

# CHAPTER Cj

## Financial Markets and Institutions

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### OVERVIEW

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This chapter assembles historical statistics on the monetary and financial systems of the United States since colonial times. The tables cover various monetary aggregates, indicators of monetary policy, statistics on banking, insurance, and other financial institutions, financial markets, debt and the flow of funds, and interest rates. This essay provides an overview of the roles of money and the financial system in the historical functioning and growth of the American economy, with individual essays setting the background for each of the major topics: monetary aggregates; monetary statistics before the national banking era; monetary policy; financial institutions and their regulation; securities markets; debt and the flow of funds; and interest rates and yields.

### Money and the Economy

Money has a central role in the creation of a modern economy based on exchange, production, and an effective division of labor. Money facilitates exchange across space and over time; indeed, it is at the base of the credit system, which allocates resources over time. Historically, three basic functions of money have been identified: unit of account, store of value, and medium of exchange (Friedman and Meltzer 2003). The *unit of account* function refers to announcing prices and recording transactions in units of the asset. The *store of value* function refers to an asset retaining its value over time, allowing money to serve as a standard of deferred payments. Most fundamentally, money is a means of payment, a way of discharging debts that arise from exchanging goods and services. A financial instrument is said to be a *medium of exchange* if it is widely accepted to discharge debts, including debts arising from the purchase and sale of goods and services. The stock of money, in turn, is defined to include those financial instruments that either are media of exchange or may be converted, quickly and at low cost, into media of exchange. Examples of such instruments include metal coins, paper currency, and certain deposits at banks and other financial institutions (see the essay on monetary aggregates in this chapter).

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Money began as full-bodied coins whose face value equaled their value as a commodity. Precious metals – gold, silver, and copper – were used in the United States as commodity money from 1790 to 1933 because they possessed the valuable properties of divisibility, storability, portability, and high value relative to weight. Fiduciary money, whose face value exceeds its value as a commodity, evolved to economize on the resource cost of using gold and silver coin. In order to circulate, fiduciary money requires basic trust by the public in the issuer's intent not to overissue to capture the social saving inherent in fiduciary money. Indeed, fiduciary money is a social contrivance. People accept it because in their experience other people also do so. Commodity money, certified by the government in the form of coin, was eventually replaced by fiduciary money, which evolved from bank-issued notes convertible into coin to the present-day government-issued pure fiat money backed by a credible commitment by the monetary authorities to maintain stable prices.

Commercial banks play an integral part in the monetary system. They evolved from the goldsmiths of medieval Europe who would take in gold for safekeeping in return for warehouse receipts, which began circulating as money. Their modern-day descendants borrow short-term and lend long-term to firms and households. Their liabilities (including notes before 1934) and deposits are the largest part of the money supply (as discussed in the following sections; also see the essay on financial institutions and their regulation in this chapter).

Government has played a crucial role in the monetary system from the beginning, but active pursuit of “monetary policy” is a relatively recent phenomenon. In the U.S. Constitution, Congress certified the value of the dollar as a coin with a fixed weight in gold or silver. Under this system, the monetary authority (the U.S. Treasury until 1914, the Federal Reserve since then) was charged with preserving the convertibility of paper currency into gold. In the twentieth century, the Federal Reserve has accepted a much broader responsibility for general macroeconomic stability. The monetary authority is also charged with maintaining the stability of the financial system. This involves both maintaining the smooth functioning of the payments system and serving as a lender of last resort in the event of a banking panic.

In the United States, monetary policy since the 1920s has largely achieved its aims by using open market operations (buying and selling of government securities from and to the banking system and the public) to produce changes in the monetary base. The monetary base is the sum of currency outstanding and prudential bank reserves at Federal Reserve banks. The monetary base changes in response to changes in the federal funds rate, which is the overnight

rate banks charge for the sale of surplus bank reserves at Federal Reserve banks. The change in short-term interest rates in turn affects the cost of borrowing funds and hence both business investment and household consumption expenditures.

Over the past two centuries, financial innovation – the development of new types of financial instruments – has changed the structure of the financial system by creating new types of financial institutions and markets (see the essays on monetary statistics before the national banking era and on financial institutions and their regulation, both in this chapter). This evolution has changed the channels by which monetary policy can affect the economy (for example, through the substitution between different financial assets and by affecting bank lending directly). Financial innovation has vastly increased the size of the financial system relative to the monetary base, which the Federal Reserve can control using open market operations. Despite these developments, the basic role of the Federal Reserve remains unchanged. It is to provide a nominal anchor for the price level by its control over the monetary base.

## The Financial System

The function of the financial system is to allocate resources by matching the surplus funds of savers (lenders) with the demands for funds by investors (borrowers). The financial system provides three key services: risk sharing, liquidity, and information. The financial system enables risk sharing by diversifying portfolios, through the provision of financial instruments to lenders who in turn pool the risks across borrowers. Providing such a service encourages higher levels of lending than would be the case if savers could place their funds in only one industry or sector of the economy.

An asset is said to be “liquid” if it can be quickly sold for very near the price for which it can be purchased. By definition, the most liquid asset is money. The financial system provides facilities to ease the exchange of financial assets, which may be risky and may be long-lived, for money.

Finally, the financial system provides information to savers about potential investors. It reduces the costs of asymmetric information in which investors (borrowers) have better information about the likely success of the projects to be funded than do savers. After delivering credit, the system continues to produce information by monitoring the performance of borrowers in utilizing the funds and servicing and repaying the loans. The three services the financial system provides are defined by two types of entities: financial institutions (see the essay on financial institutions and their regulation in this chapter) and financial markets (see the essays on securities markets and on debt and the flow of funds, both in this chapter).

A financial institution is an intermediary that collects funds from savers and transfers them to borrowers. The primary financial institutions in the United States have been commercial banks. A commercial bank receives deposits and makes loans. The loans earn interest, generated by the productive activity financed. The depositors are paid interest or are provided other services (for example, transaction facilities) to compensate them for the use of their funds. The bank earns profits from the spread between the interest paid on deposits and the interest earned on loans, and from fees charged for other financial services. The bank reduces risk by lending to diverse entities facing diverse risks. It also provides liquidity by ensuring that savers can always convert their deposits into cash.

Banks are the most important financial intermediaries in the U.S. economy. Until the middle of the twentieth century, the banking sector had the largest share of financial assets. Other types of financial intermediaries, such as savings and loan associations, trust companies, investment banks, and insurance companies, perform many of the same functions as banks, but they are specialized in terms of the activities they finance and the liquidity of their liabilities. Traditionally, the liabilities of the banking system have been the most liquid and, as previously noted, comprise the largest component of the money supply.

Commercial banks and related financial institutions in the United States are regulated by various authorities, such as the Federal Reserve, the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and state agencies. Regulation serves to ensure the soundness of these institutions, to prevent fraud, and to reduce the costs of asymmetric information (see the essay on financial institutions and their regulation in this chapter).

Financial markets are arenas in which savers and investors are directly matched. Investors (borrowers) issue claims, which are purchased by savers (lenders). Primary markets are those in which newly issued claims are sold to buyers. Secondary markets trade in already-issued claims. Funds are raised in financial markets either as debt (bonds), whose principal a borrower must repay with interest, or as equity (stocks), which involves an ownership claim to the profits or assets of the firm.

Financial markets also provide the services of risk sharing, liquidity, and information. As in the case of financial institutions, financial markets in the United States are regulated by agencies such as the Securities and Exchange Commission to ensure the free flow of information (see the essays on securities markets and on debt and the flow of funds, both in this chapter).

Interest rates are relative prices, which equilibrate demand and supply for various financial assets in financial markets (see the essay on interest rates and yields in this chapter). Nominal or market interest rates encompass both the “real” rate of interest representing the return on capital and the marginal rate of time preference, and expectations of inflation. The term structure of interest rates from short-term to long-term reflects the longevity and liquidity of the asset as well as expectations of future monetary and fiscal policy and the business cycle.

Finally, the financial system, by matching savers and investors and facilitating diversification of portfolios, has contributed in important ways to the growth of the U.S. economy. The financial system assists growth by fostering an environment that raises the savings rate and thereby accelerates capital accumulation. It also provides the funds to finance new technology (Levine 1997). The existence of robust and flexible financial markets has been frequently identified as an important contributor to the reemergence of the United States as the world technological leader at the end of the twentieth century (Gompers and Lerner 2001).

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