the firm's current or future assets to generate future residual claims, depends on investor perceptions of fundamental characteristics of the firm and the overall economic conditions, common stocks tend to fluctuate more widely in price than other direct corporate claims. Preferred stocks operate much like debt in that they promise periodic fixed payments to shareholders. They differ importantly from debt, however, in that failure to keep these promises does not offer grounds for legal action by investors against the firm. Both types of equities are represented in the tables in this chapter.

The tables include a set of stock market price indexes and dividend yield records that track equity performance on an annual basis in New York from 1802 (series Cj797), with separate categories for industrial, railroad, and utilities stocks after 1870 (series Cj800–803). Because Boston was the premier market for trading industrial securities from early in the nineteenth century until New York surpassed it around 1900, the chapter also presents prices and dividend yields for those industrial and bank stocks traded in Boston both at auction and over the formal stock exchange from 1835 to 1897 (series Cj809–810). A wide range of indexes of market performance have become available in recent years, and the most widely used are represented here from their inception dates, including the Dow Jones Industrial Average, the Standard and Poor's 500 Index, the NYSE Composite, the NASDAQ Composite, and the Wilshire 5000 (series Cj804–807). The yields of high-grade preferred stocks also appear in series Cj815–816.

Although stocks often trade frequently in the secondary market after their issue, it is in the primary market, or the market for new securities, that corporations raise external funds for investments and new ventures. In this respect, the aggregate value of new issues reflects the business climate at a point in time because firms are more likely to raise funds when they can do so at low cost, or when interest rates are low. Although bonds are the securities whose prices are most directly linked to interest rates, these rates also figure prominently in determining the returns that investors will require to hold common stocks in a given risk class, and thus affect offering prices. The role of primary markets in the distribution of both initial public offerings (IPOs) and the new issues of firms that have sold stock to the public before ("seasoned" offerings) is one of mobilizing and directing an economy's resources to projects that offer the highest returns. The size of this market in each year since 1933 is included here to document the ebbs and flows of new corporate capital, along with that of new issues of state and local government securities (Table Cj817–830).

For financial markets to function well, investors must be able to sell their assets quickly at prices that reflect their intrinsic or "true" value. Though a high volume of transactions may simply reflect the disruptive phenomenon of "churning," it is also closely related to market liquidity. Where there is a liquid financial market, there will be firms hoping to raise funds and list there because listing provides a mechanism through which the venture capitalist can "cash in" on successful projects. Because firms hope to maximize their stock price and because a share in a liquid market will trade at a higher price than an identical share in an illiquid market, the existence of a liquid stock exchange will tend to concentrate transactions within an institutional structure where informational asymmetries are smallest, promoting efficiency in the asset allocation process.

A number of series for transactions quantities are reported in this chapter as a means of observing growth in the securities markets generally. They include the annual volume and value of shares traded on the NYSE from 1879, and those of bonds from 1910 (Table Cj857–858). Also included are the annual values of trades on all registered stock exchanges, and on the New York Curb/American Stock Exchange (AMEX) specifically from 1935 (series Cj853–854). Overall, activity on the AMEX and the regional stock exchanges has been small compared to that on the NYSE, but the emergence of the NASDAQ system (operated by the National Association of Securities Dealers, or NASD) has contributed very significantly to trading volume over the past decade, often exceeding that on the NYSE in terms of the number of shares changing hands. The chapter thus includes annual NASDAQ trades since its start in 1971 (series Cj855–856).

As participation in securities markets by institutions and individuals becomes more widespread, the role of mutual funds in channeling funds to the capital markets has become increasingly important. Mutual funds are popular because they save many investors, for a fee, the time and expense of maintaining portfolios with small holdings of any individual security. Such portfolios would be costly to adjust, yet mutual funds, by spreading management and maintenance costs across a number of investor accounts, can offer a diversified portfolio to investors at low cost. The table that presents the number, value, and net redemptions of mutual fund shares since the passage of the Investment Company Act in 1940 reflects the recent and rapid rise in ownership of these shares (Table Cj859–862).

To buy stocks, investors often tender cash to their brokers, yet brokers will also lend to their customers to finance security purchases. If many such loans are made during a bull market that later experiences an unanticipated correction, the brokerage industry and the economy in general could be adversely affected by defaults. To avoid the excessive use of credit in the purchase of stocks, the Federal Reserve limits the degree to which this can be done by imposing a "margin" requirement. As can be seen in Table Cj863–865, the margin requirement changed fairly frequently from 1934 on, but it has remained at 50 percent since January 1974.

Debt and the Flow of Funds

John A. James and Richard Sylla

Production and consumption in a modern economy, as well as savings and investment, are financed by a wide variety of fund flows among economic sectors. These flows result at any given point in time in a complex structure of assets, liabilities or debts, and net worth.

For the U.S. economy, the most comprehensive source for data on financial flows and outstanding stocks of debt, as well as total financial assets (including equities in corporate and noncorporate business) and liabilities, are the flow-of-funds accounts maintained by the Board of Governors of the Federal Reserve System. These data begin with the year 1945 and extend to the present. They are updated quarterly and annually, and they can be accessed at the Federal Reserve Internet site. The flow-of-funds accounts are voluminous and can serve a multitude of purposes. To facilitate their use, the Federal Reserve publishes a *Guide to the Flow of Funds Accounts*. This chapter presents a sampling of the flow-of-funds data and the stocks of assets and liabilities resulting from

the flows. These data illustrate the nature of the Federal Reserve accounts and include additional tables on net debt outstanding and savings flows for years before 1945, as well as a more detailed rendering than appears in the flow-of-funds accounts of mortgage debt outstanding, by type of property and type of holder, since 1970.

The flow-of-funds accounts measure the acquisition of physical and financial assets throughout the U.S. economy and the sources of funds used to acquire the assets. In doing this, the accounts record the net volume of transactions in financial instruments. They provide a means of analyzing, for example, the development of financial instruments and the behavior of sectors over time, and they record the role of financial intermediaries, such as banks, mutual funds, and pension funds, in transferring funds from sectors that have positive savings to those that borrow funds.

In showing the relationship among various financial activities and their relation with nonfinancial activities that generate income and production, the flow-of-funds accounts provide a broad measure of investment activities. In theory, the accounts encompass all net changes in financial claims or liabilities resulting from (1) current transactions in the economy, (2) the allocation of saving between investment in physical capital and investment in financial capital, and (3) decisions to change the composition of financial assets and liabilities. The flow-of-funds accounts are consistent with, but broader than, the national income and product accounts, which focus on activity related to current production and income. Unlike the national income and product accounts, the flow-of-funds accounts include financial flows among various sectors of the economy that arise from transfers of existing physical assets, as well as shifts in the composition of financial portfolios that may be unrelated to, or only indirectly related to, current production.

The flow-of-funds accounts are a component of a system of accounts that describes the U.S. economy. Other components of the system are the national income and product accounts and the balance-of-payments accounts. The latter two components measure production and income activity and international capital flows during a particular time period. The flow-of-funds accounts and related national balance sheets detail how current investment in tangible and financial assets contributes to a buildup of the stock of assets in each sector of the economy and to the creation of national wealth. One can view the flow-of-funds accounts as combining data on the flows of savings and investment in the national income and product accounts with further details on the borrowing and lending of specific economic sectors.

The flow-of-funds accounts embody the principle that all movements of funds in the economy must be accounted for because total sources of funds equal total uses of funds. Savings equals investment in the economy, and all funds supplied by economic sectors become uses of funds by other sectors.

Sources of funds for a sector are its savings from current income and the amount it raises from sources outside the sector. Saving is equal to receipts of current income less outlays for consumption, operating expenses, interest, and other current expenses. The value of capital consumption allowances – that is, depreciation on tangible assets – is added to net saving to obtain gross saving. Funds raised from outside sources constitute the sectors' net increase in liabilities or debts to other sectors.

Uses of funds for a sector are its investment in physical assets and net increases in financial assets, such as deposits, loans made, and securities purchased.

The requirement that sources of funds must equal uses of funds applies not only to sectors but also to individual types of transactions. That is, total funds borrowed by means of each type of financial instrument must equal total funds lent through that instrument. For the economy as a whole, funds borrowed by all sectors must equal funds lent by all sectors, and funds borrowed through all types of financial instruments must equal funds lent through all types of instruments.

The flow-of-funds accounts are published in both flow and levels versions. Most flow tables have a corresponding levels table. A flow variable is one that shows an amount of change over a period of time. Examples of flows are Tables Ce1–68, covering 1897–1949 and showing national savings by major saver groups as well as personal savings and nonagricultural individuals' saving by major components or instruments. Here one can see, for example, how much of personal savings was channeled into the stock market in the 1920s. Other examples of flow variables are personal income, the net acquisition of government securities, and the amount of borrowing from banks, all during a particular period of time such as a year.

A level, also referred to as a stock, a position, or an outstanding, shows a value at a particular point in time. An example is the balance in an individual's checking account at the end of a month or a year. Other examples are holdings of equities by households and nonprofit organizations, and the credit market debt outstanding of (owed by) households at the end of a particular year.

In the flow-of-funds accounts, many flow series are determined by calculating changes in levels between two periods. In some cases, however, the change in a level does not equal the flow. One reason is that some series are shown at market rather than book value (that is, historical cost). For series shown at book value, the flow ordinarily equals the change in the level. However, for series shown at market value, the change in the level between two periods is not equal to the flow. Corporate equities held as assets, for example, are valued in the accounts at market values. Hence, the level for corporate equities shown in the tables for any period differs from that of the previous period by the flow, or net issuance, plus the change in market value (that is, the capital gain or loss).

The flow-of-funds tables presented here for the period beginning 1945 are in levels (Tables Cj1021–1178). They show the outstanding levels of assets and liabilities by sector or by instrument at the end of each year. In most cases, the flow-of-funds tables published by the Federal Reserve (and also available at its Internet site) would have a corresponding flows table.

Interest Rates and Yields

John A. James and Richard Sylla

Interest rates and yields of securities indicate the cost of credit to borrowers and the income received by those who lend and invest. Borrowers traditionally were business concerns and governments, but in the modern economy they also include consumers and homeowners. Lenders include individuals, banks, trusts, endowments, and a variety of other financial institutions, both private and public. This chapter presents a variety of money market rates of interest, bond yield data, rates paid to depositors and charged to consumers by financial institutions, and rates of interest paid by homeowners on mortgage loans.