potential liquidity, interest rate, and credit risk. In attempts to avoid these risk exposures and generate improved return-risk tradeoffs, banks have shifted to an underwriting model in which they originated or warehouse loans, and then quickly sell them. When loans trade, the secondary market produces information that can substitute for the information and monitoring of banks. Further, banks may have lower incentives to collect information and monitor borrowers if they sell loans rather than keep them as part of the bank's portfolio of assets. Indeed, most large banks are organized as financial service holding companies to facilitate these new activities.

More recently activities of shadow banks, non-bank financial service firms that perform banking services, have facilitated the change from the originate and hold model of commercial banking to the originate and distribute banking model. In the shadow banking system savers place their funds with money market mutual⁷ and similar funds, which invest these funds in the liabilities of shadow banks. Borrowers get loans and leases from shadow banks rather than from banks. Like the traditional banking system, the shadow banking system intermediates the flow of funds between net savers and net borrowers. However, instead of the bank serving as the middleman, it is the nonbank financial service firm, or shadow bank, that intermediates. Further, unlike the traditional banking system, where the complete credit intermediation is performed by a single bank, in the shadow banking system it is performed through a series of steps involving many nonbank financial service firms.

These innovations remove risk from the balance sheet of financial institutions and shift risk off the balance sheet and to other parts of the financial system. Since the FIs, acting as underwriters, are not exposed to the credit, liquidity, and interest rate risks of traditional banking, they have little incentive to screen and monitor activities of borrowers to whom they originate loans. Thus, FI's role as specialists in risk measurement and management has been reduced.

20. The boom ("bubble") in the housing markets began building in 2001, particularly after the terrorist attacks of 9/11. The immediate response by regulators to the terrorist attacks was to create stability in the financial markets by providing liquidity to FIs. For example, the Federal Reserve lowered the short-term interest rate that banks and other financial institutions pay in the Federal funds market and even made lender of last resort funds available to non-bank FIs such as investment banks. Perhaps not surprisingly, low interest rates and the increased liquidity provided by Central banks resulted in a rapid expansion in consumer, mortgage, and corporate debt financing. Demand for residential mortgages and credit card debt rose dramatically. As the demand for mortgage debt grew, especially among those who had previously been excluded from participating in the market because of their poor credit ratings, FIs began lowering their credit quality cut-off points. Moreover, to boost their earnings, in the market now popularly known as the "subprime market," banks and other mortgage-supplying institutions often offered relatively low "teaser" rates on adjustable rate mortgages (ARMs) at exceptionally low initial interest rates, but with substantial step-up in rates after the initial rate period expired two or three year later and if market rates rose in the future. Under the traditional banking structure, banks might have been reluctant to so aggressively pursue low credit quality borrowers for fear that the loans would default. However, under the originate-to-distribute model of banking, asset securitization and loan syndication allowed banks to retain little or no part of the loans, and hence the default risk on loans that they originated. Thus, as long as the borrower did not default within the first months after a loan's

issuance and the loans were sold or securitized without recourse back to the bank, the issuing bank could ignore longer term credit risk concerns. The result was deterioration in credit quality, at the same time as there was a dramatic increase in consumer and corporate leverage.

21. Measured as more than \$1 trillion in international debt outstanding as of 2021 the biggest issuers are France, Germany, Luxembourg, the Netherlands, the United Kingdom, and the United States.

22. China, Japan, the United Kingdom, and the United States have the biggest banks (in terms of total assets held in 2021).

Part I

Introduction and Overview of Financial Markets

Chapter One

Introduction

I. Chapter Outline

1. Why Study Financial Markets and Institutions? Chapter Overview
2. Overview of Financial Markets
 - a. Primary Markets versus Secondary Markets
 - b. Money Markets versus Capital Markets
 - c. Foreign Exchange Markets
 - d. Derivative Security Markets
 - e. Financial Market Regulation
3. Overview of Financial Institutions
 - a. Unique Economic Functions Performed by Financial Institutions
 - b. Additional Benefits FIs Provide to Suppliers of Funds
 - c. Economic Functions FIs Provide to the Financial System as a Whole
 - d. Risks Incurred by Financial Institutions
 - e. Regulation of Financial Institutions
 - f. Trends in the United States
4. Globalization of Financial Markets and Institutions

Appendix 1A: The Financial Crisis: The Failure of Financial Institutions' Specialness (available through McGraw Hill's Connect. Contact your McGraw Hill representative for more information on making the appendix available to your students).

II. Learning Goals

1. Differentiate between primary and secondary markets.
2. Differentiate between money and capital markets.
3. Understand what foreign exchange markets are.
4. Understand what derivative securities markets are.
5. Distinguish between the different types of financial institutions.
6. Know the services financial institutions perform.
7. Know the risks financial institutions face.
8. Appreciate why financial institutions are regulated.
9. Recognize that financial markets are becoming increasingly global.

III. Chapter in Perspective

This chapter has three major sections and one minor section. The text provides a general overview of the major types of U.S. financial markets, focusing primarily on terminology and descriptions of the major securities, market structures and regulators. Market microstructure is not discussed. Foreign exchange transactions are also briefly

introduced. Second, the chapter describes the various types of financial institutions and explains the risks they face and the services they provide to funds' users and funds' suppliers. The financial crisis is discussed and the impact of Brexit is considered. The final section of the chapter provides statistics about the rapid growth of globalization of both markets and institutions. An appendix covering the details of the financial crisis and the government intervention programs, including the costs as of late 2009, is available through McGraw Hill's Connect. Contact your McGraw Hill representative for more information on making the appendix available to your students.

IV. Key Concepts and Definitions to Communicate to Students

Financial markets	Primary markets
Initial public offerings (IPO)	Secondary markets
Derivative security	Liquidity
Money markets	Over-the-counter (OTC) markets
Capital markets	Derivative security markets
Derivative security	Financial institutions
Direct transfer	Price risk
Indirect transfer	Delegated monitor
Asset transformers	Diversify
Economies of scale	Enterprise risk management (ERM)

Appendix terms include:

TARP	Federal Reserve Rescue Efforts
Federal Stimulus Programs	American International Group
FDIC Bank takeovers	Other financial initiatives
Other housing initiatives	

V. Teaching Notes

Why Study Financial Markets and Institutions?

For an economy to achieve its potential growth rate, mechanisms must exist to

effectively allocate capital (a scarce resource) to the best possible uses while accounting for the riskiness of the opportunities available. Markets and institutions have been created to facilitate transfers of funds from economic agents with surplus funds to economic agents in need of funds. For an economy to maximize its growth potential it must create methods that attract savers' excess funds and then put those funds to the best uses possible, otherwise idle cash is not used as productively as possible. The fund's transfer should occur at as low a cost as possible to ensure maximum economic growth. Two competing alternative methods exist direct and indirect financing. In direct financing, the ultimate fund's supplier purchases a claim from the fund's demander with or without the help of an intermediary such as an underwriter. In this case, society relies on **primary markets** to initially price the issue and then **secondary markets** to update the prices and provide **liquidity**. Trustees are appointed to monitor the contractual obligations of issuers and instigate enforcement actions for breach of contract terms. In indirect financing, the fund's demander obtains financing from a financial intermediary. The intermediary and the borrower negotiate the terms and costs. The intermediary obtains funds by offering different claims to fund suppliers. In this case, the intermediary is usually responsible for monitoring the contractual conditions of the financing agreement and perhaps updating the cost if appropriate.

The financial crisis of 2008-2009 reversed a long-term trend of deregulating **financial institutions**. Regulatory risk and costs of regulation increased as a result of the new laws, higher capital requirements, and stricter regulatory oversight. A former Federal Reserve Chair, Alan Greenspan, believed in only minimal regulation and his philosophy appeared to prevail at many regulatory agencies including the SEC. As a discussion leader, you may wish to point out that it is not clear whether the existing rules would have been sufficient to prevent the crisis if they had been enforced. Laws and regulations by themselves are insufficient to ensure proper behavior in any case. Practitioners and academics also need to emphasize business ethics and individual accountability. Nevertheless, the financial crisis led to the massive Dodd-Frank bill (Wall Street Reform and Consumer Protection Act) designed to limit systemic risk and tighten controls on the institutions that many blame for causing the financial crisis. The "Volcker Rule" prohibited insured intermediaries from engaging in proprietary trading, owning, or managing a hedge fund and private equity investments. The Volcker rule was only slowly implemented because banks correctly maintain that many of their proprietary activities are actually hedges to reduce risk and these are allowed. It is difficult to separate hedging from speculative-based trades. An unintended consequence of the Volcker rule is the reduction of liquidity in the bond markets as banks reduce their bond trading activities. Although details are not clear at this time, it is likely the Trump administration will roll back many Dodd-Frank requirements, including the Volcker rule and the Consumer Finance Protection Bureau's (CFPB) attempts to increase the fiduciary responsibility of investment advisors with respect to conflicts of interest with their clients. In 2018, the Volcker Rule was amended to exempt smaller banks from the full scope of the Volcker Rule as well as eliminated the presumption that positions held for fewer than 60 days violated the rule unless bankers proved otherwise. The amendments went into effect in 2019 resulting in bank holdings of derivative securities increasing to \$201.32 trillion by 2019.

Maintaining profitability with restricted activities in a continuously evolving, globally competitive market has been a major challenge to the financial industry. The pace of innovation of new technology, financial products, and services has not abated. Technological advances may change traditional methods of offering financial services wholesale, and perhaps eventually, at the retail level. Job opportunities for finance students in markets and institutions are likely to continue to improve over the next ten to twenty years as managing risks at intermediaries in increasingly complex and competitive businesses will grow in importance. For career information, you may wish to refer students to <https://dhigroupinc.com/home/default.aspx>. The text provides an introductory examination of the functions and characteristics of markets and risk and profitability management at major financial institutions in order to help students understand the workings of the financial system in today's global economy.

Growth began to pick up in 2016 and market optimism increased with the election of the new president. The unemployment rate has fallen very low and economic growth has not progressed as rapidly as expected. Bond market issuance continued at a strong pace, although overall credit provided by banks experienced delayed growth. This implies that larger firms have had little difficulty in obtaining credit, but some smaller firms that rely more on bank lending continue to have difficulty obtaining credit. China's growth experienced a 6.2 percent drop in 2019 due to a prolonged trade war with the U.S., the lowest level in thirty years.

The United Kingdom's (UK) surprise vote to leave the European Union single market in June 2016 reduced the value of the pound and global stock markets. This is not surprising as markets dislike uncertainty. In March 2017, UK Prime Minister Theresa May invoked "Article 50" which started the 2-year process of extricating the UK from the EU. The reason for the British exit (Brexit) vote was to reduce the amount of immigration from EU countries. Two weeks before the October 31, 2019, deadline, the UK was still unable to reach a deal with the EU on how the exit would be structured. The EU grants equal access to trade and capital flows among member countries, but EU rules require allowing free immigration. In the U.S. and UK, there was a backlash in 2016 against globalization and immigration. While globalization has added greatly to economic efficiency, including improved corporate profits and lower costs of consumer goods and services, it has also led to increased competition for jobs and kept wages from rising. Poor real median per capita income growth has other causes as well though, such as low productivity growth, low real interest rates, and economic uncertainty. Electorates want their governments to come up with policies that allow job protection and income growth. This is no easy task, and it may require tradeoffs between the cost of consumer goods and protecting jobs. Brexit's biggest disadvantage is its damage to U.K.'s economic growth. Uncertainty over Brexit slowed the U.K.'s growth from 2.4% in 2015 to 1.6% in 2019 and would lower the U.K.'s overall growth by up to 6.7% over the next 15 years. Brexit also diminished business investment by 11% between 2016 and 2019.

A more recent shock to the world of financial markets was the COVID Pandemic in 2020 causing a virtual shutdown of world economies and resulted in a 32.5% drop in the DJIA in just over a month. After experiencing three of the biggest drops in history during the spring of 2020, the DJIA broke 30,000 on November 24, 2020, and ended the year at a record high of 30,606.48. The Dow crossed 31,000 on Jan 7, 2021, and then reached an all-time high on Jan 20, 2021, of 31,188.38. Unfortunately, the stock market

indexes, including the Dow, declined thereafter amid tight monetary policy from the Federal Reserve, the invasion of Ukraine by Russia, rising energy prices, and investor concerns regarding new coronavirus strains.

As the economy and competition in the markets change, attention to profits and risk becomes increasingly important. Making investment and financial decisions requires managers and individual investors with an understanding of the flow of funds throughout the economy as well as the operations and structure of both domestic and international markets. Financial institutions (FIs) play an important role in the functioning of financial markets. In particular, FIs often provide the least costly and most efficient way of channeling funds to and from financial markets.

Overview of Financial Markets

Financial markets are structures through which funds flow and can be distinguished into two major dimensions: (1) primary versus secondary markets, and (2) money versus capital markets.

[LG 1-1] Primary Markets vs Secondary Markets

Primary Markets. The two alternative mechanisms of fundraising are direct financing, where the saver directly purchases a claim from the ultimate fund's user in the **primary market**, and indirect financing where savers place their money in a FI and the FI lends money to the ultimate borrower. In the cases where savers desire to place their money directly in the markets, institutions such as investment bankers (asset brokers) have evolved to assist in this process. The first time a firm issues securities to the public is referred to as its **initial public offering (IPO)**. Issuing additional stock of a firm that already has stock publicly traded is referred to as a seasoned offering (or sometimes called a 'follow on' offering). In some cases, firms offer the issue to one or only a few institutional buyers. The primary markets are the markets where firms (and other borrowers) create and sell new securities in order to raise cash to fund positive NPV projects (or to meet some other social goals in the case of nonprofit fund raisers). The financial crisis drastically reduced primary market issues of all types. Bond issuance recovered first followed by the recovery of the IPO issuance in 2012 and 2013.

Secondary Markets. The instructor should emphasize that the **secondary markets** exist to provide liquidity and price information to investors. These functions make the primary market more attractive. Investors would be far less likely to invest in risky long-term primary securities unless they believe they can obtain updates of the current value of their claims and have the ability to sell these claims quickly at low cost. Hence the efficiency of operations of the secondary markets affects the growth rate in the overall economy through their effect on the primary markets. Secondary market trading volume has risen dramatically in the last several decades, particularly with the creation of wholesale and retail electronic trading mechanisms that have substantially reduced trading costs. Mergers can emphasize the economies of scale in the exchange business. The NYSE merged with Euronext in 2006 and was acquired by the Intercontinental Exchange (ICE) in 2013, after a failed merger attempt by the Deutsche-Bourse. The CME and the CBOT have also merged. Ask students to think about the pros and cons of having only one owner of the largest U.S. stock market versus having foreign ownership of our largest market. Note that electronic trading is growing so rapidly that existing market structures such as an exchange floor are having a difficult time maintaining profitability.

A **derivative security** is a financial security whose payoffs are linked to other, previously issued securities or indices and have existed for centuries. However, growth in derivative securities occurred mainly in the 1980s through the 2000s. The secondary market also offers buyers and sellers **liquidity**, which is the ability to turn an asset into cash quickly at fair market value, making the issuing firm more desirable in the primary market.

[LG 1-2] Money Markets versus Capital Markets

Money Markets. Money markets are markets that trade debt securities or instruments with maturities of one year or less. Money markets have evolved to meet the short-term investment needs (1 year or less) of corporations and institutions desiring to earn a small positive rate of return on cash that would be needed shortly, hence they have evolved with high denomination safe securities that have little risk of principal loss.

Money Market Instruments. See Figure 1-4 which illustrates outstanding amounts of money market instruments in the United States in 1990, 2000, 2010, and 2021. Notice that in 2021 federal funds and repurchase agreements followed by Treasury bills, negotiable CDs, and commercial paper, had the largest amount outstanding.

Capital Markets. Capital markets are markets where borrowers raise cash for long-term investment needs. These are generally riskier than money markets and hence, capital market securities must promise to pay a higher rate of return to attract funds. Savers willing to take the associated risk are attracted to these markets.

The two main types of derivatives markets are the market for exchange-traded derivatives and the **over-the-counter (OTC)** derivatives markets. Exchange-traded derivatives are generally liquid and involve no counterparty risk, whereas OTC contracts are custom contracts negotiated between two counterparties and have default risk.

Capital Market Instruments. Refer to Table 1-3 which lists and defines the major capital market securities. Then refer to Figure 1-5 to show their outstanding amounts by dollar market value.

Discussion question for students:

You may wish to ask students the following question that illustrates these price changes. Suppose you start with a \$1,000 investment in stocks. You lose 54% of your investment and then you gain 71%. How much money do you end up with and what was your net rate of return?

Answer:

Step 1: $\$1,000 \times (1 - 0.54) = \460

Step 2: $\$460 \times 1.71 = \786.60

Step 3: Your net rate of return was $(\$786.60 - \$1,000) / \$1,000 = -21.34\%$

[LG1-3] Foreign Exchange Markets

The majority of the world's business involves international business transactions. It is increasingly important for firms to recognize that the best investment opportunity may be located in continental Europe, the lowest cost source of funds may be found in Britain instead of the U.S., or the highest potential sales growth rate may be in Asia. As corporations and institutions have increased their international transactions, foreign exchange risk has become a major source of risk for many firms today and much hedging with spot and forward foreign exchange trades occurs.

Historically, when a nation's current account deficit surpasses 5% of GDP a correction occurs in currency value. Before the financial crisis the U.S. was able to consistently run current account deficits above 5% because foreigners were willing to supply funds to U.S. markets. Part of the reason for this is the usage of the U.S. dollar as a global reserve currency. Currency manipulation by foreign central banks also contributed to the strength of the dollar. For instance, foreign central banks continue to purchase dollars to keep local currencies down to foster their export sectors. The U.S. economy and the dollar remain key generators of global growth and these factors help the dollar maintain its value in the global market. The strength in the dollar since the Great Recession has reduced profitability of some well-known U.S. multinationals with significant overseas revenues such as IBM. Coca Cola's global sales exposes the company to nearly 70 different foreign currencies, exposing the company to flat or decreasing net quarter sales in countries with currencies weak compared to the strong U.S. dollar. Nevertheless, the excess supply of dollars available in the global economy could precipitate a drop in the currency. The dollar's drop can generate long term inflation concerns and lead to higher commodity prices because most commodities are priced in dollars regardless of where they are traded globally.

[LG1-4] Derivative Security Markets

Derivative security markets are markets in which derivative securities trade. A **derivative security** is a contract that derives its value from some underlying asset or market condition. In general, the main purpose of the derivatives markets is to transfer risk between market participants. Some participants, called hedgers, enter derivatives contracts to reduce their risk exposure in the underlying cash market. Other participants, called speculators, use derivative contracts to bet on price movements. Derivatives are highly leveraged instruments. Le allows hedgers to reduce risk and speculators to attempt to earn high rates of return with low capital investments.

Derivatives have been blamed for the financial crisis. Mortgage derivatives did allow a larger amount of mortgage credit to be created and spread the risk of mortgages to a broader base of investors. Subprime mortgage losses were large, reaching over \$700 billion. The instructor may wish to ask students whether it makes sense to blame the instrument or the users. Warren Buffett has called derivatives, ‘weapons of mass destruction.’ However, used properly they allow market participants to transfer risk to other parties and allow others lower cost methods to gain exposure to markets. It does seem reasonable to require greater transparency in OTC derivatives to ensure that players can cover the promises they make. Derivatives that involve payments of principal, such as credit default swaps, are now supposed to be traded on an exchange to ensure performance and reasonable limits to speculation.

Financial Market Regulation

Financial markets are regulated by the SEC, the exchanges, the Commodity Futures Trading Commission (CFTC) and the Financial Industry Regulatory Body (FINRA) (FINRA resulted from a merger of the NASD and the NYSE regulatory arm in 1996 and supersedes both). FINRA is a self-regulatory body that is subject to SEC oversight. The primary purposes of regulations are to prevent fraud, to ensure performance as promised, and to ensure that the public has enough information to evaluate the riskiness of an investment. The regulators do not attempt to ensure investors earn a minimum rate of return.

[LG 1-5] Overview of Financial Institutions

Financial institutions perform essential functions of channeling funds from those with surplus funds to those with shortages of funds. Many savers today are willing to risk some of their funds in the capital markets, but not all. For at least some of their wealth, savers typically desire a different type of claim than the ultimate borrower wishes to offer. **Asset transformers**, such as banks, have evolved to meet this need by offering low-risk claims to savers while granting higher-risk, more illiquid investments (e.g., loans) to the fund demanders. Other types of institutions have evolved to meet the special needs of savers such as life insurance firms to eliminate certain risks, pension funds to transfer wealth through time, money market mutual funds to pool investors’ savings, etc.

Refer to Table 1-5 for Types of financial institutions: commercial banks, thrifts, insurance companies, securities firms and investment banks, finance companies, investment funds, pension funds, and Fintechs. Figure 1-6 illustrates a **direct transfer** of funds (money) from suppliers of funds to users of funds. A **price risk** represents an asset whose sale price will be lower than its purchase price.

Unique Economic Functions Performed by Financial Institutions

Due to monitoring costs, liquidity costs, and price risks, the average investor in a world without Fis would likely view direct investment in financial claims and markets as unattractive and prefer to just hold onto their cash. Thankfully, the financial system has developed an alternative and indirect way for investors to channel funds to users of funds via **indirect transfer**.

Relative to the choices available to many savers who invest directly in the markets, FIs provide savers with very safe, liquid claims with fairly small denominations. FIs then in turn lend money to fund demanders. The ultimate borrowers, say corporations, issue risky claims (loans or bonds) held by FIs. The individual savers need not investigate the riskiness of the corporate borrowers, the FI will do that. Consequently, FIs allocate capital in an economy. FIs must then be able to accurately assess, price, and monitor the risks of borrowers for an economy to achieve its potential growth rate. FIs must also carefully manage their own risk since they are borrowing money from savers at low risk and then investing the money in higher-risk loans and securities in order to earn a profit. By carefully evaluating the riskiness of potential investments and by diversifying their loan and investment portfolios, lending institutions employ the law of large numbers to reduce their risk exposure. The text argues that intermediaries failed in evaluating the riskiness of mortgages and this failure resulted in the financial crisis. Actually, the causes are more complex. Heavy government involvement in currency, mortgage and other markets, lax regulation, failure of credit rating agencies, political pressure to promote affordable housing, failures of corporate governance, and an extended period of very low-interest rates all contributed to the crisis. It is easy to blame it on ‘Wall Street’ or capitalism but these simplistic arguments don’t hold up under scrutiny.

[LG 1-6] Monitoring Costs. Refer to Table 1-6 for services performed by financial institutions. The instructor should note that both markets and institutions assess, price and monitor risk. In some cases, however, institutions can perform these functions better than the markets. In this sense, the institution is serving as a **delegated monitor**. For instance, in situations where the borrower is reluctant to make information public or frequent monitoring is needed or when special additional financing requirements may be necessary, bank loans may be preferable to a public bond issue.

Liquidity and Price Risk. Financial institutions not only improve the quality of information but also act as **asset transformers**, making investments more attractive to investors than claims directly issued by corporations. Claims issued by financial institutions have liquidity attributes that are superior to primary securities. The ability of the financial institutions to **diversify** some of their investment risks allows them to provide liquidity services to fund suppliers. Diversification enables financial institutions to predict more accurately the return and risk on an investment portfolio allowing them to provide highly liquid claims with little price risk.

The federal government insures deposits of certain intermediaries. Because of deposit insurance, depositors do not require a risk premium to place money in an insured institution. In effect, government insurance subsidizes risk-taking at depository institutions. The government insurance liability requires that insured depository institutions be regulated to limit the government’s liability and to limit imprudent risk-taking at these institutions.

Additional Benefits FIs Provide to Suppliers of Funds

Funds suppliers who place their money in a FI generally get the following benefits:

Reduced Transaction Costs. Economies of scale refers to the concept that cost reduction in trading and other transaction services result in increased efficiency when FIs perform these services. Not only do financial institutions have a greater incentive to collect information, but also their average cost of collecting relevant information is lower than for the individual investor.

Maturity Intermediation. Maturity intermediation refers to the additional responsibility of the financial institution's ability to reduce risk by diversification compared to the small saver, and bears the risk of mismatching maturities of their assets and liabilities. FIs can produce long-term contracts by maturity mismatching while still raising funds with short-term liability contracts.

Denomination Intermediation. Some FIs, especially mutual funds perform a unique service relating to denomination intermediation. Indirect access to markets allow small savers to generate higher returns and lower risks on their portfolios.

Economic Functions FIs Provide to the Financial System as a Whole

The Transmission of Monetary Policy. The highly liquid nature of bank and thrift deposits resulted in acceptance by the public as the most widely used medium of exchange in the economy. Commercial banks play a key role in the transmission of monetary policy due to deposits being a significant component of the money supply.

Credit Allocation. FIs provide a unique service to the economy in that they are the major source of financing for particular sectors of the economy preidentified by society as being in special need of financing. For example, in the U.S. savings associations and savings banks must emphasize mortgage lending as 65% of their assets must be mortgage related for these thrifts to maintain their charter status.

Intergenerational Wealth Transfers or Time Intermediation. This refers to the ability of savers to transfer wealth from their youth to old age as well as across generations. This is especially important to a country's social well-being. Due to special taxation relief and other subsidies, investments by savers in life insurance, annuities, and pension funds are encouraged.

Payment Services. Depository Institutions (DIs) also have a unique role in the transmission of monetary policy because their claims are part of the money supply and because they assist in providing large amounts of payment services such as check clearing and wire transfers in the economy. As mentioned above, DIs allocate credit in an economy. If DIs perform the credit allocation function poorly, long-term economic growth will not be maximized. Certain FIs are also granted special tax status to assist individuals in transferring wealth through time or to the next generation.

[LG 1-7] Risks Incurred by Financial Institutions

All FIs face a variety of risks, but generally speaking all FIs face:

- Default risk on at least a portion of their assets,
- Market risk, or the risk that the value of FI investments may change,
- Liquidity risk, due to a mismatch in the maturity of assets and liabilities,
- Interest rate risk due to the same mismatch above,
- Foreign exchange risk due to foreign currency assets and liabilities or changing competitive conditions with foreign FIs as currency values fluctuate,

- Operating cost risk because there are fixed costs involved in providing all financial services,
- Insolvency risk, any of the stated risks may result in insolvency at a FI.

Some FIs face:

- Sovereign risk on overseas investments,
- Off-balance sheet risks due to contingent assets and liabilities,
- Technology and Operational risk due to either overinvestment in technology relative to customer demand, or a failure of technology, respectively.

[LG 1-8] Regulation of Financial Institutions

FIs hold savers' funds. Should even one FI default many people's wealth could be destroyed unless the government intervenes. Government institutions such as the Federal Deposit Insurance Corporation (FDIC) can handle a limited number of simultaneous failures. Systemic risks or system-wide failures, perhaps due to contagion, among any group of FIs could not be handled by our existing regulatory structures at the current funding levels. Contagion occurs when the failure of one or a few institutions causes widespread failures, at an extreme resulting in an economic crash similar to the Depression of the 1930s. Part of the fear of contagion arises because most FIs are 1) highly leveraged and 2) operate on the principle that the majority of claimants will not seek to withdraw their funds at the same time as FIs don't keep all of the savers' funds in the vault available for immediate withdrawal.

The government must regulate DIs because of the deposit insurance liability. Regulation is also necessary to prevent fraud and discriminatory practices. Regulations impose a cost on society by adding to the cost burden of FIs, which must be passed on to borrowers in the form of higher costs, or reduced rates of savings for investors in FIs. Prior to the financial crisis, regulatory changes allowed FIs to engage in more activities and increased the level of competition among institutions. As a result, regulators have been forced to develop more sophisticated measures of risk and incentives for institutions to limit risk.

The "Restoring American Financial Stability Act of 2010" was designed to promote the financial stability of the United States by improving accountability and transparency in the financial system, eliminating the need for bailouts by getting rid of the "too big to fail" problem, and to protect consumers from abusive financial services practices. Other stated goals included helping create jobs by creating a solid economic foundation and to prevent another crisis. An overarching theme in the bill was to create a regulatory structure that restores America's confidence in the financial system. The bill is divided into 16 parts that address everything from hedge funds to insurance and accountability to new regulations. I do not believe can eliminate the 'too big to fail' problem. What does too big to fail mean? The only foolproof way to eliminate the government's deposit liability (short of rescinding insurance) is to 'ring fence' deposit funds. That is to prevent deposits from being used for risky purposes. This seems unlikely. Moreover, the government bailed out AIG, which did not take deposits.

Trends in United States

Refer to Table 1-7 illustrating the changing shares of total assets of financial institutions in the U.S. from 1948 to 2020. Make note of the most important trends that are clearly evident.

The Rise of Financial Services Holding Companies. The passage of the Financial Services Modernization Act (FSMA) of 1999 repealed the last vestiges of the 1930s era Glass-Steagall Act that separated commercial and investment banking and allowed financial service firms (FSFs) broader powers to engage in financial activities. After passage, FSFs could simultaneously engage in banking, insurance, and securities activities.

The act was passed because technology had created large economies of scale and scope; hence, FSFs were circumventing regulations to grow in size and to offer more financial services. Increasing global competition from FSFs that were less tightly regulated also provided the impetus for the passage of the bill along with a general trend towards disintermediation by the public. The banking industry argued that they would be able to provide financial services more cheaply by engaging in other less regulated activities. Several other changes occurred after 1999.

The Shift Away from Risk Measurement and Management and the Financial Crisis. First, the addition of trading activities began to change the culture of banking and the nature of the relationship between bankers and customers. In a lending relationship, there is a mutual partnership between the borrower and the lender; in particular, the bank wants the borrower to do well so that the loan will be repaid. In a trade deal, however, the bank and the customer are in an adversarial relationship. The bank does well at the customer's expense. Customers who do not realize this can easily be taken advantage of by their bank counterparty. Second, the advent of securitization changed the nature of banking activity from primarily an ongoing lending relationship with a customer to an 'originate and resell the loan' business, in other words, a volume-based business. With securitization, the bank has an incentive to make riskier loans since the loans will subsequently be sold. With Congressional urging, mortgage lenders weakened credit standards and offered sophisticated mortgage types such as adjustable rate and interest-only mortgages that initially had low payments to speculators and less sophisticated homebuyers. Banks and others took on too much credit, liquidity and indeed insolvency risk as a result. Add to this a long period of low interest rates which contributed to a housing price bubble along with government involvement in mortgage securitization and insurance, and the resulting problems in the mortgage markets should have been predictable. Indeed, both former Federal Reserve Chairmen Alan Greenspan and the Bush administration warned Congress of the growing risks in mortgages. In 2006 with interest rates beginning to increase, home prices began falling and the mortgage crisis began. By early 2007 about 10% of subprime mortgages were 90 days behind on their payments. By August 2007 about 1/5 of subprime mortgage holders were at least 60 days behind in their payments.

The subprime market only comprised a few percentages of the total mortgage industry. It was not large enough to bring about the financial crisis that the U.S. and the world endured. The problems in the subprime market revealed the overall bubble in housing prices that resulted from an extended period of low-interest rates. The housing market is huge and fairly illiquid. The government has yet to pass a plan to reduce the risks posed by The Federal National Mortgage Association and The Federal Home Loan Mortgage Corporation.

As a percentage of total assets, banks, thrifts, insurers, and private pension funds are all declining and investment companies, pensions, and securities and broker-dealers are on the increase. Loan sales have exhibited rapid growth, even throughout the financial crisis. In addition, many FIs that did not traditionally provide bank credit now indirectly do so by purchasing securities collateralized by loans. This has given rise to the term ‘shadow banking system’ because the ultimate financiers are not directly providing bank credit. Securitization has been criticized as one source of the financial crisis and when originators know they will sell the loans and that they will not bear the credit risk then underwriting standards may decline. This apparently did happen with mortgages before the crisis. Nevertheless, the additional supply of funds available from shadow banks allows faster growth. Europe began encouraging securitization as a tool to promote more rapid growth since their banks remain financially weak.

Enterprise Risk Management. Since the crisis, regulators have encouraged the use of broader risk measurement tools at depository institutions. **Enterprise Risk Management (ERM) systems** take a more holistic and strategic look at risk management. Rather than just focusing on the process of risk management due to transactions ERM includes broader measures such as setting performance targets and compensation schemes that may foster excessive risk-taking. The general idea is to ensure that the risks taken by the institution are understood by the bank’s board of directors and that its activities fall within acceptable risk parameters. ERM may be thought of as a strategic element of the bank’s internal control process and may be incorporated into a bank’s stress test where scenarios are evaluated as to the impact on the bank’s ability to survive poor economic outcomes.

Fintech. Financial technology, referred to as FinTech utilizes technology to deliver financial solutions directly competing with traditional financial methods. Services such as cryptocurrencies and blockchain are one of the new technology services provided by FinTech that supports the exchange of value between two unknown parties in a quick and efficient manner. FinTech also supports models of peer-to-peer mass collaboration which in turn will make many existing organizational forms redundant. The adoption of new technologies in the financial services market requires substantial expenditures to adapt to the new industry standards.

[LG 1-9] Globalization of Financial Markets and Institutions

Recent decades have witnessed the globalization of financial markets to an unprecedented degree. At times trading in foreign equities exceeded trading in U.S. equities and to a greater extent than ever, events ‘there’ affect markets ‘here’ and vice versa. Although the U.S. markets are still the largest, the advent of the Euro (the common currency in Europe) has already led to rapid growth in Euro financing.

Eurobonds are a significant source of financing for many U.S. firms and they represent an alternative to a domestic bond issue. Eurobonds are bonds issued outside the home country but are in the home currency. The growth in foreign financial markets has five ongoing causes:

1. Greater pool of savings in foreign countries.
2. Better investment prospects outside of countries with large savings.
3. The Internet has improved information availability on foreign markets and securities.
4. Low-cost methods to invest in foreign securities have proliferated (such as ADRs).
5. Deregulation around the world has allowed investors to purchase more foreign securities.

The financial crisis helped reveal how interconnected the world's markets have become. No country was unaffected by the crisis, though not all were affected equally. Countries that did not have a housing boom, such as France and Germany, fared better. Nevertheless, bank profits fell across the globe and global stock markets plunged in unison during the crisis. The old adage that 'the only thing that goes up in a crisis are correlations' proved dramatically true.

Europe underwent a sovereign debt crisis of its own. When weaker countries joined the euro currency they found their borrowing costs were quite low, even when they borrowed large amounts. In effect, countries such as Greece, Iceland, Ireland, Portugal and Spain were able to borrow using Germany's credit rating because of membership in the euro currency. The results were predictable. These countries over-borrowed and did not use the money to generate sufficient income growth to make the debt sustainable. Eventually the debts incurred could not be repaid on and the markets began to charge higher interest rate spreads over German bunds. The countries could not afford the higher interest rates and bailouts ensued. Brexit will bring additional challenges to Europe. No one knows the long-term impact of Brexit on the UK or the EU, but clearly attitudes about integration in Europe have changed in the last several years. Many economists believe that the EU needs greater economic integration within and reduced trade barriers without to succeed. Efforts to negotiate reduced trade barriers between Japan and Europe are perhaps a good portent of future efforts at integration. In the late 2010s, the trade war between the U.S. and China caused market turbulence that was felt worldwide. The DJIA dropped 800 points on August 14, 2019, due to the increasing tensions between the two companies. Just nine days later, when President Trump ordered American companies to seek immediate alternatives to doing business in China, the DJIA dropped another 223 points.

Teaching Tip:

Ask your students how one could measure integration among economies. What variables would you wish to consider?

How did the sub-prime mortgage market crisis reveal the extent of international investing?

How did the most recent financial crisis demonstrate how interconnected the world's markets have become?

Why has globalization declined among many people in popularity in recent years? How did this bring about the vote for Brexit?

Ask your students why FIs are regulated. What are the types of risks that FIs face?

Have your students explain how FIs help individuals diversify their portfolio risks.

Appendix 1A: The Financial Crisis: The Failure of Financial Institutions' Specialness

The financial crisis of 2008 and 2009 (FC) has likely changed the banking and investment banking industries forever. There are now no major U.S. stand-alone investment banks. Most of the so-called 'Wall Street elite' are either merged, bankrupt, or in the case of Goldman Sachs and Morgan Stanley, converted to commercial bank charters. Subprime losses also devastated one of the country's largest thrift, IndyMac. This failure alone cost the FDIC between \$8.5 and \$9.4 billion. The crisis resulted in the forced sale or merger of other large institutions such as Wachovia, Countrywide, and Merrill Lynch and a bailout of Citigroup. Vaunted and time-tested firms such as Bear Stearns and Lehman Brothers lost all of their value due to excessive leverage and overconcentration in mortgage-backed investments. Both are now gone. As problems in the major financial institutions began spreading other markets were affected. The commercial paper market shut down until the Fed intervened and money market mutual funds potentially faced runs when one fund 'broke the buck' due to its holdings of Lehman investments. The country's largest insurer, AIG, was saved from bankruptcy only by government intervention, and even the 'Big Three' U.S. automakers faced insolvency with GM and Chrysler receiving bailouts. U.S. unemployment peaked at over 10% and the effects of the recession were felt worldwide. Countries that did not have housing booms and had more conservative banking systems fared better during the crisis and recovered more quickly. Canada is a good example as are France and Germany. China was affected by the crisis but recovered quickly as the Chinese government quickly acted to stimulate its economy.

The text appendix provides details of the government's actions to stem the financial crisis and a walkthrough of the major events. A brief outline of some of the major government financial activities follows:

Troubled Asset Relief Program (TARP), up to \$700 billion approved

- Capital injections to troubled institutions (in exchange for preferred stock)
- Purchase of poor-quality loans and securities
- Reducing preventable foreclosures

Funding for certain key markets

- The Fed has greatly expanded its discount window lending facility to include non-banks and to include much poorer collateral, lowered interest rates and began 'quantitative easing.'
- The Fed purchased commercial paper from high quality issuers for a time to offset a lack of investors. Heavy mutual fund withdrawals limited the supply of funds available to commercial paper markets during the crisis. Fed purchases of paper allowed refunding to continue.
- The Treasury and the Fed operated the Term Asset Backed Securities Lending Facility to encourage securitization of loans.

Expanded FDIC backing

- The FDIC first increased deposit insurance to \$250,000 per account permanently and temporarily increased insurance to 100% of the deposit amount (originally until Dec 31, 2009, extended to June 30, 2010, the Dodd-Frank bill extended this again until Dec 31, 2012). Currently the insurance limit is \$250,000, but it is not clear whether the government would force losses on uninsured amounts in the event of a large bank failure.
- The FDIC fully backed any newly issued senior unsecured debt that was sold before June 30, 2009, for banks and bank holding companies.

The government also passed the controversial \$789 billion stimulus package. It is popular among many to deride the need for an economic stimulus bill. One has to remember however that the U.S. financial system was indeed in severe trouble in this time period and economic growth was falling at a record pace in the modern era. Had the government taken the wrong steps, or even failed to act, I believe a far more serious recession could have occurred. Was it reasonable to expect Congress to stand by and do nothing in such a case, particularly if one recalls the effects of the Great Depression? In an extreme situation such as presented by the crisis, it seems likely that expansive fiscal policy was called for. However, the stimulus bill that was actually passed did not seem to contain enough elements that were focused on generating growth. Moreover, fiscal spending is notoriously slow and ineffective in stimulating growth. The public sector does not have a profit motive to promote efficiency and spending decisions are heavily politicized. The elements of the stimulus bill should have been critically examined for their ability to generate short-term and long-term economic growth. With the debt and deficit levels the country now faces, more stimulus spending seems unwise unless a) one can convincingly show sufficient growth would result to outweigh the risks of additional spending and borrowing and b) one can provide a creditable plan to ensure debt reduction through meaningful entitlement reform, including the new health care entitlement.

VI. Web Links

http://www.dowjones.com/	News service with business and market highlights
http://www.newsweek.com/	Weekly news magazine that covers business
http://www.economist.com/	Superb weekly magazine that covers U.S. and global business and political news.
http://www.sec.gov/	Securities Exchange Commission homepage
http://www.nyse.com/	The New York Stock Exchange's excellent website
http://www.wsj.com/	The Wall Street Journal has excellent coverage of the many recent problems with ethics on Wall Street and Main Street

<http://www.federalreserve.gov>

The web page of the Federal Reserve Board of Governors. This website contains the Beige Book, the Chairman's testimony before Congress, and flow of funds data for the United States

VII. Student Learning Activities

1. Identify a specific scenario where direct financing would be beneficial for both the fund's supply and the fund's demander. Identify a second specific scenario where indirect financing would be beneficial for both the fund's supply and the fund's demander.
2. Using the Internet find the flow of funds data at <http://www.federalreserve.gov>. For each of the following intermediaries, identify the largest type of investment security excluding loans (e.g., corporate bonds, equity, etc.). Explain why you believe each intermediary has chosen this investment type:
Pension funds
Commercial Banks
Life insurers
Property & Casualty insurers
3. Find the most recent version of the Flow of Funds Matrix, Supplemental Table, Z.1 at the Federal Reserve website. (You might try the following web address: <https://www.federalreserve.gov/releases/z1/20170305/html/flows.htm>). The Adobe Reader is required.
Identify the financial assets and liabilities of each of the following sectors:

	Financial Assets	Financial Liabilities
Households and Non-profits		
State & Local government		
Financial sectors		
Non-financial business		
Federal government		
Foreign sectors		

In the current period, which categories are funds suppliers and which are funds demanders?

4. Locate current promised interest rates on three money market instruments and promised rates of return on two capital market instruments. Explain the differences in your findings.

5. A liquid asset is one that can be quickly converted to a spendable commodity such as cash without incurring large transaction costs or uncertainty in value. Given this, rank the following investments from most liquid to least liquid:
Cash, Common Stocks, Bonds, Real Estate, Savings Accounts, CDs, Checking Accounts
6. During the financial crisis and afterward gold prices skyrocketed. Discuss why gold prices changed. Is gold always a good investment in uncertain times? Why has gold's performance changed now? Discuss.
7. What countries have the most international debt securities outstanding? Discuss.
8. What events resulted in bank's shift from the traditional banking model of originate-and-hold to a model of originate-and-distribute?
9. Explain how FIs reduce monitoring costs associated with the flow of funds from fund suppliers to fund investors?
10. What are some of the other services that FIs provide to the financial system?