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# Federal Reserve BULLETIN

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# Aggregate Disturbances, Monetary Policy, and the Macroeconomy: The FRB/US Perspective

*David Reifschneider, Robert Tetlow, and John Williams, of the Board's Division of Research and Statistics, prepared this article.*

The U.S. economy is continually buffeted by disturbances originating both within and outside our borders. To assess the influence of such events on employment, inflation, and other measures of macroeconomic performance, economists often use models of the economy—systems of mathematical equations describing the interactions among various measures of activity in the markets for labor, goods, and financial instruments. Although no model can replicate in full detail the complex behavior of the real world, one can construct models that are consistent with both economic theory and historical data. Such models shed light on the way the economy works and how it responds to disturbances and policy actions that are similar to those encountered historically.

The FRB/US model of the U.S. economy is maintained at the Federal Reserve Board for use in policy analysis and forecasting. With FRB/US, the Board's staff can gauge the likely consequences of specific events through simulation analysis—computational "what-if" exercises in which the model is used to predict the outcomes from alternative assumptions regarding fiscal and monetary policy, international conditions, and so forth. In a similar manner, the staff can use model simulations to assess possible implications for economic performance of the full range of disturbances likely to be experienced over extended periods of time.

This article examines the properties of the FRB/US model and the ways in which they shape the model's predictions. To a large extent, the discussion centers on the monetary transmission mechanism—the chain of relationships embedded in the model that describe how monetary policy actions influence financial markets and, in turn, aggregate output and inflation. The quantitative nature of this mechanism is illustrated by estimates of the effect of movements in interest rates and other factors on spending in different sectors and by simulations of the effect of a change in the stance of policy on the economy as a whole.

After the discussion of the transmission mechanism, the article considers the ways in which monetary policy influences the macroeconomic consequences of specific events in the FRB/US model by showing how the predicted effects of selected disturbances change under alternative policy responses. Because these disturbances—a decline in the value of the stock market, a period of unexpectedly rapid wage growth, and an adverse shock to the productivity of American firms and workers—differ in their implications for output and inflation, they illustrate some of the choices faced by policymakers in the context of the model. In the final section of the article, these choices are summarized in terms of policy frontiers that show how, past some point, reductions in the variability of inflation are obtained only through increases in the variability of output.

## *PROPERTIES OF THE FRB/US MODEL*

FRB/US is what is often called a New Keynesian model because of the assumptions it incorporates. In the model, households and firms are forward-looking—that is, they base their decisions on the income and sales, financial conditions, and prices that they expect for the future. However, rather than being instantaneous, the response to changes in these fundamental factors is gradual because capital installation costs, contracts, and other considerations create significant frictions that slow the process. For this reason, the failure of markets to clear quickly after disturbances to the economy can result in periods of over- or under-utilization of labor and capital resources (see box "An Overview of the FRB/US Model").

According to the viewpoint embedded in the model, monetary policy can mitigate these swings in aggregate resource utilization by altering financial market conditions and thereby exerting an indirect influence on output and employment in the short term and on inflation over the longer term. In FRB/US, policymakers alter financial conditions by changing the short-term interest rate under the control of the Federal Reserve—the federal funds rate. Current and anticipated changes in this rate influence prices and rates of return on various financial assets, including bonds and corporate equities, and on foreign exchange.

Changes in these financial conditions in turn influence spending by households and firms and, by altering resource utilization in labor and product markets, affect the rate of inflation. (For alternative views on how monetary policy may influence the economy, see box "Other Monetary Transmission Channels.")

## An Overview of the FRB/US Model

Macroeconomic models sometimes differ in their predictions about the effect of a particular event on the economy, owing to differences in theoretical design, empirical specification, and degree of aggregation. For this reason, reviewing the structure of the FRB/US model is useful for understanding the model's behavior.[1]

The equations of FRB/US are specified in accordance with standard economic theory. In particular, households, businesses, and investors are assumed to be forward-looking in their decisionmaking as they seek to optimize their welfare. Individuals choose a path for current and future consumption that maximizes their lifetime utility, subject to a budget constraint; this assumption implies that consumer spending today is related to the present value of expected future earnings and the current value of assets. Similarly, firms maximize expected profits in hiring workers, investing in capital goods, and setting prices; this assumption implies, among other things, that the desired stock of business equipment is a function of expected sales and the cost of capital. In financial markets, investors equate expected rates of return on different assets, subject to premiums that compensate borrowers and lenders for differences in risk and liquidity.

In their decisionmaking, households and firms are assumed to face significant frictions that slow the speed at which they adjust prices and quantities to changes in fundamental economic factors. Although not explicitly incorporated into the structure of FRB/US, the sources of these frictions are varied; they include the cost of adjusting a firm's work force and physical capital, labor contracts and other agreements, and an apparent reluctance of households to change spending habits quickly. The existence of such frictions means that households and firms have an incentive to be forward-looking in their behavior because costs of adjusting spending and prices can be reduced by correctly anticipating their preferred values in the future. As a result, many decisions in the nonfinancial sectors depend not only on conditions today and in the recent past but also on the way conditions are expected to change in the near future.

Expectations also play a key role in determining prices in the financial market sector of the model. However, the motivation for this dependence on expectations is somewhat different because financial decisions are assumed to be unaffected by frictions, given the negligible cost of such transactions. Rather, expectations figure prominently in this sector because the return on many financial investments is a stream of payments stretching well into the future. In FRB/US, expectations are modeled explicitly, but in a flexible manner that allows Board staff to make alternative assumptions about the amount of information available to households, firms, and investors in forming their expectations about the future course of the economy.

Because of the presence of frictions that delay the adjustment of nonfinancial variables, FRB/US belongs to a class of models often described as "New Keynesian."[2] In such models, prices and quantities do not adjust quickly enough to ensure full resource utilization at all times. These models predict that the labor market, in particular, will be out of equilibrium periodically. For example, during economic downturns an unusually large percentage of the labor force may be willing to work at current wage rates but be unable to find a job. Alternatively, during periods of above-average activity, the unemployment rate may temporarily fall to a low level, and employees may be required to work a longer workweek than desired. However, these Keynesian features of FRB/US diminish over time, and in the long run, when adjustment is complete, all markets clear.

An aspect of FRB/US that is closely related to slow market adjustment is the behavior of inflation. In the model, firms seek to pay workers the value of their marginal product and to price their output as a markup over trend unit labor and energy costs. However, labor contracts and other factors create frictions that slow the speed at which wages and prices adjust to shifts in demand and supply. (Commodity prices are an exception to this behavior because they adjust quickly on world spot markets). Such "sticky-price" behavior is incorporated into the equations of FRB/US that govern the response of inflation to changes in economic conditions. An important implication of this view of the inflation process is that policy-directed changes in short-term nominal interest rates have a temporary influence on the real rate of interest. Through this influence over real interest rates, monetary policy can affect real prices and yields on a variety of financial assets and thereby indirectly influence economic activity in various sectors of the economy.

1. For a more extended discussion of the FRB/US model and its uses, see Flint Brayton and Peter Tinsley, "A Guide to FRB/US: A Macroeconomic Model of the United States," Finance and Economic Discussion Series, 1996-42 (Board of Governors of the Federal Reserve System, October 1996); Flint Brayton, Eileen Mauskopf, David Reifschneider, Peter Tinsley, and John Williams, "The Role of Expectations in the FRB/US Macroeconomic Model," *Federal Reserve Bulletin*, vol. 83 (April 1997), pp. 227–45; and Flint Brayton, Andrew Levin, Ralph Tryon, and John B. Williams, "The Evolution of Macro Models at the Federal Reserve Board," *Carnegie-Rochester Conference Series on Public Policy*, vol. 47 (1997), pp. 43–81.

2. For further information, see N. Gregory Mankiw and David Romer, eds., *New Keynesian Economics* (MIT Press, 1991).

## *The Influence of Policy Actions on Financial Markets*

The set of relationships linking policy actions to movements in aggregate output and inflation is commonly known as the monetary transmission mechanism. In FRB/US, the first step in this chain is the connection between two markets—that for overnight interbank loans and related short-term instruments (strongly influenced by Federal Reserve operations) and that for long-term government and corporate bonds. Specifically, these markets are linked by the expectations theory of the term structure, which states that investors seek to equalize—up to a premium to compensate for differences in risk—the yield from holding a bond to maturity with the yield expected from a sequence of short-term investments in the money market. Mathematically, the theory implies that the yield on a bond is given by the following formula:

$$R_{t,m} = \sum_{j=0}^{m-1} \omega_j r_{t+j} + \varphi_t .$$

Here $R_{t,m}$ is the yield to maturity on an $m$-period bond; $r_{t+j}$ is the value of the overnight interbank loan rate (the federal funds rate) expected $j$ periods in the future; and the weights, $\omega_j$, sum to unity. As the formula shows, a bond's yield is, in part, a weighted average of the funds rate expected well into the future. The remaining term, $\varphi_t$, denotes the premium paid to investors to compensate for uncertainty in the future course of short-term interest rates and for the chance of default.

Given this arbitrage relationship—which is assumed to hold at all times because financial markets, with their low transaction costs, are relatively unaffected by the frictions that slow adjustment in other sectors—policy can influence long-term yields in at least two ways. First, it can alter the current value of the funds rate. By itself, however, such an action has only a minor direct influence on long-term yields because the weight on the current period's setting of the funds rate is relatively small. Second, policy can affect investors' expectations for the future course of the funds rate—an influence that is potentially quite powerful. In the FRB/US model, the

### Other Monetary Transmission Channels

The discussion in the text focuses on the aspects of the monetary transmission channel explicitly incorporated in the structure of the FRB/US model. In the real world, other channels may also help transmit monetary policy actions through the economy. Here in brief are two such mechanisms that have been discussed in the economics literature: the real balance effect and the credit channel.

*The Real Balance Effect.* The monetary base—the sum of currency and bank reserves—makes up part of the public's financial wealth. Movements in the federal funds rate are accomplished through changes in the monetary base; for example, an increase in the federal funds rate necessitates a decrease in the monetary base. Unlike debt between private parties, for which a change in value affects only the distribution of real wealth and not its overall level, changes in the monetary base do affect the level of private wealth and therefore should, in theory, alter consumption spending. However, relative to movements in other forms of wealth, movements of the monetary base are very small in size, and thus, in reality, the real balance effect is likely to be quantitatively unimportant.

*The Credit Channel.* A number of economists have argued that financial markets do not function as flawlessly as depicted in the standard framework embedded in the FRB/US model.[1] In particular, households and firms face significantly higher costs if funds are raised from bank loans and other outside sources than if internal cash sources are used. Moreover, banks may restrict the amount lent to limit borrowers' exposure to default risk. According to this view, when monetary policy is tight, not only do high real interest rates deter spending, but as income and profits fall, many households and firms see their savings and cash reserves diminish. Given the high cost and limited availability of outside financing, households and firms curtail spending even more than the change in interest rates implies. Although it is difficult to incorporate fully the effects of such credit market imperfections into a macroeconomic model like FRB/US, in two spending categories allowance is made for such effects. For a portion of households—estimated to account for about 10 percent of aggregate consumption—consumer outlays move one-for-one with current income. Similarly, a portion of business investment in equipment depends on current profits, capturing the reliance of many firms on internal funds. More generally, household spending is estimated to be more procyclical than standard theory would imply, perhaps because of the effects of the credit channel.

1. For a recent review of this literature, see Ben S. Bernanke, "Credit in the Macroeconomy," *Federal Reserve Bank of New York Quarterly Review* (Spring 1993), pp. 50–70. For an empirical evaluation of different views of the monetary transmission channels, see Christina D. Romer and David H. Romer, "New Evidence on the Monetary Transmission Mechanism," *Brookings Papers on Economic Activity*, vol. 1 (1990), pp. 149–213.

public expects policymakers to respond to changes in economic conditions in a systematic manner, raising the funds rate when output is above potential and inflation is high and lowering rates when output is below potential and inflation is low. In forming their expectations, households, firms, and investors use this expected policy response to guide their forecasts not only of the future course of interest rates but also of output, inflation, and other macroeconomic variables.[1] (For additional information on monetary policy operations, see box "How Does the Federal Reserve Set the Funds Rate?")

Similar asset-pricing formulas, based on the same principle of equalizing risk-adjusted expected rates of return across investments, link the value of corporate equities to the yield on bonds and expectations of future corporate earnings. In addition, arbitrage across international markets implies that variations in the return on investments in the United States cause changes in the foreign exchange value of the dollar.

1. Further information on the treatment of expectations in the FRB/US model can be found in Flint Brayton and others, "The Role of Expectations in the FRB/US Macroeconomic Model," *Federal Reserve Bulletin*, vol. 83 (April 1997), pp. 227–45.

**How Does the Federal Reserve Set the Funds Rate?**

Throughout this article, monetary policy actions are characterized as setting the nominal federal funds rate—the interest rate that banks pay to each other for overnight loans of reserves held in the Federal Reserve System. In fact, the Federal Reserve does not directly control the federal funds rate; instead, the funds rate is a market rate determined by the supply and demand for reserves. The Federal Reserve uses open market transactions—buying and selling Treasury securities—to expand or contract the supply of reserves. By choosing the right supply of reserves to the banking system, the Federal Reserve can effectively keep the funds rate near its desired level.[1]

An alternative representation of monetary policy procedures is one in which the Federal Reserve, instead of choosing a level for the funds rate, strives to keep the money supply near a target level. If the reserves-to-money multiplier were stable, the money supply target would imply a particular level for the supply of reserves. If the demand for both money and reserves were also stable, the money supply target would be associated with a particular level of the federal funds rate. Therefore, targeting the money supply and targeting the federal funds rate need not be fundamentally different approaches. In practice, however, substantial disturbances to money demand occurred as a result of financial deregulation during the early 1980s and financial innovation in the early 1990s. Current discussions of monetary policy and Federal Reserve practice therefore focus on the direct setting of the federal funds rate.[2]

1. For a detailed account of open market operations, see Ann-Marie Meulendyke, *U.S. Monetary Policy and Financial Markets* (Federal Reserve Bank of New York, 1989), and "Open Market Operations during 1997," *Federal Reserve Bulletin*, vol. 84 (July 1998), pp. 517–32.

2. See Joshua N. Feinman and Richard D. Porter, "The Continuing Weakness in M2," *Federal Reserve Board Finance and Economics Discussion Series* 1992-209 (September 1992).

## *The Influence of Financial Market Conditions on Spending*

Changes in financial conditions, whether or not driven by shifts in the stance of monetary policy, are an important factor in the spending decisions of households and firms. For example, swings in interest rates can greatly affect the cost of financing purchases of goods on credit. In the case of the stock market, equity price movements have historically been a large component of changes in household wealth, which alter the desired level of consumer spending. Finally, changes in the foreign exchange value of the dollar alter the price of domestically produced goods relative to the price of products produced abroad and thereby influence the volume and direction of foreign trade.

These financial effects manifest themselves in FRB/US in several ways. For example, the stock of capital equipment that firms hold is sensitive to movements in the relative price of that stock, which includes the cost of raising funds in both the bond and the equity markets. These financing costs are related to expected real yields on both types of assets—that is, the nominal yield that must be paid to an investor for holding a bond or a corporate equity less the average rate of inflation expected to prevail over the holding period. Similarly, movements in real mortgage and bank loan rates influence the desired level of the housing stock and consumer holdings of motor vehicles and other durable goods.

We use the model to derive the quantitative importance of these financial effects for different categories of stocks and spending by computing the response of individual sectors to changes in interest rates, wealth, and the exchange rate in isolation from the rest of the economy (table 1). In particular, no allowance is made here for feedback effects—that is, for a simulated change in sectoral spending to alter, in turn, the original change in financial conditions. This type of calculation, typically dubbed partial-equilibrium analysis, provides a direct measure of the quantita-

1. Partial-equilibrium response of capital stocks and private spending to changes in financial conditions, with other factors constant

Percent

| Category of stock and spending | Response in level at end of year | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 15 |
| | 1 percentage point decrease in interest rates | | | |
| *Capital stocks* | | | | |
| Consumer durable goods | .3 | .7 | .8 | .8 |
| Housing | .1 | .3 | .5 | 1.3 |
| Producers' durable equipment | .1 | .5 | 1.0 | 4.0 |
| *Private investment spending* | | | | |
| Consumer durable goods | 1.7 | 1.7 | 1.3 | .8 |
| Housing | 4.8 | 6.8 | 5.7 | 1.3 |
| Producers' durable equipment[1] | 1.3 | 3.1 | 3.8 | 4.0 |
| | 20 percent increase in stock market wealth | | | |
| *Private spending* | | | | |
| Consumer durable goods | .9 | 1.3 | 1.1 | .6 |
| Housing | 2.4 | 3.5 | 2.9 | .6 |
| Consumer spending on nondurable goods and services | .2 | .4 | .5 | .6 |
| | 6 percent depreciation of the dollar | | | |
| Exports | 1.7 | 4.8 | 5.5 | 5.7 |
| Imports | −1.1 | −3.5 | −3.8 | −3.7 |

1. Includes effect of a 1 percentage point fall in the rate of return on equity.

tive importance of these parts of the transmission mechanism.

In the FRB/US model, a decrease in all interest rates—with inflation, income, and other factors held constant—boosts the desired stocks of consumer durable goods, business equipment, and residential structures by lowering the relative cost of investment goods (top portion of table 1). Because of frictions that make rapid installation of new capital costly, households and firms do not instantaneously adjust capital stocks to the new long-run desired levels. Instead, adjustment is gradual, especially in the case of producers' durable equipment and housing, for which only a fraction of the long-run rise in the capital stock is in place at the end of three years.[2]

The gradual adjustment of stocks does not imply that associated investment spending—that is, expenditures on new equipment and structures intended to cover depreciation of the existing stocks as well as any desired net increments to stocks—is slow to respond to a sustained change in interest rates. In fact, the opposite is true: The percentage increase in investment outlays for all three categories is substantial in the first year, with spending rising further over the next year or two and even climbing above its long-run percentage change in the case of consumer durable goods and housing. Such a hump-shaped pattern in the response of investment flows (as opposed to the corresponding stocks) is called the accelerator effect. It arises because gross investment spending is typically small in relation to the size of the capital stock, implying that a given percentage change in stocks, if it is to be achieved rapidly, requires a much larger percentage movement in investment outlays. This phenomenon is particularly important for housing, where the ratio of investment outlays to the capital stock is so low that it would take an increase of approximately 25 percent in spending to raise the capital stock 1 percent within a year.

As noted previously, financial conditions should have a major influence on private spending through wealth effects because the desired level of consumer spending depends, in part, on the current value of net household assets. An important component of the latter is corporate equity, whether held directly or owned indirectly in the form of mutual fund shares and pension fund reserves. Such stock market wealth (which currently accounts for roughly one-third of household net worth) is highly variable over time and has a tendency to rise whenever real long-term interest rates fall, because of arbitrage between the bond and stock markets. According to the model's pricing formula for the stock market, a 1 percentage point decrease in the real yield on bonds should be accompanied by a 20 percent increase in the value of corporate equity, all else being equal.[3] Such a boost to wealth stimulates the various components of household spending by an appreciable amount, particularly in the short run for investment expenditures (middle portion of table 1).[4]

2. In FRB/US, movements in interest rates have no direct effect on two other categories of investment—nonresidential structures and inventories. Although such investment should, in theory, depend on interest rates, the empirical evidence for such interest sensitivity is weak.

3. In equilibrium, the dividend–price ratio for equities is approximately equal to $r + \theta - g$, where $r$ is the expected yield on bonds, $\theta$ is a premium paid to investors to compensate them for the greater riskiness of equity, and $g$ is the expected growth rate of dividends. Because the historical mean of $r + \theta - g$ is about 5, a 1 percentage point increase in the yield on bonds reduces equity prices on average by one-fifth, or 20 percent, all else being equal. Although in theory the sensitivity of stock prices to a change in interest rates should shift as $r$, $\theta$, and $g$ move over time, this nonlinear effect is ignored in the FRB/US model.

4. Wealth effects such as these are often described in terms of how much an additional dollar of wealth increases consumer spending. In the FRB/US model, an extra dollar of stock market wealth increases spending on average about 3½ cents in the long run. However, because the elasticity of spending with respect to wealth is constant in the model, at the present high valuation of the stock market the estimated wealth effect is closer to 2 cents.

The final major influence of financial markets on spending occurs through the market for foreign exchange. As with stock prices, the exchange value of the dollar with respect to foreign currencies fluctuates widely over time. However, arbitrage across international money and bond markets causes movements in the exchange rate to be correlated with changes in U.S. interest rates. A version of this relationship, called the uncovered interest parity condition, implies that a 1 percentage point fall in real domestic long-term interest rates should produce an immediate 6 percent depreciation of the dollar, all else being equal.[5] In FRB/US, such a depreciation of the dollar boosts the demand for U.S. exports almost 6 percent by lowering the price of American goods expressed in a weighted average of foreign currencies (bottom portion of table 1). In the same manner, depreciation of the dollar increases the domestic price of foreign-produced goods, decreasing the volume of imports almost 4 percent in the long run. In both cases, the adjustment of trade volumes is not instantaneous but is spread over two or three years.

## *The Influence of Changes in Aggregate Income and Sales on Spending*

Changes in sectoral spending, whether caused by financial factors or other forces, alter the level of aggregate sales, output, and income. Changes in these economywide factors, in turn, further influence the spending of households and firms beyond the financial effects just described. Such general-equilibrium effects are incorporated into simulations of the full FRB/US model. However, as in the analysis of the direct effects on spending of changes in financial conditions, examining this feedback portion of the monetary transmission mechanism in a partial-equilibrium framework is instructive.

Table 2 summarizes the response of different categories of private spending to a 1 percent increase in the level of aggregate income, output, and sales, with

2. Partial-equilibrium response of capital stocks and private spending to a 1 percent increase in the level of aggregate income, sales, output, and wealth, with other factors constant

Percent

| Category of stock and spending | Response in level at end of year | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 15 |
| *Capital stocks* | | | | |
| Consumer durable goods | .2 | .6 | .9 | 1.0 |
| Housing | .1 | .3 | .4 | 1.0 |
| Producers' durable equipment | .1 | .4 | .8 | 1.0 |
| Inventories | .8 | 1.1 | 1.0 | 1.0 |
| *Private investment spending* | | | | |
| Consumer durable goods | 1.5 | 2.0 | 1.7 | 1.0 |
| Housing | 3.9 | 5.7 | 4.7 | 1.0 |
| Producers' durable equipment | 1.3 | 2.0 | 1.8 | 1.0 |
| Nonresidential structures | 1.1 | 1.4 | 1.3 | 1.0 |
| Inventories[1] | .8 | .3 | −.1 | .0 |
| *Other private spending* | | | | |
| Consumer nondurable goods and services | .4 | .7 | .8 | 1.0 |
| Imports | 1.9 | 1.5 | 1.3 | 1.0 |

1. Change in four-quarter growth rate of inventory stocks.

prices, interest rates, and other factors held constant. Because wealth equals the present value of expected future dividends, interest, and other forms of capital income, the net worth of households has also been increased 1 percent. In these simulations, the income shift is permanent and is assumed to be immediately recognized as such by firms and households.

The table reveals an important feature of the behavior of households and firms—the speed at which the public adjusts its spending to a change in income and sales. For example, in the model the level of consumer spending depends on both income and wealth. In response to a rise in income and wealth of 1 percent, outlays on consumer nondurable goods and services would be expected to rise proportionally in the absence of any frictions slowing adjustment. However, because such impediments to rapid adjustment are estimated to be significant, this category of consumer spending rises to its new long-run level only after three or four years.[6]

Households also behave in a gradual manner when adjusting their holdings of durable goods and housing, as do firms when investing in productive capital. But unlike spending on nondurable goods and services, gradual adjustment in these areas manifests

5. Ignoring risk considerations, the uncovered interest parity condition implies that, if the expected yield on a dollar-denominated bond is higher than the yield on a bond denominated in a foreign currency, investors will hold the foreign bond only if the dollar is expected to depreciate by enough to equate the two yields when both are measured in a common currency. For this reason, when domestic interest rates rise relative to foreign rates, the dollar immediately appreciates to ensure the requisite amount of *future* depreciation. Under the assumption that the duration of the average bond is about six years, a 1 percentage point decrease in the spread between domestic and foreign interest rates should therefore yield a 6 percent depreciation of the dollar.

6. Households and firms are much less sensitive to *transitory* changes in income and sales; for example, the first-year responses shown in table 2 would be roughly halved if the income shift were only temporary. In part, this response results from the life-cycle view of consumer choice built into the model, according to which a temporary blip in household income yields only a small change in the value of lifetime resources. But households and firms are also less willing to respond to changes in income and interest rates viewed as temporary because of habit persistence and adjustment costs.

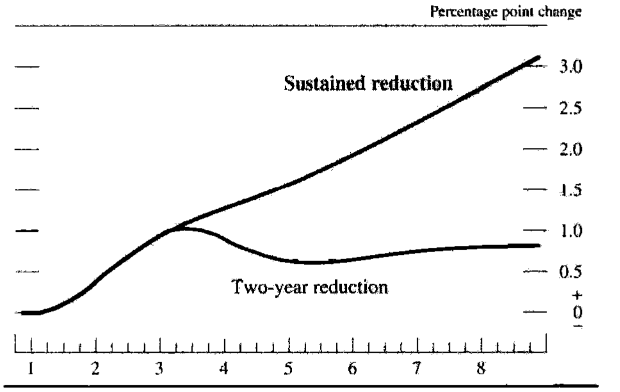
itself in the response of capital stocks to the permanent rise in aggregate income and sales: As in the previous example of a change in financial conditions, investment spending responds quickly. Because private investment spending is a major component of aggregate demand, composing almost one-quarter of nominal gross domestic product (GDP), these accelerator effects have important implications for the dynamic response of the overall economy to disturbances.[7]

## *The Influence of Changes in Output on Inflation*

The final step in the FRB/US transmission mechanism concerns the behavior of inflation. Because of labor contracts and other frictions, wages and prices are slow to adjust to changes in economic conditions. Such "sticky-price" behavior, which is readily apparent in the historical data, is incorporated into the model by making the current rate of aggregate price inflation depend on five factors: (1) the degree to which the markup of prices over unit labor and energy costs is out of line with its historical mean; (2) the recent past rate of price inflation; (3) the rate of growth of unit labor and energy costs expected to prevail in the future; (4) the current and expected degree of slack in labor and product markets; and (5) movements in the relative prices of food, energy, and imports.[8]

In the model, inflation is predicted to decline as long as labor and capital are underutilized and to rise whenever resource utilization is above average. Diagram 1 illustrates this behavior. The FRB/US model

1. Partial equilibrium effect on inflation of a reduction of 1 percentage point in the unemployment rate




predicts that, all else being equal, if the unemployment rate is held 1 percentage point below its equilibrium level on a sustained basis, inflation should climb steadily about 0.4 percentage point a year, provided that the public's expectations for long-run inflation rise gradually in response to the actual pickup in inflation. Alternatively, if the decline in unemployment is temporary, lasting only two years, then the long-term change in the rate of inflation is limited, settling in at about 0.8 percentage point.

These partial-equilibrium simulation results have two important implications for monetary policy in the context of FRB/US. The first concerns the absence of a long-run tradeoff between the level of unemployment and that of inflation. Because inflation stabilizes only if unemployment returns to its equilibrium level—a property known as the natural rate hypothesis—long-run economic stability requires real interest rates and other financial conditions to be consistent with a balance between aggregate spending and the productive potential of the economy. For this balance to be achieved, in the long run the nominal value of the federal funds rate must be set to reflect both the prevailing rate of inflation and the underlying determinants of spending and production.

The second implication for policy concerns the cost of altering the rate of inflation. If the prevailing rate of inflation has risen because of past episodes of over-utilization of resources or other disturbances directly boosting inflation, then a return to the original inflation rate requires a period of tight monetary policy—that is, for a time, the level of the real funds rate must be elevated above its long-run equilibrium level, causing the unemployment rate to be temporarily above its equilibrium level. If inflation has fallen, then the opposite holds: Restoration of the previous growth rate of prices allows a period of low real interest rates and above-average employment.

7. Business inventory decisions tend to augment these accelerator effects because the desired stock of inventories is proportional to the level of aggregate sales. This relation implies that a permanent jump in spending leads to a temporary surge in stockpiling that quickly fades. Another area in which spending responds in a hump-shaped pattern is imports, which rise almost 2 percent in the first year after a sustained jump in GDP but then fall back to only 1 percent. In contrast to investment spending, the response of imports to shifts in domestic activity acts as a stabilizing force for the U.S. economy by diverting a portion of any increase in domestic demand to foreign firms. This stabilizing property of import demand is even greater in many other models of foreign trade because they do not impose the equilibrium condition of stable long-run import shares of GDP but allow the long-run income elasticity of imports to be 2 or higher.

8. Aggregate wages are determined in a similar manner, in that wage inflation depends primarily on past wage inflation, expected future growth in consumer prices and labor productivity, and aggregate resource utilization. Wage inflation is also influenced by changes in the minimum wage and payroll taxes. Taking the wage and price equations together, the FRB/US specification of the inflation process is in certain respects similar to the traditional "Phillips curve" model; however, unlike a Phillips curve, it is derived from optimizing behavior and explicitly accounts for the effects of expectations.

## *Full-Model Effects of an Easing in Monetary Policy*

So far the analysis of the FRB/US transmission mechanism has dealt with each of its components in isolation from one another. Now we can put the pieces together and show how the transmission mechanism functions in its entirety by examining the way a drop in the federal funds rate, acting through sector-specific responses to induced changes in financial conditions and income, works to influence aggregate output, unemployment, and inflation.

Table 3 summarizes the simulated response (expressed relative to baseline) of the full FRB/US model to a policy action that lowers the federal funds rate by 1 percentage point on a sustained basis. In this simulation, the public initially interprets the drop in the federal funds rate as a temporary action that will be reversed relatively quickly. Thus, their expectations for the future are little changed at first. As time passes, however, the public interprets the easier stance as a signal that the long-run objectives of monetary policy have changed and that policymakers seek to raise the level of inflation permanently. For this reason, beliefs about the future are revised more and more as the reduction in the funds rate is sustained.

The evolving nature of expectations explains why the 1 percentage point decrease in the funds rate initially leads to only a small drop in long-term interest rates (upper portion of table 3). As investors come to believe that the policy easing represents a long-term shift in policy objectives, they gradually revise down their estimate of the average level of short-term interest rates likely to prevail over the next ten years. As a result, bond yields are ½ percentage point below baseline by the end of two years.[9] Arbitrage considerations cause this fall in bond yields to affect other asset markets and to lead both to higher stock prices and to a depreciation of the dollar.[10]

The improvement in financial conditions stimulates activity in various sectors and leads to an increase in the level of real GDP. This increase is initially modest, but as adjustment proceeds and accelerator effects kick in, the response of aggregate spending quickens, and by the end of two years, real GDP has risen about 1¾ percent above its baseline level. As suggested by the earlier discussion of financial influences on spending, investment spending accounts for a disproportionate share of the increase in GDP (table 3, lower portion). For example, at the end of two years the change in residential investment accounts for about one-quarter of the increase in output even though it constitutes only 4 percent of aggregate spending, and the portions of the GDP response attributable to outlays on consumer durable goods and business fixed investment are roughly twice their expenditure shares. Inventory investment also plays a disproportionate role in the rise of aggregate demand.

Another way to decompose the GDP response is to break it down into its primary transmission channels—that is, the separate effects on spending of changes in the cost of borrowing, stock market

3. Monetary transmission mechanism in the FRB/US model: Full-model simulated effect of a 1 percentage point fall in the federal funds rate

Percent

| Item | Response at end of year 1 | Response at end of year 2 |
|---|---|---|
| | Change from baseline | |
| *Financial markets* | | |
| Yield on 10-year Treasury bonds | −.3 | −.5 |
| Stock market prices | 8.8 | 12.7 |
| Exchange rate value of the dollar | −2.2 | −4.9 |
| *Aggregate activity* | | |
| GDP (chain-weighted 1992 dollars) | .6 | 1.7 |
| Unemployment rate | −.2 | −.7 |
| Consumer price inflation rate | .2 | .6 |
| | Portion of total response | |
| *Decomposition of GDP response into expenditure categories*[1] | | |
| Consumer spending, durable goods (8.3) | 24.0 | 18.6 |
| Consumer spending, other (59.4) | 28.0 | 26.2 |
| Business fixed investment (10.6) | 13.0 | 18.5 |
| Residential investment (4.0) | 26.2 | 24.0 |
| Inventory investment (0.8) | 16.4 | 10.7 |
| Exports (11.9) | 7.1 | 13.0 |
| Imports (−13.1) | −17.5 | −14.8 |
| Government (17.9) | 2.4 | 3.4 |
| *Decomposition of GDP response into transmission channels* | | |
| Cost of borrowing | 26.9 | 36.4 |
| Stock market | 16.0 | 20.7 |
| Exchange rate value of the dollar | 6.9 | 17.3 |
| Anticipated nonfinancial responses | 50.2 | 25.7 |
| *Decomposition of inflation response into transmission channels* | | |
| Resource utilization | 10.6 | 33.1 |
| Exchange rate value of the dollar | 24.8 | 22.4 |
| Anticipated nonfinancial responses | 64.6 | 44.5 |

1. 1997 nominal shares of GDP in parentheses.

9. The decline in bond yields is also limited by the public's expectation that nominal short-term interest rates, after falling for an extended time, will eventually recover and then increase by the amount of the revision to the expected long-run rate of inflation.

10. In this simulation and throughout most of the article, it is assumed that the public forms its expectations about the future course of the economy using a small-scale forecasting system that includes output, inflation, the federal funds rate, an estimate of the economy's long-run equilibrium real short-term interest rate, and an estimate of the long-run trend level of inflation sought by policymakers. This particular characterization of expectations is discussed in Brayton and others, "The Role of Expectations in the FRB/US Macroeconomic Model."

wealth, and the exchange rate discussed earlier, as well as a fourth channel, anticipated nonfinancial responses. In the model simulation, changes in the funds rate exert a direct influence on expectations of future movements in output and inflation. In essence, this influence can be thought of as an anticipation of the effects of the other three channels on aggregate activity that have yet to materialize. For this reason, the importance of this anticipatory channel fades as the direct effects of the other channels emerge in full and expectations of future conditions are realized in actual developments.

But the anticipations channel is powerful in the short run, and it accounts for about half of the total response of aggregate output in the first year (lower portion of table 3). By contrast, only a quarter of the first-year GDP response is directly attributable to current and past declines in the cost of borrowing; wealth effects and dollar depreciation account for even smaller shares. By the second year, the importance of anticipated changes in aggregate income and other variables that have not yet materialized is considerably diminished. Commensurately, that of the three standard channels is raised—particularly the exchange rate channel, where adjustment of trade flows to dollar depreciation is especially drawn out.

As with the GDP response, the movement in aggregate price inflation can also be decomposed into its primary determinants, including a channel that measures the anticipated effect of the policy easing on expected changes in the future growth rate of trend unit production costs that have yet to emerge. Such anticipation effects—related in part to the public's evolving view of the long-run rate of inflation sought by policymakers—are extremely important in the short run and account for almost half of the two-year change in actual inflation. However, their effect by the end of the third year—not shown in table 3—is zero. The contribution of current and past changes in resource utilization is also considerable, as is that of exchange rate depreciation. The latter arises because a large portion of the induced decline in the foreign exchange value of the dollar is passed through into the dollar-denominated price of imports, which in turn directly boosts consumer prices.

## *Some Macroeconomic Consequences of Aggregate Disturbances*

The preceding discussion showed how policy actions are transmitted throughout the economy, affecting real variables, such as consumption and output, and nominal variables, such as inflation. This section looks at the monetary mechanism in a slightly different way by examining monetary policy responses to disturbances originating from elsewhere in the economy. These experiments show that the way in which monetary policy reacts to shocks, together with the nature of the shock itself, influences the way in which the economy evolves over time.

Simple macroeconometric models have only a few possible types of disturbances, often just generic shifts in aggregate demand and supply. But in a larger model like FRB/US, as well as in the real world, the kinds of disturbances are numerous (see box "On Defining and Measuring Shocks"). In this section, the focus is on the implications for policy of two general classes of disturbances: shocks whose primary initial influence is on spending ("demand" disturbances) and shocks whose initial effect is mainly on prices or production ("supply" disturbances). All shocks differ, and their classification is not always straightforward. There are, however, some broad similarities of disturbances within a class and important differences in the policy implications of each type of shock.

### *A Shift in the Equity Premium*

As just noted, demand shocks include any disturbance directly affecting people's willingness to spend. In FRB/US, shifts in foreign demand, personal income taxes, and asset prices are examples of demand disturbances. In regard to the last example, movements in stock market wealth that are not explained by changes in interest rates and other fundamentals are frequent occurrences. These may occur because people suddenly reassess the riskiness of the stock market and demand a higher or a lower rate of return for holding equities relative to bonds. This reassessment is called a change in the equity premium.

For illustrative purposes, we use the FRB/US model to simulate a permanent rise in the equity premium that is sufficient to bring about an initial 20 percent decline in stock market wealth. Many policy responses to this disturbance could be considered; results for three of them, expressed as changes from baseline, are summarized in diagrams 2 and 3.

Policy cannot completely offset the consequences of the rise in the equity premium for stock prices; so regardless of the policy response, the initial fall in real stock-market wealth is essentially the same (diagram 2, upper-left panel). For consumers, this development represents a significant decline in the wealth that can be allocated to fund current and future expenditures. For firms, the higher premium implies an increase in the cost of financing capital outlays using equity. The FRB/US model predicts that, in the absence of adjustment costs, consumers would respond to this change in financial conditions by reducing the level of consumption approximately 0.6 percent and firms would cut equipment investment a bit more than 0.8 percent per year. (That is, the frictionless responses to the rise in the equity premium would be identical to the fifteen-year partial-equilibrium changes shown in table 1.) However, neither category of expenditures falls by this amount at first because of the adjustment costs and other frictions discussed earlier (diagram 3, top panels).

Falling demand and the associated rise in unemployment put downward pressure on inflation. Monetary policy can reinforce this effect on output and inflation if it fails to respond to the change in the macroeconomic environment. Because the rise in the equity premium is permanent, it leads to a sustained loss in wealth and a permanent increase in the saving rate. As a result, permanently lower real interest rates are necessary after the shock to restore equilibrium. Thus, if the nominal federal funds rate were kept constant, the initial value of the real federal funds

## On Defining and Measuring Shocks

In the context of a model, a disturbance is any factor affecting spending and other variables that is not itself determined by the equations of the model—that is, any factor exogenous to the system. These exogenous factors fall into two categories. The first includes all explanatory variables determined outside macroeconomic models, such as population growth. The second category includes the errors—the difference between the model's predictions and actual historical outcomes—made by the model's equations. This definition of shocks makes it clear that the decomposition of movements in economic data into the portion explained by a model's structure and the portion attributable to autonomous influences depends on the model used in the analysis.

For example, in the FRB/US model, movements in the relative price of oil are treated as autonomous and not affected by changes in energy use and production. However, a model of greater complexity might include equations for the world demand and supply of petroleum and thus would attribute at least some changes in the price of oil to factors internal to the model, rather than classifying them as disturbances. Similarly, FRB/US and other models with a fully articulated supply side distinguish between exogenous changes in prices and autonomous disturbances to productivity. However, in smaller models that lack an aggregate production function, such as the IS-LM-Phillips-curve system of many textbooks, the wage–price block is often simply called a short-run supply curve, and price disturbances are therefore frequently referred to as supply shocks.[1]

The measurement of shocks is also influenced by empirical methodology, as illustrated by research in the early 1980s that suggested that permanent shocks to supply are important in explaining movements in real GDP. The relative importance and the persistence of supply and demand shocks remain subjects of considerable research and debate.[2] Such uncertainty over the duration of disturbances complicates monetary policy because of the significant lag between changes in the federal funds rate and the response of aggregate output, unemployment, and inflation. Thus, policymakers must often act before they have complete information; for example, in the case of an unexplained movement in equity prices, they must act without knowing how long the bull or bear market will last.

Finally, the definition and measurement of shocks is influenced by the theoretical approach used to construct the economic model. New Keynesian models such as FRB/US allow for direct disturbances to many sectors of the economy without inquiring too closely into the exact nature of these disturbances.[3] By contrast, another class of models—known as dynamic stochastic general equilibrium, or DSGE, models—are based on the view that the economy is subject to only a small number of fundamental disturbances to consumer tastes and production technology.[4] Such models place more importance than do New Keynesian models on the role of productivity shocks in explaining economic fluctuations. These models also interpret historical responses of output and employment to disturbances as people's optimal adjustments, rather than as a failure of markets to clear. Accordingly, DSGE models assign a much smaller role to monetary policy in mitigating the effects of macroeconomic disturbances than do New Keynesian models like FRB/US.

1. See Laurence Ball and N. Gregory Mankiw, "Relative-Price Changes as Aggregate Supply Shocks," *Quarterly Journal of Economics*, vol. 110 (February 1995), pp. 161–93.

2. See Charles R. Nelson and Charles I. Plosser, "Trends and Random Walks in Macroeconomic Time Series: Some Evidence and Implications," *Journal of Monetary Economics*, vol. 10 (September 1982), pp. 139–62, and Pierre Perron, "The Great Crash, the Oil Price Shock, and the Unit Root Hypothesis," *Econometrica*, vol. 57 (November 1989), pp. 1361–401, for examples of research into the permanence of supply shocks.

3. One consequence of this approach is that a real-world event may manifest itself as a set of simultaneous disturbances to different portions of the model. For example, the recent Asian financial crisis appears as an autonomous decline in foreign output, a reduction in relative oil prices, an unexpected appreciation of the dollar, and a fall in the premium incorporated into U.S. bond yields.

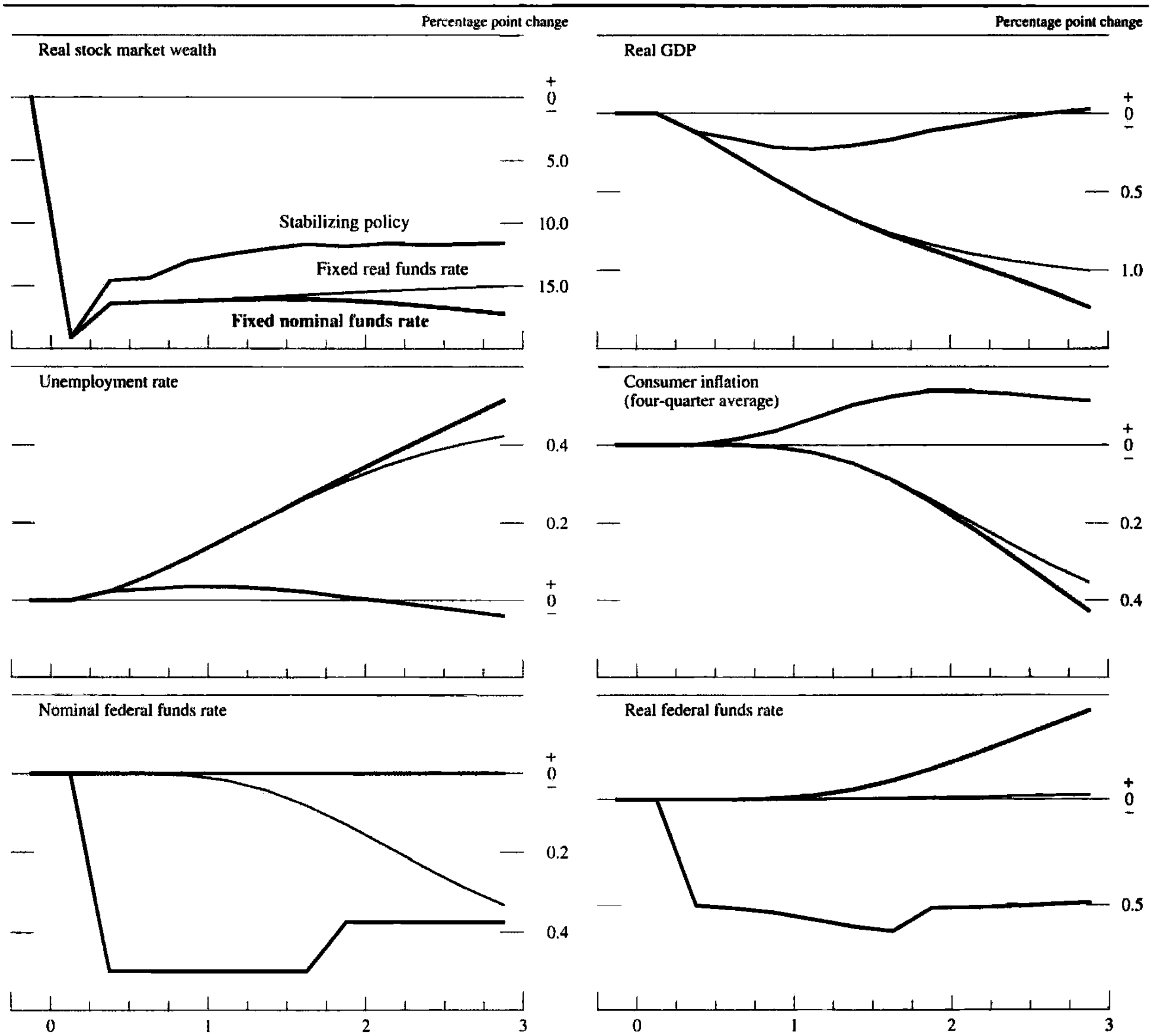
4. For an introduction to DSGE models, see Edward Prescott, "Theory ahead of Business Cycle Measurement," *Federal Reserve Bank of Minneapolis Quarterly Review*, vol. 10 (Fall 1986), pp. 9–21.

rate would be too high (diagram 2, lower-right panel). The high real rate would put additional downward pressure on aggregate spending and thereby raise unemployment and push down inflation (diagram 2, middle-left and middle-right panels respectively). As a result, the real funds rate would rise further. If allowed to persist, this policy would result in a continuing downward spiral of falling output and inflation, driven by ever-rising real interest rates.

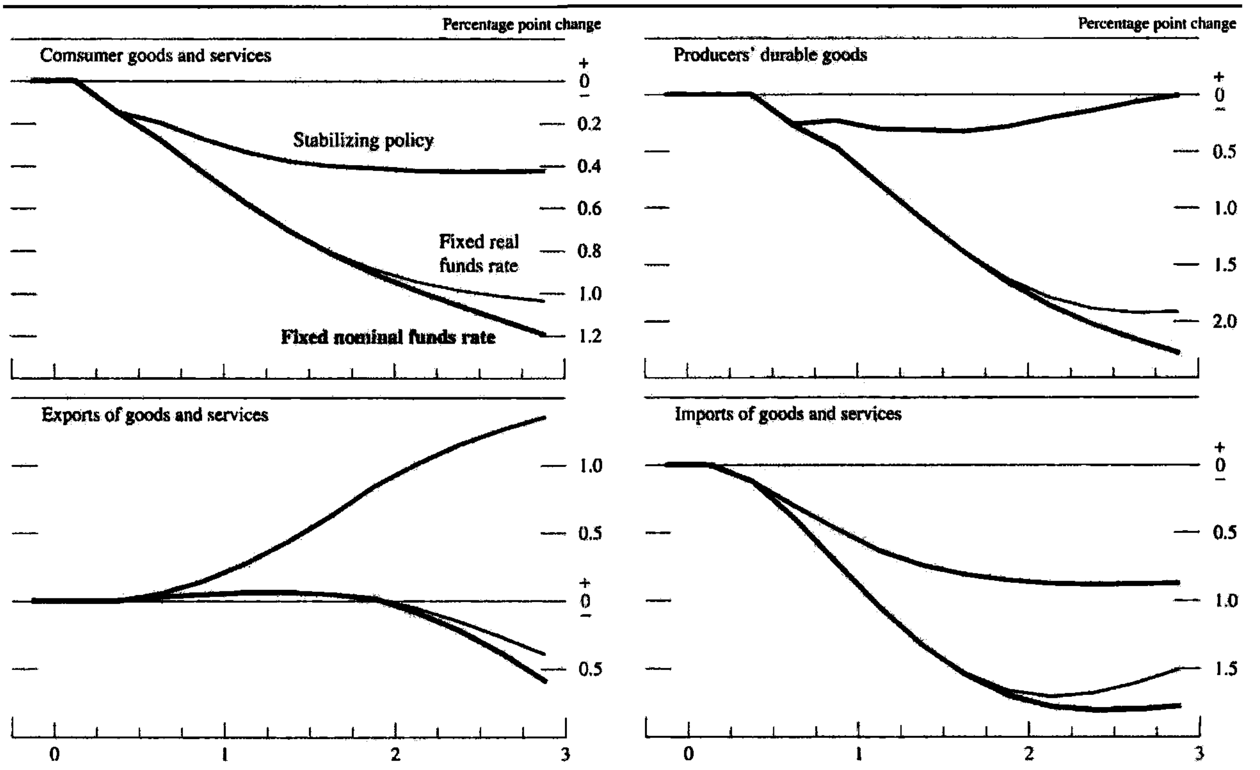
An alternative policy is to fix the real interest rate at its initial level. The lower-left panel of diagram 2 shows a substantial decline in the nominal funds rate associated with this policy (curve for fixed real funds rate). As already noted, however, a recovery in aggregate demand requires that the real interest rate fall. Thus, fixing the real rate is also destabilizing in the long run. Therefore, in response to a demand shock, and in the absence of some additional countervailing disturbance, the real rate must be moved in the same direction as the movement in demand resulting from the equity shock.

One policy response that fits this description is shown by the curve for stabilizing policy in the lower-left panel of diagram 2. The reduction in the funds rate shown is small but long lasting and so is sufficient for bringing inflation and unemployment back to their previous levels. The mechanism through which this policy works is that described previously in the full-model simulation of the effects of an easing in policy: According to the FRB/US model, a

2. A permanent increase in the equity premium (deviation from baseline)



3. A permanent increase in the equity premium and the components of spending (deviation from baseline)




reduction in the federal funds rate today lowers real interest rates today and generates expectations of lower rates and of higher output in the future. These expectations, in turn, elicit higher domestic spending by raising the target level of consumption and investment spending. These effects are supplemented by an expectations-driven decrease in corporate bond rates, which helps the stock market recover some of its initial losses.[11] Finally, the reduction in domestic interest rates puts downward pressure on the exchange value of the U.S. dollar, improving international competitiveness and strengthening the trade balance (diagram 3, bottom panels).

The stabilizing policy promptly returns both inflation and resource utilization close to their original levels. Only a brief, small acceleration in inflation and a slight increase in unemployment are borne by the economy. The increase in inflation is attributable to exchange-rate pass-through, for the fall in the dollar also leads to higher prices of imported consumer goods, which are then passed through into a higher rate of consumer price inflation. For the most part, this ability to offset simultaneously the output and the inflation consequences of demand disturbances is a feature of the FRB/US model, and of all models of its class: Stabilizing both output and inflation are complementary objectives in the presence of a shift in aggregate demand.

As diagram 2 shows, there is a monetary policy setting associated with a path for the real interest rate that stabilizes inflation and unemployment. However, under this policy, consumer expenditures are significantly lower throughout the period shown in the upper-left panel of diagram 3 and for the period beyond. Thus, monetary policy cannot fully replace the loss of wealth and consumption caused by the rise in the equity premium. This result illustrates the general principle that in the long run policy can only restore normal levels of resource utilization and determine the prevailing rate of inflation; it cannot undo all the effects of permanent shifts in fundamentals.

11. The value of stock-market wealth recovers somewhat in the quarter immediately following the shift in the equity premium because of expectations on the part of bond-market participants that the initial loss of wealth will reduce the equilibrium real interest rate. Equity prices rise in response to this expectation because of asset arbitrage. Beyond the first quarter or two, expected real corporate bond rates fall because of expectations of lower short-term nominal interest rates in the future and sluggish adjustment of price inflation. This fall permits the modest recovery in stock market wealth to persist. However, when the nominal federal funds rate is held fixed, once expectations of declines in the federal funds rate go unrealized, stock market wealth begins to fall once again.

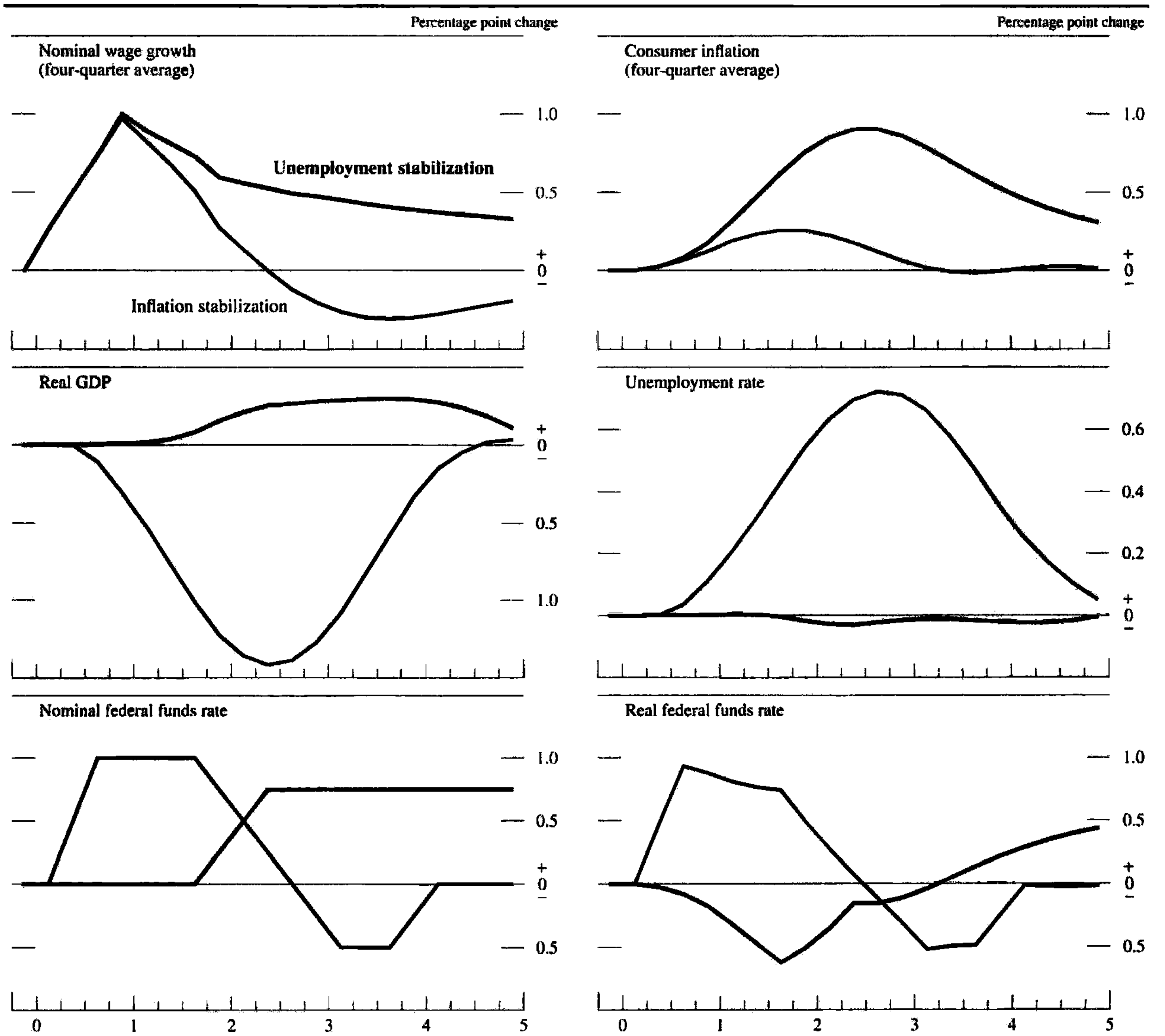
### *An Acceleration in Wage Compensation*

In contrast to demand shocks, some macroeconomic disturbances affect prices directly and only afterward have an influence on real quantities. Shocks in this category include autonomous movements in the prices of food and energy. Such shocks, together with direct disruptions to the supply of labor or other aspects of production, present policymakers with short-term tradeoffs not encountered in the case of demand shocks.

One typical example of a price shock is an unanticipated change in wage compensation. This change may occur for a number of reasons: In the context of a macroeconomic model, the precise origin of shocks is not always clear. For present purposes it suffices to consider an autonomous temporary acceleration in wage inflation without any accompanying shocks to aggregate demand, labor supply, or the like. For this experiment, the shock raises the four-quarter wage inflation rate by 1 percentage point after a year. Having established that there are circumstances under which pegging either nominal or real interest rates leads to macroeconomic instability, we restrict our attention to policies that stabilize either unemployment or inflation. Simulation results are shown in diagram 4.

As expected, the wage-growth disturbance acts directly and immediately on wages and prices and then on measures of real activity. And as before, monetary policy cannot realistically offset the initial effects of the shock: Wage inflation rises by essen-

4. Transitory increase in wage compensation (deviation from baseline)



tially the same amount over the first year of the scenario, regardless of the policy responses considered (diagram 4, upper-left panel). All else being equal, the acceleration in wages squeezes the profit margins of firms, inducing a wage–price spiral as firms push up prices in an attempt to re-establish their profit margins. A policy of keeping the inflation rate close to its original level must therefore raise the nominal (and real) federal funds rate early and by a substantial amount (the curves for inflation stabilization, bottom panels). This policy tightening results in an extended period of higher unemployment (middle-right panel). Over time, expectations of future price and wage inflation are brought into line with policy objectives, and real variables return to equilibrium levels.

The depiction of the economy when policy attempts to stabilize unemployment contrasts sharply with the inflation-stabilization case. Because unemployment is slow to respond to falling profit margins, under this strategy the federal funds rate initially remains unchanged (bottom-left panel). The shock therefore propagates into higher and longer-lasting inflation than is the case when policy reacts promptly to head off an emerging wage–price spiral (top-right panel). Under this policy, only when growing demand pressure begins to show up in employment do nominal interest rates rise, and then only enough to maintain unemployment near its baseline level (middle-right panel). By this time, the experience of higher inflation has become entrenched in expectations.

Beyond the end of the period shown, price and wage inflation do not return to their original levels: Without an active effort by the monetary authority to contain the actual and expected growth of prices at the original low rates, inflation tends to drift with whatever relative-price disturbances hit the economy. This result is a direct consequence of the natural rate hypothesis embedded in the FRB/US and most other models. For all such models, full employment is consistent with any constant inflation rate, and for the economy to arrive at a particular inflation rate, the monetary authority must take appropriate action—that is, it must establish a nominal anchor.[12]

12. An extensive literature compares the virtues of possible nominal anchors, which include the price level, the nominal exchange rate, commodity prices, nominal income, and the inflation rate. For a general discussion of this issue, see Bennett T. McCallum "Issues in the Design of Monetary Policy Rules" in John B. Taylor and Michael Woodford, eds., *Handbook of Macroeconomics* (North-Holland, forthcoming). A readable guide to inflation targeting is Ben S. Bernanke and others, *Inflation Targeting: Lessons from the International Experience* (Princeton University Press, 1999).

*A Shift in the Level of Productivity*

Besides being subject to shifts in relative prices, the economy is affected by disturbances to the availability or efficiency of inputs to the production process. Changes in labor supply, crop failures, and technological innovations are common examples of such shocks to supply.

A supply disturbance that economists often study is a shift in total factor productivity—that is, an unanticipated change in the volume of output that can be produced with a given level of productive inputs. Some implications of a temporary slowdown in productivity growth are illustrated in diagram 5. In the simulation, the slowdown gradually reduces the level of potential output 1 percent over two years, after which productivity growth returns to normal but the level of potential output remains permanently lower (upper-right panel). One reason for such a decline in productivity might be that research and development expenditures temporarily yield an abnormally low flow of technical innovations.

Two policy responses to such an event are considered. In one, policy acts to bring inflation promptly back to its original level, and in the other, policy stabilizes inflation more gradually. In either case, policymakers and the public are assumed to understand that the reduction in the level of productivity is permanent.

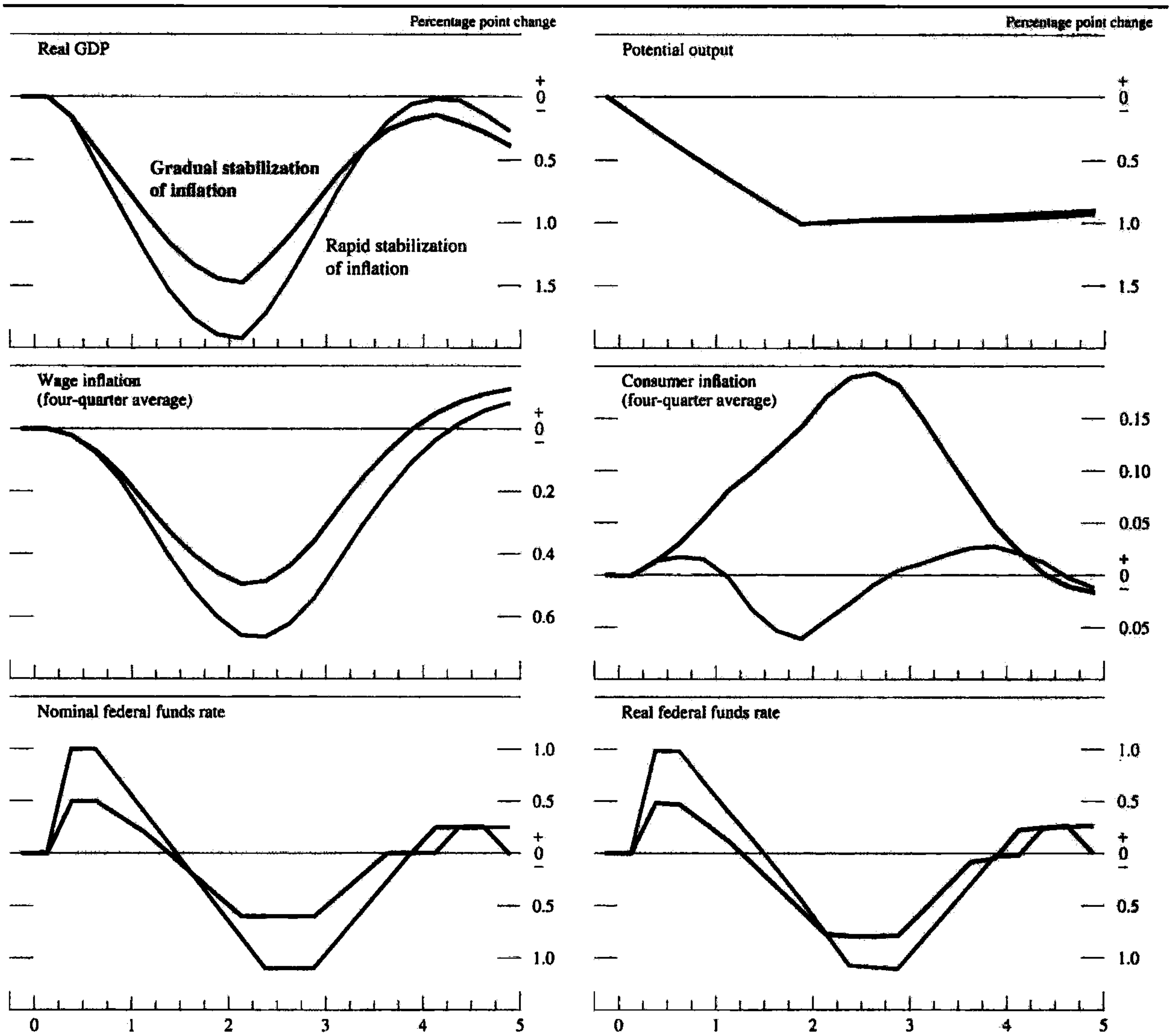
The effect of this shock on real GDP can be split into two parts. First, the level of potential output falls by 1 percent, so that if resource utilization does not change, the level of real GDP must fall proportionally. Second, the other dynamic aspects of adjusting spending behavior cause the initial decline in outlays to be greater than that of potential output, with the result that unemployment rises.

On the price side, the fall in productivity reduces the equilibrium real wage by 1 percent. Reestablishment of labor market equilibrium requires that the real wage fall to this new equilibrium level; monetary policy influences whether the reduction in the real wage occurs through a period of low wage growth, of higher price inflation, or a combination of both.

For monetary policy to keep price inflation close to its original level (curve for rapid stabilization of inflation, middle-right panel), the nominal federal funds rate needs to rise immediately and by a substantial amount (lower-left panel). Raising the funds rate in this way counteracts the expectation that some of the adjustment in real wages will take place through higher prices.

With this policy response, the upward pressure on prices is short-lived. The decline in productivity

5. Temporary reduction in productivity growth (deviation from baseline)




reduces the desired capital stock, bringing down investment. Similarly, the falling real wage reduces labor income, bringing down consumption. The accelerator mechanisms discussed in the previous section tend to make producers' durable equipment and consumption expenditures overshoot their new, lower long-run levels. Accordingly, significant excess supply emerges by the second year.

The initial tightening in policy thus gives way shortly thereafter to substantial easing to support aggregate demand and contain emerging expectations of disinflation. In the end, the policy succeeds in achieving tight control of inflation but at the cost of sizable swings in output around potential.

This policy response is just one of many that are consistent with keeping the inflation rate from drifting over long periods of time. In the diagram, the curves for gradual stabilization show another, more gradual response to the shift in potential output. The early tightening of policy in this case is designed to be one-half the size of the tightening just discussed, as measured by the nominal funds rate. This policy results in more of the real wage adjustment taking place through prices, rather than through nominal wages. It also results in less short-run fluctuation in aggregate spending (upper-left panel). Finally, this less-aggressive policy results in less variability of the nominal federal funds rate throughout the period.

These alternative policies show that, in the context of the FRB/US model, policy that seeks to stabilize inflation must establish a nominal anchor in the long run, but doing so still leaves considerable latitude for different short-run responses to disturbances. In the case of supply shocks (broadly defined to include price disturbances), policies that work aggressively against movements in inflation do so at the expense of greater variability in output and interest rates. In contrast, policies that are less strict about short-run control of inflation result in lower variability of output and interest rates by accepting larger fluctuations of inflation. Thus, although there is no long-run tradeoff between the level of employment and that of inflation, supply shocks in the FRB/US model do present policymakers with tradeoffs in variability among output, inflation, and interest rates.

### *Economic Disturbances and General Policy Responses*

The disturbances discussed above are merely three among the many whose economic effects can be simulated using the FRB/US model. The macroeconomic consequences of a selection of these shocks, including the three just presented, are summarized in table 4. Some of these disturbances—a fall in stock market wealth, a rise in foreign output, and a change in fiscal policy—can be classified as demand shocks. Others—higher wage inflation, a fall in productivity, an increase in oil prices, and a hike in the minimum wage—are examples of supply disturbances. Still others—a depreciation of the dollar and a decline in the relative price of capital goods—combine features of both types of shocks in that they directly affect both spending and production (or prices).

To simplify the comparison of results across the different disturbances, the effects of each disturbance are first simulated holding the real federal funds rate constant (table 4, left-hand portion). Comparing results for the various disturbances reveals a range of macroeconomic outcomes, indicating that each shock has its unique influence on the economy. The results also provide guidance on the direction of the change in the federal funds rate that would be needed to stabilize employment or inflation or both in the model, as well as a rough sense of which shocks would require greater or smaller shifts in the stance of policy.

In theory, individualized policy responses could be crafted to accompany each specific disturbance, with the goal of delivering particular macroeconomic outcomes, subject to the limitation that policy cannot eliminate all short-run fluctuations in both aggregate employment and inflation in the case of supply shocks. In practice, however, the economy often experiences several disturbances at the same time; in addition, policymakers and the public alike may find it difficult to identify the precise nature of shocks as they occur. For this reason, it is useful to consider generalized policy responses that have the property of gradually stabilizing output and inflation in the face of a wide range of economic disturbances.

A simple example of such a policy is the Taylor rule.[13] According to the rule, the nominal federal funds rate is raised by 150 basis points for each percentage point increase in the rate of inflation. In addition, the rule also increases the federal funds rate by 50 basis points for each percentage point that real GDP exceeds its potential level (a measure usually referred to as the output gap). In the context of the FRB/US model, the rule's procedure for setting the federal funds rate stabilizes the economy for a wide range of macroeconomic disturbances. As shown in the right-hand portion of table 4, the Taylor rule does not ensure that complete stabilization of output and inflation will be achieved in a period as short as three years. Relative to a policy of holding the real funds rate constant, however, the rule does successfully prevent longer-term macroeconomic instability: For all the disturbances, both unemployment and inflation are within 0.1 percentage point of their baseline values after ten years.[14]

## *MONETARY POLICY AND AVERAGE MACROECONOMIC PERFORMANCE*

The simulations of various disturbances discussed above are examples of the ways in which monetary policy actions affect movements in prices and unemployment after disturbances to aggregate demand and supply. As was noted, disturbances to aggregate demand typically do not present policymakers with a tradeoff between the objective of price stability and that of employment stability: Adjusting the stance of monetary policy to bring the level of economic activity closer to its potential simultaneously acts to damp any upward or downward pressure on inflation. By contrast, production and price disturbances do present policymakers with a tradeoff between the variability of output and that of inflation, though not between the levels: In FRB/US, there is no long-run tradeoff

13. The Taylor rule was introduced "to preserve the concept of . . . a policy rule in an environment where it is practically impossible to follow mechanically the algebraic formulas economists write down to describe their preferred policy rules." John B. Taylor, "Discretion versus Policy Rules in Practice" *Carnegie-Rochester Conference Series on Public Policy*, vol. 39 (1993), p. 197.

14. For many of the disturbances, GDP and the federal funds rate do not return to baseline. Such long-run shifts occur when the shock permanently alters the level of potential GDP or the steady-state rate of interest or both.

4. Simulated macroeconomic effects of selected disturbances under alternative monetary policies

Percent change from baseline except as noted

| Macroeconomic measure | Constant real funds rate | | | | Taylor rule | | | |
|---|---|---|---|---|---|---|---|---|
| | Response at end of year | | | | Response at end of year | | | |
| | 1 | 2 | 3 | 10 | 1 | 2 | 3 | 10 |
| | Stock market: Reduction in stock market wealth of 20 percent ex ante, caused by permanent increase in the equity premium | | | | | | | |
| GDP[1] | −.4 | −.8 | −1.0 | −2.1 | −.2 | −.3 | −.3 | −.1 |
| Unemployment rate | .1 | .3 | .4 | .8 | .1 | .1 | .1 | .0 |
| Consumer price inflation[2] | .0 | −.2 | −.4 | −1.4 | .0 | .0 | .0 | .0 |
| Nominal federal funds rate | .0 | −.2 | −.4 | −1.4 | −.3 | −.4 | −.4 | −.4 |
| | Wages: Four quarters of unanticipated increases in nominal wage growth cumulating to 1 percentage point | | | | | | | |
| GDP[1] | .0 | −.2 | −.3 | −.1 | .0 | −.3 | −.5 | −.1 |
| Unemployment rate | .0 | .1 | .2 | .0 | .0 | .2 | .3 | .0 |
| Consumer price inflation[2] | .2 | .7 | .6 | .3 | .2 | .6 | .5 | .1 |
| Nominal federal funds rate | .2 | .7 | .6 | .3 | .2 | .8 | .6 | .1 |
| | Potential GDP: Eight-quarter reduction in total factor productivity growth cumulating to a permanent 1 percent fall in the level | | | | | | | |
| GDP[1] | −.5 | −1.2 | −1.4 | −.9 | −.5 | −1.3 | −1.3 | −.9 |
| Unemployment rate | .0 | .1 | .3 | .0 | .0 | .2 | .3 | .0 |
| Consumer price inflation[2] | .1 | .3 | .1 | −.1 | .1 | .3 | .1 | .0 |
| Nominal federal funds rate | .1 | .3 | .1 | −.1 | .1 | .2 | −.1 | .0 |
| | Exchange rate: Permanent ex ante 10 percent reduction in the real exchange value of the dollar | | | | | | | |
| GDP[1] | .4 | 1.6 | 2.5 | 3.8 | .4 | 1.0 | 1.2 | −.5 |
| Unemployment rate | −.1 | −.4 | −1.0 | −1.9 | −.1 | −.2 | −.5 | −.1 |
| Consumer price inflation[2] | .4 | .5 | .4 | 3.0 | .4 | .4 | −.1 | .1 |
| Nominal federal funds rate | .4 | .5 | .4 | 3.0 | .7 | 1.2 | .8 | 1.1 |
| | Oil prices: Permanent increase in relative oil prices cumulating to $10 per barrel over four quarters | | | | | | | |
| GDP[1] | −.2 | −.4 | −.2 | −.3 | −.2 | −.4 | −.2 | −1.1 |
| Unemployment rate | .1 | .2 | .1 | −.3 | .1 | .2 | .1 | .0 |
| Consumer price inflation[2] | .5 | .3 | .2 | .4 | .5 | .3 | .1 | −.1 |
| Nominal federal funds rate | .5 | .3 | .2 | .4 | .5 | .2 | .2 | .1 |
| | Foreign output: Permanent 5 percent increase in the trend level of foreign GDP | | | | | | | |
| GDP[1] | .8 | .9 | .9 | 1.6 | .6 | .4 | .2 | −.2 |
| Unemployment rate | −.3 | −.4 | −.5 | −.8 | −.2 | −.2 | −.2 | .0 |
| Consumer price inflation[2] | .1 | .3 | .4 | 1.3 | .0 | .1 | .1 | .0 |
| Nominal federal funds rate | .1 | .3 | .4 | 1.3 | .4 | .4 | .4 | .4 |
| | Income taxes: Permanent increase in federal personal income taxes equal to 1 percent of GDP ex ante | | | | | | | |
| GDP[1] | −.4 | −.8 | −1.0 | −1.5 | −.3 | −.5 | −.5 | −.1 |
| Unemployment rate | .1 | .3 | .4 | .7 | .1 | .2 | .2 | .1 |
| Consumer price inflation[2] | .0 | −.1 | −.3 | −1.2 | .0 | .0 | .0 | .0 |
| Nominal federal funds rate | .0 | −.1 | −.3 | −1.2 | −.2 | −.4 | −.4 | −.7 |
| | Government expenditures: Permanent increase in federal government purchases of goods and services equal to 1 percent of GDP | | | | | | | |
| GDP[1] | 1.4 | 1.4 | 1.1 | 1.1 | 1.1 | .5 | .0 | −.6 |
| Unemployment rate | −.5 | −.7 | −.7 | −.6 | −.3 | −.3 | −.2 | .0 |
| Consumer price inflation[2] | .1 | .5 | .7 | 1.4 | .0 | .1 | .1 | .0 |
| Nominal federal funds rate | .1 | .5 | .6 | 1.4 | .7 | .7 | .5 | .2 |
| | Minimum wage: Permanent $1 per hour increase in the minimum wage, indexed to inflation | | | | | | | |
| GDP[1] | .0 | −.3 | −.2 | −.1 | −.0 | −.4 | −.4 | −.2 |
| Unemployment rate | .0 | .2 | .2 | .0 | .0 | .2 | .3 | .1 |
| Consumer price inflation[2] | .3 | .7 | .5 | .3 | .3 | .7 | .4 | .0 |
| Nominal federal funds rate | .3 | .7 | .5 | .2 | .4 | .8 | .4 | .0 |
| | Capital goods prices: Permanent 5 percent fall in the relative price of business equipment | | | | | | | |
| GDP[1] | .2 | .6 | 1.0 | 2.2 | .2 | .5 | .7 | .7 |
| Unemployment rate | .0 | −.2 | −.3 | −.6 | .0 | −.1 | −.2 | .0 |
| Consumer price inflation[2] | .0 | .0 | .1 | 1.0 | .0 | .0 | .0 | .1 |
| Nominal federal funds rate | .0 | .0 | .1 | 1.0 | .1 | .2 | .3 | .4 |

1. Gross domestic product measured in chain-weighted 1992 dollars.

2. Four-quarter growth rate of chain-weighted price index for personal consumption expenditures.

between unemployment and inflation.[15] Thus, as seen in the experiment of a negative shock to productivity, a policy that forcefully acts to keep inflation in check achieves this objective at the cost of more pronounced fluctuations in economic activity and unemployment. Alternatively, a more muted initial policy response limits the magnitude of the fall in employment but does so at the cost of larger swings in inflation.

In the context of the full range of demand and supply disturbances hitting the economy, any systematic policy response to changes in macroeconomic conditions embodies its own particular average tradeoff between variability of output and that of inflation. For example, because the Taylor rule discussed earlier responds to movements in inflation and the output gap in a fixed fashion, it generates a predictable stabilization path for different economic measures following any given set of macroeconomic disturbances. Taking account of all the possible shocks that might be encountered over time, and adjusting for their likelihood, one can compute the average variability of output, inflation, and interest rates likely to be experienced under the Taylor rule. Similar calculations can be made for other systematic policy responses—for example, policies that allow for larger or smaller responses to movements in inflation and the output gap or that include responses to past or projected levels of interest, inflation, and other variables.

To analyze the stability implications of the Taylor rule and other systematic policy responses, policy is assumed to follow a generalized policy rule of the form

$$r_t = a + br_{t-1} + c\pi_t + dy_t,$$

where $r_t$ denotes the federal funds rate in quarter $t$, $\pi$ is the four-quarter inflation rate, $y$ is the output gap, and $a$, $b$, $c$, and $d$ are the coefficients of the policy rule. The coefficients of such a generalized policy rule determine how quickly and aggressively policy responds both to deviations of inflation from its target rate and to the output gap.[16] The choice of coefficient values thus affects the volatility of inflation and output in the economy. For example, policies that respond aggressively to inflation—that is, ones for which the value of $c$ is large—will be associated with a lower average volatility of inflation. The coefficient $b$ on the lagged funds rate measures to what extent the current setting of the funds rate depends on past observations of inflation and output.

The FRB/US model can be used to evaluate the relationship between policy and macroeconomic fluctuations. With a specific set of coefficient values for the generalized policy rule, one can compute the standard deviations of inflation and the output gap associated with that specific policy rule, based on stochastic simulations in which the FRB/US model is repeatedly subjected to random supply and demand shocks based on the experience of the past thirty years.[17] The shocks include random disturbances to the labor, goods, financial, and foreign markets. This process is then repeated for many different sets of policy coefficients.

Diagram 6 summarizes the results of this experiment. The shaded area shows the inflation and output volatilities that result from choices of coefficients in the generalized policy rule, subject to a constraint that the variability of the federal funds rate does not exceed a specified level.[18] This limit on funds rate variability serves the purpose of excluding from the analysis "unreasonable" policy rules that are highly effective in offsetting aggregate disturbances (in particular those to demand) but, in so doing, generate wild swings in interest rates. For purposes of these simulations, we assume that the public is fully aware of the policy in place and forms expectations consistent with that policy and the structure of the model.[19] In addition, the long-run inflation goal of policymakers is assumed to be constant.

In general, points in the lower left portion of the shaded region represent better outcomes, in terms of a lower variability of both inflation and output, than

15. In the model, there is a limited long-run effect of inflation on the level of real GDP because the tax system is not neutral in relation to the average rate of inflation. Thus, a change in the average rate of inflation affects the after-tax cost of capital, investment, and potential GDP.

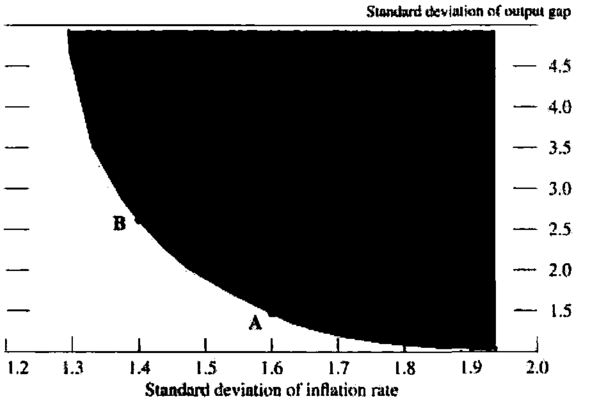
16. For the Taylor rule, $b = 0$, $c = 1.5$, $d = 0.5$, and the intercept $a$ depends on the economy's equilibrium real interest rate and the long-run rate of inflation sought by policymakers.

17. For a complete description of the methodology used in this experiment see Andrew T. Levin, Volker Wieland, and John C. Williams, "Robustness of Simple Monetary Policy Rules under Model Uncertainty," in *Monetary Policy Rules*, John B. Taylor, ed. (University of Chicago Press, forthcoming).

18. In the FRB/US model, the connection between the level of the output gap and the unemployment rate is close. Thus, in terms of the diagram, greater volatility of the output gap implies greater volatility of the unemployment rate around its equilibrium level.

19. Such expectations are called model consistent, and they differ somewhat from those in the previous sections of the article, in which the public was assumed to have an approximate, but not exact, understanding of monetary policy and the workings of the economy in general. In the present context, model-consistent expectations have the advantage of preventing expectational errors caused by the public's misunderstanding of policy procedures—errors that would be unlikely to occur in the long run if policymakers were to adopt standard procedures.

6. FRB/US policy frontier




do points in the upper right. The curve on the boundary of the shaded region, labeled "policy frontier," shows the minimum output variability attainable for a given amount of inflation variability. Thus, the frontier represents the best attainable set of outcomes for the types of policy considered here.

Many policies, however, are associated with outcomes well away from the frontier. Modifications to such inefficient policies can lead to outcomes in which the fluctuations of inflation and output are both smaller on average. For example, a policy associated with the outcome labeled point C in the diagram can be changed so that the resulting outcome is given by point B, which represents a lower variability of both inflation and output.

One can draw a number of conclusions from these results. First, among policies on the frontier, there is, as expected, a tradeoff between inflation variability and output variability. As in the examples of shocks to wages and productivity, a policy that decreases the variability of inflation does so at the cost of an increase in the variability of output. As noted, the variability tradeoff stems fundamentally from the existence of supply shocks. Shocks of this type present policymakers with the choice of keeping a tight rein on inflation and accepting large movements in resource utilization or allowing the inflation rate to fluctuate significantly in the short run while tempering the movements in unemployment and output. Demand shocks, however, present no such conflict: A policy that offsets demand shocks effectively stabilizes both inflation and output.[20]

Not surprisingly, policies that respond relatively aggressively to inflation and only moderately to output generate outcomes of low inflation variability and high output variability. For example, point B on the policy frontier results from a policy that is about 50 percent more responsive to inflation and about 50 percent less responsive to the output gap than the policy associated with point A on the frontier.

A couple of caveats are worth mentioning. First, these results are specific to the FRB/US model; other models may provide different conclusions regarding the existence and characteristics of the tradeoff between inflation variability and output variability. Second, an assumption of the experiment is that the policymaker faces no uncertainty regarding the coefficients or structure of the model and the accuracy of the data, factors that in reality greatly complicate policymakers' decisionmaking. Uncertainties regarding the state of the economy, the "true" model of the economy, and the incidence of supply versus demand shocks may suggest modifications to the types of policy rules considered here.[21]

In summary, this analysis using the FRB/US model shows that, for well-chosen policies, there is a tradeoff between reducing the magnitude of fluctuations in inflation and reducing those in employment and output. Within the set of efficient policies—that is, those associated with the policy frontier—the choice of appropriate monetary policy depends on the weights that policymakers place on stabilizing inflation relative to stabilizing employment. □

20. Demand shocks cause a different kind of tradeoff, that between stabilizing inflation and output and minimizing the volatility of movements in interest rates. According to the FRB/US model, to fully offset the effect of all demand disturbances, it would be necessary to regularly raise or lower the federal funds rate by multiple percentage points within a year. Because such violent movements in interest rates may have harmful repercussions on the efficient operation of financial markets, monetary policy in practice is limited to damping the effects of demand disturbances—it cannot eliminate them.

21. For a further discussion of these issues, see John B. Taylor, ed., *Monetary Policy Rules* (forthcoming).

# Industrial Production and Capacity Utilization: 1998 Annual Revision

*Charles Gilbert and Richard Raddock, of the Board's Division of Research and Statistics, prepared this article. Robert Ritterbeck provided research assistance.*

In late 1998, the Federal Reserve published revised indexes of industrial production (IP) and the related measures of capacity and utilization for the period January 1992 through October 1998. For the third quarter of 1998, the revision placed the production index at 131.6 percent of output in 1992, compared with 128.2 percent reported previously, and the capacity index at 161.5 percent of output in 1992, compared with 158.1 percent reported previously.[1] As a result, the rate of industrial capacity utilization—the ratio of production to capacity—for that quarter was revised up 0.3 percentage point, to 81.5 percent. (Summary data for total industry and manufacturing are shown in appendix tables A.1 and A.2.)

The updated measures reflect both the incorporation of newly available, more comprehensive source data typical of annual revisions and, for some series, the introduction of modifications in the methods for compiling the series. The new source data, which are principally derived from the 1996 Annual Survey of Manufactures and the 1997 Survey of Plant Capacity, affect data for 1995 and thereafter. The modified methods affect data for 1992 onward.

Growth in the output and capacity of high-technology industries is now estimated to have been more rapid than previously shown. Outside of the high-technology industries, revisions to the output indexes for individual industries were largely offsetting and had little net effect on the overall IP index through 1997 (chart 1).

## *REVISIONS TO PRODUCTION, CAPACITY, AND UTILIZATION*

### *Production*

The revised increases in the total IP index are about the same as those shown previously for 1993 and 1994 but are faster for 1995–98 (table A.3). The revised annual rate of growth has averaged 4.5 percent since 1994, 0.8 percentage point higher than previously shown; the upward revision for 1996 forward was close to 1 percentage point per year. The index shows the same pattern of output growth since 1992: No quarter shows a decrease in output, but gains were slower between the second quarter of 1995 and the first quarter of 1996, and again beginning with the first quarter of 1998. The slowing in the latter period reflects the effects of the economic turmoil in Asia.

#### By Market Groups

Among major market groups, the expansion of output was pervasive and substantial in 1996 and 1997, with strength concentrated in business equipment, durable consumer goods, and related materials; only the production of defense and space equipment declined in these years. The production of nondurable consumer products advanced relatively slowly; solid growth in the consumer chemical products industry was offset by declines in apparel production for 1995 through the present.

In 1998, growth was slower in the production of consumer goods, business equipment other than information processing equipment, and both durable and nondurable materials. The output of information processing and related equipment continued to increase strongly, and the output of construction supplies accelerated after having risen slowly in 1997. The output of energy products and materials also picked up, on balance, a move reflecting the unusual weather patterns since last fall. The output of defense and space equipment edged up after having declined substantially for most of this decade.

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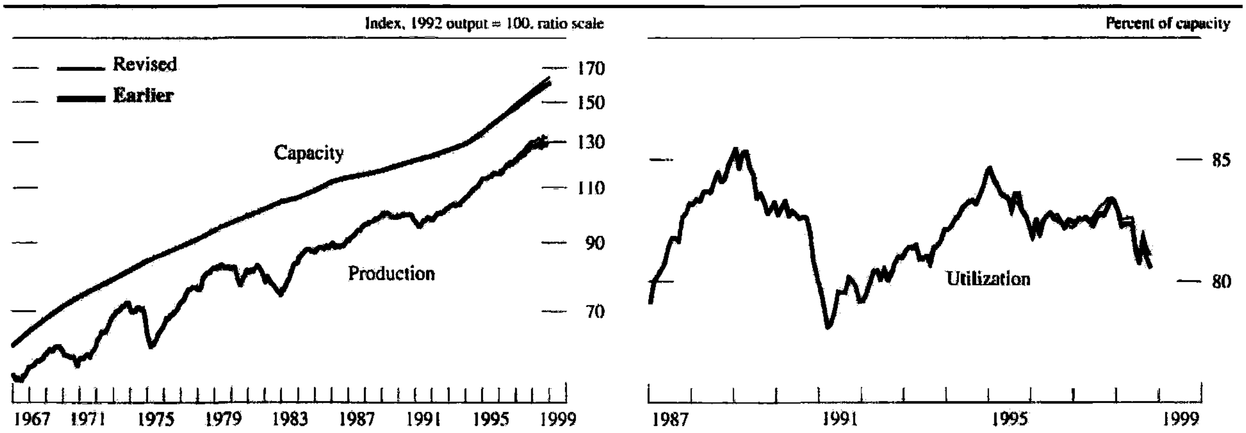
NOTE. Other contributors to the revision and this article include the following: Ana Aizcorbe, William Cleveland, Carol Corrado, Maura Doyle, Norman Morin, and Dixon Tranum.

1. The revisions to the industrial production data for August through October 1998 and the new data for November from the Board's G.17 statistical release on "Industrial Production and Capacity Utilization," issued on December 16, 1998, have been incorporated in all the statistics and tables presented in this article.

1. Industrial production, capacity, and utilization




NOTE. The production indexes and utilization rates are seasonally adjusted. All the revised measures extend through November 1998; the earlier measures extend through October 1998.

By Industry Groups

The revised figures continue to show that during the past two years growth among the broad industry groups was concentrated in durable manufacturing, which advanced 11.1 percent in 1997 before easing to a 4.2 percent annual rate in the first three quarters of 1998. The relatively rapid expansion in this sector has been supported over the years by sustained rapid increases in the output of computers, semiconductors and related electronic components, and communications equipment. According to the revised index, the annual rate of growth of production in these high-technology industries averaged nearly 40 percent for 1994 through 1997, substantially higher than previously shown (table A.4). The growth of output of other manufacturing industries, which was revised little on balance for the 1994–97 period, advanced 3.0 percent over the four quarters of 1996 and 4.3 percent over 1997 before edging down in 1998. In 1998, the economic troubles in Asia have, either through more imports or fewer exports, reduced the domestic production of iron and steel, semiconductors, some chemicals, and other internationally traded goods. However, the revised series for civilian aircraft shows stronger growth in the first half of 1998 than shown previously.

*Capacity*

The revised measures of capacity and utilization reflect the new IP indexes, updated estimates of manufacturing capital input, new information on physical capacity and utilization for selected industries provided mainly by trade associations, and preliminary results of the 1997 Survey of Plant Capacity conducted by the Bureau of the Census, which yielded utilization rates for manufacturing industries for the fourth quarter of 1997.

As was the case with the IP index, the rate of growth of manufacturing capacity was revised upward for 1995 forward (table A.5). The revised figures show that the annual rate of growth jumped to 6.0 percent in 1995 and 6.4 percent in 1996. It has slowed a bit in the past two years; 1998 growth is estimated to have been 5.6 percent. The rapid growth and upward revisions were again concentrated in durable manufacturing, especially in the high-technology industries. The capacity increase in these industries peaked at 46.3 percent in 1996 and then decelerated to 34.8 percent by 1998. In contrast, capacity growth in the rest of manufacturing was approximately 3 percent in 1995 and 1996 and then declined to an estimated 2.6 percent by 1998.

Capacity expansion in mining and utilities was considerably slower. In particular, the North American Electric Reliability Council reduced its estimate of generating capacity for the winter of 1997 and projected increases in capacity short of probable increases in demand. Moreover, the drop in world demand for crude oil and its low price have led to a sharp drop in work in domestic oil fields.

*Capacity Utilization*

For 1997 and 1998, the upward revisions to manufacturing capacity were relatively smaller than the revisions to output; consequently, the rate of manufacturing capacity utilization was revised up 0.3 percentage point for the fourth quarter of 1997 and 0.6 percentage point for the third quarter of 1998 (table A.6). The largest upward revision of utilization was for the transportation equipment industry. Utilization in manufacturing in the third quarter of 1998 was 80.2 percent, a level that is 0.9 percentage point less than the 1967–97 average, as the rates in both primary- and advanced-processing industries fell more than 2 percentage points over the first three quarters of 1998. In contrast to the general easing in manufacturing utilization rates, the rate rose further for petroleum products, to 96.5 percent. The low price of crude oil pushed refining activity toward capacity limits.

The capacity utilization rate for mining for the third quarter of 1998 was revised down 2.5 percentage points, leaving it more than a percentage point below its long-term average. Although the rate for gas utilities also was revised down, to a below-average level, the rate for electric utilities was revised upward to 97.7 percent, its highest level since 1970. Strong summer demand for air conditioning due to high temperatures forced some utilities to limit their supply of electricity to industrial companies.

## *TECHNICAL ASPECTS OF THE ANNUAL REVISION*

The revision incorporates the updating of the comprehensive annual data and of the monthly source data used in the estimation of production, capacity, and utilization. More up-to-date results were obtained from the 1996 Annual Survey of Manufactures, the 1997 Survey of Plant Capacity, other annual industry reports, recent information on prices, and revised monthly source data on physical products and on labor and electricity inputs.[2] Productivity relationships were revised on the basis of the differences between the new annual and monthly data and applied to the individual monthly source data to determine the final individual production indexes. Along with the individual production series and seasonal factors, the annual value-added weights used in aggregating the indexes to market and industry groups were also updated.

### *Changes to Individual Production Series*

The industry and market structures of the index of industrial production now comprise 267 individual series, up from 264 at the time of the previous annual revision. Individual series were changed for electronic components, coal, aircraft, and lawn and garden equipment.

The electronic components industry, SIC 367, was previously covered by two indexes, one for TV tubes and the second for semiconductors and other components. Now, four new indexes cover electronic components other than TV tubes: (1) semiconductors and related devices, SIC 3674; (2) printed circuit boards, SIC 3672; (3) other electronic components, SIC 3675-8 and part of 3679; and (4) printed circuit assemblies and loaded boards, part of SIC 3679. Development of the estimates of production of semiconductors and related devices is discussed below; the other three series are derived from monthly Bureau of Labor Statistics data on worker hours and productivity trends determined by annual data. The four series appear within the industry structure of the IP index in the subgroup electronic components, SIC 367; and within the market structure in equipment parts, a subgroup within durable goods materials, as shown in the following table:

Semiconductors and Related Electronic Components within the Market Structure

| Series | 1997 value-added share |
|---|---|
| Materials | 40.2 |
| Durable goods materials | 24.0 |
| Equipment parts | 9.2 |
| Computer and other board assemblies and parts | .9 |
| Printed circuit assemblies and loaded boards (SIC 3679pt) | .5 |
| Semiconductors, printed circuit boards, and other electronic components | 3.7 |
| Printed circuit boards (SIC 3672) | .3 |
| Semiconductors and related devices (SIC 3674) | 2.8 |
| Other electronic components (SIC 3675-8,9pt) | .6 |

The new production measure for semiconductors and related devices (SIC 3674) attempts to capture advances in the capability of these devices as well as changes in volumes produced by aggregating detailed information on physical quantities and average unit values for about 300 distinct devices.[3] A chained Fisher *quantity* index of semiconductor output is derived by dividing an estimate of nominal domestic production by a chained Fisher *price* index.

Nominal domestic production is estimated using monthly data from the World Semiconductor Trade

2. Information about the sources of monthly data used to calculate the indexes can be found in "Table 1: Industry structure of industrial production: Classification, value-added weights, and description of series" on the Board's World Wide Web site (http://www.federalreserve.gov/releases/g17/About.htm).

3. The data for the individual devices are aggregated using Fisher aggregation methods. See Carol Corrado, Charles Gilbert, and Richard Raddock, "Industrial Production and Capacity Utilization: Historical Revision and Recent Developments," *Federal Reserve Bulletin*, vol. 83 (February 1997), pp. 67–92, for a general description of the methodology.

Statistics monthly (WSTS) issued by the Semiconductor Industries Association and estimates of the U.S. share of world shipments based on data from the Census Bureau's annual Current Industrial Reports for semiconductors.

Data on physical quantities and average unit values for the different semiconductor devices are obtained from several sources and used to construct price indexes for about a dozen categories of chips. Data on metal oxide semiconductor (MOS) microprocessors (MPUs) come from MicroDesign Resources; data on MOS memories and selected MOS logic chips other than MPUs come from Dataquest; and data on other devices come from the WSTS.

The price indexes computed from these data for MOS memories and MOS MPUs are quantitatively very similar to those published by the Bureau of Economic Analysis for the period 1992 through 1996, and to the new producer price indexes (PPI) published by the Bureau of Labor Statistics since January 1997.[4] In contrast, the price indexes that are used in the industrial production system for non-MOS devices and MOS logic chips other than MPUs show steeper price declines than the corresponding PPI measures.

Some minor products of SIC 3674 are not included in the semiconductor indicator described above. The nominal gross output data from the Annual Survey of Manufactures (ASM) for the industry include all of the products made by the industry, so the price deflator constructed above is augmented by producer price indexes for the secondary products of the industry when computing the deflator for the nominal gross output data for the industry. The final industrial production estimate for semiconductors and related devices includes a correction to align the monthly output index to the deflated gross output data for the industry.

Changes to individual series other than those in the electronic components subgroup include revised IP series for coal, completed commercial aircraft, and lawn and garden equipment. The coal series had been based directly on tonnage production. However, the quality of U.S. coal varies by region.[5] For example, a ton of coal from Appalachia provides more heat, expressed in British thermal units (Btu), than a ton of lignite coal from North Dakota, Texas, or Louisiana. The growth in coal production over the past decade or so has been concentrated in subbituminous coal, which is extracted by surface mining at low cost in Wyoming and western Montana and is relatively low in Btu content. Therefore, the revised index of coal production weights the tonnage produced in a region by the Btu content typical of a ton of coal mined in that region.

Completed aircraft, SIC 3721, includes both commercial and military aircraft. The benchmark annual levels for this industry are gross output levels for the industry, derived from data from the ASM and from price deflators from the Bureau of Economic Analysis. These benchmark levels are split into military and civilian components on the basis of more detailed ASM product shipments.

The goal of the revision for this industry was to make the IP indexes reflect actual aircraft operations. Previously the indexes were based on monthly production-worker hours and rested on productivity assumptions that were developed from historical trends. One of the difficulties with this approach was that the information on production-worker hours does

**Data Changes and Availability**

Data on production, capacity, and utilization are published monthly in the Board's G.17 statistical release "Industrial Production and Capacity Utilization." As described in the accompanying article, the data for 1992 and after have been revised. This revision marks the introduction of one new market group: semiconductors, printed circuit boards, and other electronic components.

Files containing all the historical data can be found on the Board's web site (http://www.federalreserve.gov) under "Statistics: Releases and historical data." For paid access to these files through the Department of Commerce's Economic Bulletin Board or web site, please call STAT–USA at 1–800–STAT–USA (1–202–482–1986).

Diskettes containing either historical data (through 1985) or more recent data (1986 to those most recently published in the G.17 statistical release) are available from Publications Services, Board of Governors of the Federal Reserve System, Washington, DC 20551 (202–452–3245).

A document with printed tables of the revised estimates of series shown in the G.17 release is available upon request to the Industrial Output Section, Mail Stop 82, Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, DC 20551.

4. See Bruce T. Grimm, "Price Indexes for Selected Semiconductors, 1974–96," *Survey of Current Business* (U.S. Department of Commerce, Bureau of Economic Analysis, February 1998); and Mike Holdway, "Changes in the PPI for Semiconductors Indexes," *Producer Price Indexes: PPI Detail Report* (U.S. Department of Labor, Bureau of Labor Statistics, January 1997).

5. See A. Denny Ellerman, Thomas M. Stoker, and Ernst R. Berndt, "Sources of Productivity Growth in the American Coal Industry, 1972–95" (paper prepared for a meeting of the Conference on Research on Income and Wealth, New Directions in Productivity Analysis, Washington, D.C., March 1998).

not distinguish hours used in the production of commercial aircraft from hours used in the production of military aircraft. Under the new procedure, the production measure for commercial aircraft approximately equals a forward-looking ten-month moving average of actual or future planned completions (deliveries plus the change in stock) of commercial aircraft by Boeing Corporation. The final IP index is also constructed so that its monthly changes are positively correlated with the monthly changes in production-worker hours.

The estimates of military aircraft productivity were also improved, using annual information on planned production of military aircraft, including fighters, bombers, cargo planes, and AWACS planes, which were combined into an annual aggregate military aircraft production indicator using prices available on Department of Defense web sites. This indicator, combined with the estimate of commercial aircraft production, provides a good estimate of the overall production of complete aircraft through the current year.

Finally, a physical product series for lawn and garden equipment, SIC 3524, was developed using data for production of lawn and garden tractors, mowers, rotary tillers, and snow throwers from *Stark's Component Ledger*. The data represent output for the three-month period from the third month of a given calendar quarter through the second month of the following quarter. Through 1992, the monthly indicator for this series remains production-worker hours.

### *Weights*

The IP index is an annually weighted Fisher index.[6] In the revision, the annual value-added weights for the aggregation of the IP indexes and the capacity utilization rates, which are derived from annual estimates of industry value added, were updated and extrapolated (table A.7). Data from the Annual Survey of Manufactures, together with revenue and expense data reported by the Department of Energy and the American Gas Association, provided information on industry value added for manufacturing and utilities through 1996; the latest value-added data for mining came from the Census of Mineral Industries for 1992. The weights are expressed as unit value added. Generally, the unit-value-added measures track broad changes in corresponding producer prices. The weights required for aggregating IP in the most recent period are (1) estimated from available data on producer prices through the most recent year and (2) extrapolated for the following year, given the persistence of many relative price trends.

### *Revised Monthly Data*

The monthly physical product data that are used to measure the monthly movements of many IP indexes have been updated to capture data that became available after the closing of the regular four-month reporting window. For many individual IP indexes, monthly data on production-worker hours or sales of electric power to industry groups, in kilowatt-hours, along with estimates of trends in output per worker hour or kilowatt-hour, are used to indicate the monthly change in output. This revision incorporates the Bureau of Labor Statistics benchmark of the employment data for March 1997. It also incorporates revised data on the sales of electricity to industries for 1992 onward. The monthly kilowatt-hour sales figures were benchmarked to data on the annual use of electric power reported in the Annual Survey of Manufactures through 1996. The incorporation of the new data resulted in an average upward revision in industrial use of electric power of 0.3 percentage point per year over the period 1994 through 1996 (table A.8). Seasonal factors for the electric power series were reestimated using data through May 1998.[7]

This revision also introduced an improvement in the techniques for adjusting monthly electric power data for systematic influences of the weather. Data on electric power use by establishments in fifty three-digit SIC industries are used as monthly indicators for production in forty-two component IP series. Unusually warm or cool temperatures appear at times to have caused the use of electricity to rise or fall independently of its use in production. Staff research indicated that the usual seasonal adjustment techniques did not adequately capture the influence of the weather on electric power usage by thirteen industries, which are used to infer production for almost 16 percent of the IP index. The revised IP index estimates for these thirteen industries incorporate electric power use series with the effects of unseasonable weather removed; the procedure uses data on national heating and cooling degree days to model weather effects.

6. The aggregation procedures are described in Corrado, Gilbert, and Raddock, "Industrial Production and Capacity Utilization: Historical Revision and Recent Developments."

7. Seasonal factors for worker hours were based on data through October 1998; factors for the monthly physical product series were based on data through June or later in the summer.

### *Measurement of Capacity*

The revisions to capacity and utilization incorporate the revised production indexes, the preliminary results of the 1997 Survey of Plant Capacity, updated measures of 1997 and 1998 capacity in physical units for selected industries, and revised estimates of industry capital input. The 1997 Survey of Plant Capacity, which was conducted by the Bureau of the Census and partially funded by the Federal Reserve, returned to being conducted annually; from 1989 to 1996, results from the survey were received every two years.

The Survey of Plant Capacity is the Federal Reserve's source of utilization rates for most manufacturing industries. The preliminary results of the 1997 survey, along with revisions to the 1996 survey, suggested that trends in manufacturing utilization rates were roughly in line with those previously estimated by the Federal Reserve for those years. However, dividing the industrial production indexes for high-technology industries, which were generally revised substantially upward, by the Census utilization rates yielded a noticeable upward revision of capacity in those industries.

An estimate of capital input for an industry is typically the third major component, along with an IP index and a survey utilization rate, in the Federal Reserve's procedure for estimating capacity by industry (see box "Procedure for Estimating Capacity"). Revised BEA estimates of business investment and deflators by asset type through mid-1998 were incorporated with this revision. The effect of these new data on the overall manufacturing capital input measure was very small.

### Procedure for Estimating Capacity

The Federal Reserve's procedure for constructing individual capacity indexes involves several steps. First preliminary, implied end-of-the-year indexes of capacity are calculated by dividing a production index by a utilization rate obtained from a survey for that end-of-year period. These ratios, like the indexes of industrial production, are expressed as percentages of 1992 production; they give the general level and trend of the capacity estimates.[1]

Once the preliminary implied capacity indexes are calculated, measures of physical capacity or of capital input are used to estimate and extrapolate the annual movements of the capacity indexes. For most manufacturing industries, physical measures of capacity are lacking; in these cases, the annual growth in the capacity estimates is related to the growth in an industry's capital input. The capital input measures are developed principally from investment data reported in the Annual Survey of Manufactures.

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1. Each implied capacity index number is an estimate of a sustainable maximum level of output expressed as a percentage of actual output in 1992. Thus, if in the fourth quarter of 1992 the production index is 100 and a related utilization rate from a survey is 80 percent, then the implied capacity index is 100/.8, or 125.

The capacity indexes capture the concept of sustainable practical capacity, which is defined as the greatest level of output that a plant can maintain within the framework of a realistic work schedule after taking account of normal downtime and assuming sufficient availability of inputs to operate the machinery and equipment in place. The questions asked in both the broad Census Bureau survey and the narrower surveys of selected industries are generally consistent with this definition of capacity. The concept itself generally conforms to that of a full-input point on a production function, with the qualification that capacity represents a realistically sustainable maximum, rather than some higher unsustainable short-term maximum. See Carol Corrado and Joe Mattey, "Capacity Utilization," *Journal of Economic Perspectives*, vol. 11 (Winter 1997), pp. 151–67.

In the absence of utilization rate information for an industry, which is the case for a few series in mining, trends through peaks in production are used to estimate capacity output for that industry.

## *Appendix A: Summary Tables Based on the G.17 Release, December 16, 1998*

A.1. Revised data for industrial production, capacity, and utilization for total industry, 1987–98

Seasonally adjusted data except as noted

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 | Annual avg.[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Industrial production (percentage change)** | | | | | | | | | | | | | | | | |
| 1987 | −.6 | 1.2 | .4 | .4 | .4 | .9 | .6 | .1 | −.1 | 1.4 | .3 | .6 | 4.2 | 6.7 | 5.6 | 7.1 | 4.6 |
| 1988 | .1 | .3 | .0 | .6 | .1 | .1 | .7 | .5 | −.4 | .3 | .8 | .5 | 3.2 | 3.1 | 3.9 | 3.6 | 4.5 |
| 1989 | .6 | −.8 | .9 | .2 | −.6 | −.2 | −1.0 | .4 | −.2 | −.5 | .4 | .5 | 3.8 | .5 | −4.4 | −.1 | 1.8 |
| 1990 | −.5 | .5 | .5 | −.6 | .4 | .0 | .0 | .2 | .1 | −.6 | −1.3 | −.6 | 2.0 | .6 | 1.0 | −5.8 | −.2 |
| 1991 | −.5 | −.8 | −.9 | .3 | .8 | 1.2 | .1 | .1 | 1.0 | −.1 | −.1 | −.6 | −8.3 | 1.5 | 6.2 | 1.1 | −2.0 |
| 1992 | .2 | .6 | .7 | .7 | .2 | −.1 | .8 | −.3 | .4 | .6 | .5 | .1 | 1.3 | 6.1 | 2.7 | 4.6 | 3.1 |
| 1993 | .5 | .5 | .2 | .4 | −.5 | .2 | .2 | −.4 | 1.0 | .4 | .5 | .8 | 4.3 | 1.5 | 1.2 | 6.4 | 3.5 |
| 1994 | .2 | .5 | .7 | .4 | .7 | .5 | .3 | .5 | .2 | .7 | .8 | 1.1 | 6.1 | 7.1 | 5.2 | 7.6 | 5.4 |
| 1995 | .5 | −.1 | .2 | −.1 | .3 | .4 | −.3 | 1.1 | .3 | .0 | .2 | .0 | 6.3 | 1.3 | 3.5 | 3.0 | 4.9 |
| 1996 | −.2 | 1.3 | −.2 | 1.2 | .9 | .7 | .2 | .5 | .1 | .1 | .6 | .3 | 2.8 | 9.6 | 5.5 | 3.5 | 4.5 |
| 1997 | .5 | .7 | .4 | .6 | .3 | .5 | .7 | .6 | .5 | .6 | .5 | .3 | 6.6 | 6.0 | 7.2 | 6.6 | 6.0 |
| 1998 | .0 | −.1 | .4 | .5 | .4 | −.9 | −.1 | 1.4 | −.4 | .2 | −.3 | ... | 1.6 | 2.8 | .9 | ... | ... |
| | **Industrial production (index)** | | | | | | | | | | | | | | | | |
| 1987 | 90.2 | 91.2 | 91.6 | 92.0 | 92.4 | 93.2 | 93.7 | 93.8 | 93.7 | 95.0 | 95.3 | 95.9 | 91.0 | 92.5 | 93.8 | 95.4 | 93.2 |
| 1988 | 95.9 | 96.2 | 96.3 | 96.8 | 96.9 | 97.0 | 97.6 | 98.1 | 97.8 | 98.0 | 98.8 | 99.3 | 96.1 | 96.9 | 97.8 | 98.7 | 97.4 |
| 1989 | 99.8 | 99.0 | 100.0 | 100.2 | 99.6 | 99.4 | 98.4 | 98.8 | 98.6 | 98.2 | 98.6 | 99.0 | 99.6 | 99.7 | 98.6 | 98.6 | 99.1 |
| 1990 | 98.6 | 99.1 | 99.6 | 99.0 | 99.4 | 99.3 | 99.3 | 99.5 | 99.6 | 99.1 | 97.7 | 97.2 | 99.1 | 99.2 | 99.5 | 98.0 | 98.9 |
| 1991 | 96.7 | 95.9 | 95.0 | 95.4 | 96.1 | 97.2 | 97.3 | 97.4 | 98.4 | 98.3 | 98.1 | 97.5 | 95.9 | 96.2 | 97.7 | 98.0 | 97.0 |
| 1992 | 97.7 | 98.2 | 98.9 | 99.6 | 99.9 | 99.7 | 100.5 | 100.2 | 100.6 | 101.2 | 101.7 | 101.8 | 98.3 | 99.8 | 100.4 | 101.5 | 100.0 |
| 1993 | 102.3 | 102.7 | 102.9 | 103.3 | 102.7 | 103.0 | 103.2 | 102.8 | 103.9 | 104.3 | 104.8 | 105.7 | 102.6 | 103.0 | 103.3 | 104.9 | 103.5 |
| 1994 | 105.9 | 106.4 | 107.2 | 107.6 | 108.4 | 108.9 | 109.3 | 109.8 | 110.0 | 110.8 | 111.6 | 112.9 | 106.5 | 108.3 | 109.7 | 111.7 | 109.1 |
| 1995 | 113.4 | 113.4 | 113.6 | 113.4 | 113.8 | 114.3 | 113.9 | 115.1 | 115.4 | 115.5 | 115.7 | 115.8 | 113.5 | 113.8 | 114.8 | 115.7 | 114.4 |
| 1996 | 115.5 | 117.0 | 116.8 | 118.2 | 119.2 | 120.0 | 120.3 | 120.9 | 121.1 | 121.2 | 121.9 | 122.3 | 116.5 | 119.2 | 120.8 | 121.8 | 119.5 |
| 1997 | 123.0 | 123.9 | 124.4 | 125.1 | 125.5 | 126.1 | 127.0 | 127.8 | 128.5 | 129.3 | 129.9 | 130.3 | 123.7 | 125.6 | 127.8 | 129.8 | 126.8 |
| 1998 | 130.3 | 130.2 | 130.7 | 131.3 | 131.9 | 130.6 | 130.5 | 132.4 | 131.9 | 132.2 | 131.8 | ... | 130.4 | 131.3 | 131.6 | ... | ... |
| | **Capacity (index)** | | | | | | | | | | | | | | | | |
| 1987 | 114.0 | 114.1 | 114.2 | 114.3 | 114.4 | 114.5 | 114.6 | 114.7 | 114.9 | 115.0 | 115.1 | 115.2 | 114.1 | 114.4 | 114.7 | 115.1 | 114.6 |
| 1988 | 115.3 | 115.5 | 115.6 | 115.7 | 115.8 | 115.9 | 116.0 | 116.2 | 116.3 | 116.4 | 116.5 | 116.7 | 115.5 | 115.8 | 116.2 | 116.5 | 116.0 |
| 1989 | 116.8 | 117.0 | 117.2 | 117.4 | 117.6 | 117.8 | 118.0 | 118.2 | 118.4 | 118.6 | 118.8 | 119.0 | 117.0 | 117.6 | 118.2 | 118.8 | 117.9 |
| 1990 | 119.2 | 119.3 | 119.5 | 119.7 | 119.9 | 120.1 | 120.2 | 120.4 | 120.6 | 120.8 | 121.0 | 121.2 | 119.3 | 119.9 | 120.4 | 121.0 | 120.2 |
| 1991 | 121.4 | 121.6 | 121.7 | 121.9 | 122.1 | 122.2 | 122.4 | 122.6 | 122.7 | 122.9 | 123.0 | 123.2 | 121.6 | 122.1 | 122.6 | 123.0 | 122.3 |
| 1992 | 123.4 | 123.6 | 123.8 | 124.0 | 124.2 | 124.5 | 124.7 | 124.9 | 125.1 | 125.3 | 125.5 | 125.7 | 123.6 | 124.2 | 124.9 | 125.5 | 124.5 |
| 1993 | 125.9 | 126.2 | 126.4 | 126.6 | 126.9 | 127.1 | 127.4 | 127.6 | 127.8 | 128.1 | 128.3 | 128.6 | 126.2 | 126.9 | 127.6 | 128.3 | 127.2 |
| 1994 | 128.9 | 129.3 | 129.7 | 130.1 | 130.5 | 130.9 | 131.3 | 131.7 | 132.1 | 132.6 | 133.0 | 133.4 | 129.3 | 130.5 | 131.7 | 133.0 | 131.1 |
| 1995 | 133.9 | 134.5 | 135.1 | 135.7 | 136.4 | 137.0 | 137.6 | 138.2 | 138.8 | 139.5 | 140.1 | 140.8 | 134.5 | 136.4 | 138.2 | 140.1 | 137.3 |
| 1996 | 141.4 | 142.1 | 142.8 | 143.4 | 144.1 | 144.8 | 145.5 | 146.1 | 146.8 | 147.4 | 148.1 | 148.8 | 142.1 | 144.1 | 146.1 | 148.1 | 145.1 |
| 1997 | 149.4 | 150.1 | 150.7 | 151.3 | 152.0 | 152.6 | 153.2 | 153.8 | 154.4 | 155.0 | 155.7 | 156.3 | 150.1 | 152.0 | 153.8 | 155.7 | 152.9 |
| 1998 | 157.0 | 157.6 | 158.3 | 158.9 | 159.6 | 160.3 | 160.9 | 161.5 | 162.2 | 162.8 | 163.5 | ... | 157.6 | 159.6 | 161.5 | ... | ... |
| | **Utilization (level, percent)** | | | | | | | | | | | | | | | | |
| 1987 | 79.1 | 80.0 | 80.2 | 80.5 | 80.7 | 81.4 | 81.8 | 81.8 | 81.6 | 82.6 | 82.8 | 83.2 | 79.8 | 80.8 | 81.7 | 82.9 | 81.3 |
| 1988 | 83.2 | 83.4 | 83.3 | 83.7 | 83.7 | 83.6 | 84.1 | 84.5 | 84.1 | 84.2 | 84.8 | 85.1 | 83.3 | 83.7 | 84.2 | 84.7 | 84.0 |
| 1989 | 85.4 | 84.6 | 85.3 | 85.3 | 84.7 | 84.4 | 83.4 | 83.6 | 83.3 | 82.8 | 83.0 | 83.2 | 85.1 | 84.8 | 83.4 | 83.0 | 84.1 |
| 1990 | 82.7 | 83.0 | 83.3 | 82.7 | 82.9 | 82.7 | 82.6 | 82.6 | 82.6 | 82.0 | 80.8 | 80.2 | 83.0 | 82.8 | 82.6 | 81.0 | 82.3 |
| 1991 | 79.6 | 78.9 | 78.1 | 78.2 | 78.7 | 79.6 | 79.5 | 79.5 | 80.2 | 80.0 | 79.8 | 79.2 | 78.9 | 78.8 | 79.7 | 79.6 | 79.3 |
| 1992 | 79.2 | 79.5 | 79.9 | 80.3 | 80.4 | 80.1 | 80.6 | 80.2 | 80.4 | 80.8 | 81.0 | 81.0 | 79.5 | 80.3 | 80.4 | 80.9 | 80.3 |
| 1993 | 81.2 | 81.4 | 81.4 | 81.5 | 81.0 | 81.0 | 81.0 | 80.6 | 81.3 | 81.4 | 81.7 | 82.2 | 81.3 | 81.2 | 81.0 | 81.8 | 81.3 |
| 1994 | 82.1 | 82.3 | 82.6 | 82.7 | 83.1 | 83.2 | 83.2 | 83.4 | 83.3 | 83.5 | 83.9 | 84.6 | 82.4 | 83.0 | 83.3 | 84.0 | 83.2 |
| 1995 | 84.7 | 84.3 | 84.1 | 83.5 | 83.4 | 83.4 | 82.7 | 83.3 | 83.1 | 82.8 | 82.6 | 82.3 | 84.3 | 83.5 | 83.1 | 82.6 | 83.4 |
| 1996 | 81.7 | 82.4 | 81.8 | 82.4 | 82.7 | 82.9 | 82.7 | 82.8 | 82.5 | 82.2 | 82.3 | 82.2 | 82.0 | 82.7 | 82.7 | 82.2 | 82.4 |
| 1997 | 82.3 | 82.6 | 82.5 | 82.7 | 82.6 | 82.6 | 82.9 | 83.1 | 83.2 | 83.4 | 83.4 | 83.4 | 82.5 | 82.6 | 83.1 | 83.4 | 82.9 |
| 1998 | 83.0 | 82.6 | 82.6 | 82.6 | 82.6 | 81.5 | 81.1 | 82.0 | 81.3 | 81.2 | 80.6 | ... | 82.7 | 82.3 | 81.5 | ... | ... |

Note. Monthly percentage change figures show change from the previous month; quarterly figures show the change from the previous quarter at a compound annual rate of growth. Production and capacity indexes are expressed as percentages of output in 1992.

In this and subsequent tables, data for September 1998 onward are subject to revision in future monthly G.17 statistical releases.

1. Annual averages of industrial production are calculated from indexes that are not seasonally adjusted.

A.2. Revised data for industrial production, capacity, and utilization for manufacturing industries, 1987–98

Seasonally adjusted data except as noted

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Quarter | | | | Annual avg.[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | 1 | 2 | 3 | 4 | |
| | Industrial production (percentage change) | | | | | | | | | | | | | | | | |
| 1987 | −.8 | 1.6 | .2 | .5 | .3 | 1.0 | .7 | −.2 | .1 | 1.3 | .5 | .6 | 5.0 | 7.0 | 5.5 | 7.6 | 5.3 |
| 1988 | −.2 | .4 | −.1 | 1.0 | −.1 | .0 | .7 | .3 | .2 | .2 | .9 | .6 | 2.3 | 4.1 | 3.7 | 5.2 | 4.7 |
| 1989 | .9 | −1.2 | .8 | .1 | −.7 | .0 | −1.1 | .3 | −.3 | −.6 | .4 | .1 | 4.3 | −.7 | −4.5 | −1.4 | 1.9 |
| 1990 | −.2 | .9 | .3 | −.8 | .4 | −.1 | .0 | .3 | −.1 | −.6 | −1.3 | −.6 | 2.9 | −.1 | .8 | −6.3 | −.5 |
| 1991 | −.9 | −.7 | −1.1 | .3 | .7 | 1.4 | .2 | .2 | 1.1 | −.1 | −.2 | −.5 | −9.7 | 1.2 | 7.8 | 1.7 | −2.4 |
| 1992 | .3 | .7 | .8 | .6 | .4 | .0 | .7 | −.2 | .3 | .5 | .6 | −.1 | 2.7 | 6.8 | 3.4 | 4.0 | 4.0 |
| 1993 | .9 | .2 | .2 | .6 | −.4 | .0 | .2 | −.5 | 1.2 | .4 | .5 | .9 | 4.9 | 2.1 | .5 | 6.9 | 3.7 |
| 1994 | .1 | .6 | .9 | .7 | .8 | .2 | .5 | .6 | .3 | .8 | .9 | 1.1 | 6.3 | 8.8 | 5.8 | 9.2 | 6.0 |
| 1995 | .6 | −.2 | .2 | −.1 | .1 | .5 | −.5 | .9 | .7 | .1 | .1 | .1 | 6.7 | 1.1 | 2.9 | 3.8 | 5.4 |
| 1996 | −.3 | 1.3 | −.3 | 1.4 | 1.0 | .8 | .5 | .5 | .2 | .0 | .7 | .4 | 2.1 | 10.6 | 7.0 | 3.9 | 4.7 |
| 1997 | .5 | .9 | .5 | .6 | .3 | .7 | .7 | .8 | .4 | .6 | .8 | .3 | 7.2 | 6.6 | 7.7 | 7.5 | 6.8 |
| 1998 | .1 | −.1 | .3 | .6 | .3 | −1.2 | −.1 | 1.6 | −.4 | .6 | .0 | ... | 2.4 | 2.5 | .4 | ... | ... |
| | Industrial production (index) | | | | | | | | | | | | | | | | |
| 1987 | 89.6 | 91.0 | 91.2 | 91.6 | 91.9 | 92.8 | 93.4 | 93.3 | 93.4 | 94.6 | 95.1 | 95.6 | 90.6 | 92.1 | 93.4 | 95.1 | 92.8 |
| 1988 | 95.4 | 95.8 | 95.7 | 96.7 | 96.6 | 96.6 | 97.3 | 97.5 | 97.7 | 97.9 | 98.9 | 99.4 | 95.6 | 96.6 | 97.5 | 98.7 | 97.1 |
| 1989 | 100.3 | 99.1 | 99.9 | 100.0 | 99.4 | 99.4 | 98.3 | 98.7 | 98.4 | 97.8 | 98.2 | 98.3 | 99.8 | 99.6 | 98.5 | 98.1 | 99.0 |
| 1990 | 98.1 | 99.0 | 99.3 | 98.6 | 99.0 | 98.9 | 98.8 | 99.1 | 99.0 | 98.4 | 97.2 | 96.6 | 98.8 | 98.8 | 99.0 | 97.4 | 98.5 |
| 1991 | 95.8 | 95.1 | 94.1 | 94.4 | 95.0 | 96.3 | 96.6 | 96.8 | 97.8 | 97.8 | 97.6 | 97.1 | 95.0 | 95.2 | 97.0 | 97.5 | 96.2 |
| 1992 | 97.4 | 98.1 | 98.9 | 99.5 | 99.9 | 99.9 | 100.6 | 100.4 | 100.7 | 101.2 | 101.8 | 101.7 | 98.1 | 99.7 | 100.6 | 101.6 | 100.0 |
| 1993 | 102.6 | 102.8 | 103.0 | 103.6 | 103.2 | 103.2 | 103.4 | 102.9 | 104.1 | 104.5 | 105.1 | 106.0 | 102.8 | 103.3 | 103.5 | 105.2 | 103.7 |
| 1994 | 106.1 | 106.7 | 107.6 | 108.4 | 109.3 | 109.5 | 110.1 | 110.7 | 111.1 | 112.0 | 113.0 | 114.3 | 106.8 | 109.1 | 110.7 | 113.1 | 109.9 |
| 1995 | 115.0 | 114.8 | 115.1 | 115.0 | 115.1 | 115.7 | 115.1 | 116.2 | 117.0 | 117.1 | 117.2 | 117.3 | 115.0 | 115.3 | 116.1 | 117.2 | 115.9 |
| 1996 | 116.9 | 118.4 | 118.1 | 119.7 | 120.9 | 121.8 | 122.4 | 123.0 | 123.3 | 123.3 | 124.2 | 124.7 | 117.8 | 120.8 | 122.9 | 124.1 | 121.4 |
| 1997 | 125.3 | 126.4 | 127.0 | 127.7 | 128.1 | 129.0 | 129.8 | 130.8 | 131.4 | 132.2 | 133.3 | 133.7 | 126.2 | 128.3 | 130.7 | 133.1 | 129.7 |
| 1998 | 133.8 | 133.7 | 134.1 | 134.9 | 135.4 | 133.7 | 133.6 | 135.7 | 135.2 | 136.0 | 135.9 | ... | 133.8 | 134.7 | 134.8 | ... | ... |
| | Capacity (index) | | | | | | | | | | | | | | | | |
| 1987 | 113.2 | 113.4 | 113.6 | 113.8 | 113.9 | 114.1 | 114.2 | 114.4 | 114.6 | 114.7 | 114.9 | 115.0 | 113.4 | 113.9 | 114.4 | 114.9 | 114.1 |
| 1988 | 115.2 | 115.3 | 115.4 | 115.6 | 115.7 | 115.8 | 116.0 | 116.1 | 116.3 | 116.5 | 116.6 | 116.8 | 115.3 | 115.7 | 116.1 | 116.6 | 115.9 |
| 1989 | 117.0 | 117.3 | 117.5 | 117.8 | 118.0 | 118.3 | 118.5 | 118.7 | 119.0 | 119.2 | 119.5 | 119.7 | 117.3 | 118.0 | 118.7 | 119.5 | 118.4 |
| 1990 | 119.9 | 120.1 | 120.3 | 120.5 | 120.7 | 120.9 | 121.1 | 121.3 | 121.5 | 121.7 | 122.0 | 122.2 | 120.1 | 120.7 | 121.3 | 122.0 | 121.0 |
| 1991 | 122.4 | 122.6 | 122.8 | 123.0 | 123.1 | 123.3 | 123.5 | 123.7 | 123.8 | 124.0 | 124.2 | 124.3 | 122.6 | 123.1 | 123.7 | 124.2 | 123.4 |
| 1992 | 124.5 | 124.8 | 125.0 | 125.2 | 125.5 | 125.7 | 125.9 | 126.2 | 126.4 | 126.6 | 126.9 | 127.1 | 124.8 | 125.5 | 126.2 | 126.9 | 125.8 |
| 1993 | 127.4 | 127.6 | 127.9 | 128.2 | 128.4 | 128.7 | 129.0 | 129.3 | 129.5 | 129.8 | 130.1 | 130.3 | 127.6 | 128.4 | 129.3 | 130.1 | 128.8 |
| 1994 | 130.7 | 131.1 | 131.6 | 132.0 | 132.5 | 132.9 | 133.4 | 133.8 | 134.3 | 134.8 | 135.2 | 135.7 | 131.1 | 132.5 | 133.8 | 135.2 | 133.2 |
| 1995 | 136.3 | 137.0 | 137.7 | 138.4 | 139.1 | 139.8 | 140.5 | 141.2 | 141.9 | 142.6 | 143.4 | 144.2 | 137.0 | 139.1 | 141.2 | 143.4 | 140.2 |
| 1996 | 144.9 | 145.7 | 146.4 | 147.2 | 148.0 | 148.8 | 149.5 | 150.3 | 151.0 | 151.8 | 152.5 | 153.3 | 145.7 | 148.0 | 150.3 | 152.5 | 149.1 |
| 1997 | 154.1 | 154.8 | 155.5 | 156.2 | 157.0 | 157.8 | 158.4 | 159.1 | 159.9 | 160.6 | 161.3 | 162.1 | 154.8 | 157.0 | 159.1 | 161.3 | 158.1 |
| 1998 | 162.8 | 163.5 | 164.3 | 165.1 | 165.8 | 166.6 | 167.3 | 168.1 | 168.8 | 169.5 | 170.3 | ... | 163.5 | 165.8 | 168.1 | ... | ... |
| | Utilization (level, percent) | | | | | | | | | | | | | | | | |
| 1987 | 79.1 | 80.2 | 80.3 | 80.6 | 80.7 | 81.4 | 81.8 | 81.5 | 81.5 | 82.5 | 82.8 | 83.1 | 79.9 | 80.9 | 81.6 | 82.8 | 81.3 |
| 1988 | 82.9 | 83.1 | 82.9 | 83.7 | 83.5 | 83.4 | 83.8 | 84.0 | 84.0 | 84.1 | 84.8 | 85.1 | 83.0 | 83.5 | 83.9 | 84.7 | 83.8 |
| 1989 | 85.7 | 84.5 | 85.0 | 85.0 | 84.2 | 84.1 | 83.0 | 83.1 | 82.7 | 82.1 | 82.2 | 82.1 | 85.1 | 84.4 | 82.9 | 82.1 | 83.6 |
| 1990 | 81.8 | 82.5 | 82.6 | 81.8 | 82.0 | 81.8 | 81.6 | 81.7 | 81.5 | 80.9 | 79.7 | 79.0 | 82.3 | 81.9 | 81.6 | 79.9 | 81.4 |
| 1991 | 78.2 | 77.5 | 76.6 | 76.8 | 77.1 | 78.1 | 78.2 | 78.2 | 79.0 | 78.9 | 78.6 | 78.1 | 77.5 | 77.3 | 78.5 | 78.5 | 77.9 |
| 1992 | 78.2 | 78.6 | 79.1 | 79.4 | 79.6 | 79.5 | 79.9 | 79.6 | 79.7 | 79.9 | 80.2 | 80.0 | 78.6 | 79.5 | 79.7 | 80.1 | 79.5 |
| 1993 | 80.5 | 80.6 | 80.5 | 80.8 | 80.4 | 80.1 | 80.1 | 79.6 | 80.4 | 80.5 | 80.8 | 81.4 | 80.5 | 80.4 | 80.0 | 80.9 | 80.5 |
| 1994 | 81.2 | 81.4 | 81.8 | 82.2 | 82.5 | 82.4 | 82.6 | 82.8 | 82.7 | 83.1 | 83.6 | 84.2 | 81.5 | 82.4 | 82.7 | 83.6 | 82.5 |
| 1995 | 84.4 | 83.8 | 83.6 | 83.1 | 82.8 | 82.7 | 81.9 | 82.3 | 82.4 | 82.1 | 81.7 | 81.3 | 83.9 | 82.9 | 82.2 | 81.7 | 82.7 |
| 1996 | 80.7 | 81.3 | 80.6 | 81.3 | 81.7 | 81.9 | 81.9 | 81.8 | 81.6 | 81.2 | 81.4 | 81.3 | 80.9 | 81.6 | 81.8 | 81.3 | 81.4 |
| 1997 | 81.3 | 81.7 | 81.7 | 81.7 | 81.6 | 81.7 | 81.9 | 82.2 | 82.2 | 82.3 | 82.6 | 82.5 | 81.6 | 81.7 | 82.1 | 82.5 | 82.0 |
| 1998 | 82.2 | 81.8 | 81.6 | 81.7 | 81.6 | 80.2 | 79.8 | 80.7 | 80.1 | 80.2 | 79.8 | ... | 81.8 | 81.2 | 80.2 | ... | ... |

NOTE. See general note to table A.1.

1. Annual averages of industrial production are calculated from indexes that are not seasonally adjusted.

A.3. Rates of growth in industrial production, by major market group, 1994–98

| Market group | Revised growth rate (percent) | | | | | Difference between growth rates: revised less earlier (percentage points) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1994 | 1995 | 1996 | 1997 | 1998 | 1994 | 1995 | 1996 | 1997 | 1998 |
| **Total index** | **6.5** | **3.5** | **5.3** | **6.6** | **1.8** | **.0** | **.3** | **1.1** | **.9** | **.8** |
| Products, total | 4.7 | 2.1 | 4.2 | 5.0 | 2.4 | .1 | .3 | .3 | .3 | 1.3 |
| Final products | 4.8 | 2.6 | 4.4 | 5.6 | 2.3 | .2 | .3 | .4 | .5 | 1.6 |
| Consumer goods | 4.3 | 1.3 | 2.2 | 2.7 | −.5 | −.1 | −.4 | −.2 | −.1 | .4 |
| Durable | 6.5 | .3 | 2.3 | 6.5 | .9 | −.3 | −.3 | −1.1 | .5 | 1.5 |
| Automotive products | 5.4 | −2.4 | 2.0 | 9.3 | −6.5 | −.6 | −.4 | .4 | .6 | −.8 |
| Autos and trucks | 5.2 | −4.7 | 2.5 | 12.3 | −14.0 | −1.0 | −.5 | .9 | 1.2 | −1.0 |
| Autos | 5.8 | −7.3 | −3.8 | 3.4 | −7.0 | −.8 | −.4 | .0 | −.3 | −.3 |
| Trucks | 3.0 | 1.3 | 8.1 | 15.7 | −17.0 | −1.4 | −.3 | .2 | −.2 | −.2 |
| Auto parts and allied goods | 5.6 | 1.8 | 1.0 | 4.7 | 6.9 | .0 | −.1 | −.3 | −.3 | −.3 |
| Other durable goods | 7.4 | 2.5 | 2.6 | 4.3 | 7.0 | −.1 | −.3 | −2.2 | .4 | 3.6 |
| Appliances and electronics | 14.4 | 9.0 | 8.9 | 11.8 | 17.5 | .9 | .1 | 1.0 | 4.1 | .4 |
| Appliances and air conditioning | 2.7 | −2.0 | −.2 | −.5 | 9.5 | −.6 | −4.1 | −2.1 | .4 | −1.4 |
| Home electronics | 28.1 | 20.1 | 18.3 | 24.2 | 25.3 | 2.9 | 4.7 | 3.0 | 5.2 | 1.0 |
| Carpeting and furniture | 5.8 | −3.0 | 3.0 | 2.4 | 3.1 | .3 | −1.6 | −2.4 | −.1 | 2.3 |
| Miscellaneous | 3.5 | 1.1 | −1.7 | .9 | 3.0 | −.8 | .0 | −4.2 | −1.9 | 5.2 |
| Nondurable | 3.7 | 1.6 | 2.2 | 1.7 | −.9 | −.1 | −.4 | .1 | −.3 | .1 |
| Nonenergy | 4.9 | .9 | 2.1 | 1.7 | −1.9 | −.1 | −.4 | .2 | −.3 | −.1 |
| Foods and tobacco | 6.6 | −.3 | 1.4 | 1.3 | −1.0 | −.2 | −.7 | −.4 | −.3 | −.4 |
| Clothing | 4.1 | −3.5 | −.2 | −2.0 | −3.7 | −.2 | 1.9 | 3.9 | −.6 | .9 |
| Chemical products | 5.3 | 5.1 | 4.9 | 2.9 | −1.9 | .1 | −.2 | .2 | −1.2 | −.5 |
| Paper products | −.5 | 2.1 | 1.9 | 3.8 | −3.9 | −.1 | −1.6 | −.5 | 1.0 | 1.2 |
| Energy products | −4.2 | 6.3 | 2.3 | 1.6 | 6.5 | −.1 | .0 | −.4 | −.4 | 2.2 |
| Fuels | −2.2 | 1.4 | 3.5 | 1.8 | 1.7 | .1 | .1 | .2 | .0 | −1.5 |
| Utilities | −5.1 | 8.6 | 1.8 | 1.5 | 8.9 | −.1 | −.2 | −.8 | −.4 | 4.1 |
| Equipment, total | 5.8 | 4.6 | 8.0 | 10.4 | 6.5 | .7 | 1.5 | 1.2 | 1.6 | 3.4 |
| Business equipment | 9.4 | 7.0 | 9.8 | 13.1 | 9.0 | .8 | 1.6 | 1.5 | 2.3 | 4.3 |
| Information processing and related | 13.4 | 14.9 | 16.5 | 16.2 | 15.4 | −.1 | 1.9 | 4.7 | 4.0 | 6.2 |
| Computer and office | 29.5 | 44.7 | 41.9 | 43.7 | 58.1 | −.3 | 1.7 | 4.5 | 9.2 | 10.4 |
| Industrial | 10.0 | 8.5 | 1.2 | 5.2 | 3.0 | .1 | .8 | 1.2 | −.5 | .1 |
| Transit | 1.5 | −9.4 | 14.3 | 22.8 | 9.7 | 4.1 | 3.3 | −4.9 | 5.2 | 7.3 |
| Autos and trucks | 8.4 | −6.0 | −3.0 | 12.3 | −8.3 | 5.7 | 1.6 | −2.9 | 3.8 | .1 |
| Other | 5.9 | 1.9 | 5.5 | 10.4 | .9 | −.2 | .1 | .7 | .9 | 3.3 |
| Defense and space equipment | −6.7 | −7.2 | −1.0 | −3.9 | .5 | .9 | 1.5 | .5 | −1.3 | −.2 |
| Oil and gas well drilling | −6.7 | 2.4 | 7.6 | 9.4 | −19.8 | .3 | .4 | .6 | .2 | −2.0 |
| Manufactured homes | 8.6 | 8.7 | −.7 | −.7 | 6.7 | 1.0 | 2.0 | .2 | .5 | −5.0 |
| Intermediate products | 4.3 | .5 | 3.8 | 3.2 | 2.6 | −.1 | .0 | .0 | −.4 | .4 |
| Construction supplies | 7.2 | −.3 | 5.9 | 2.4 | 4.8 | .0 | .2 | .1 | .2 | −1.3 |
| Business supplies | 2.5 | 1.1 | 2.4 | 3.8 | 1.3 | −.2 | −.2 | .0 | −.8 | 1.3 |
| Materials | 9.3 | 5.7 | 6.9 | 9.0 | .9 | −.3 | .3 | 2.2 | 1.7 | .1 |
| Durable | 13.5 | 11.0 | 10.2 | 13.3 | 2.0 | −.4 | .6 | 3.5 | 2.1 | .7 |
| Consumer parts | 10.3 | 3.6 | 1.2 | 7.3 | −4.8 | .2 | 1.3 | 1.1 | .4 | .0 |
| Equipment parts | 21.4 | 26.3 | 22.7 | 26.4 | 10.0 | −1.3 | .5 | 7.8 | 4.8 | 1.7 |
| Semiconductors, printed circuit boards, and other electrical components | 53.2 | 65.4 | 49.4 | 53.3 | 20.7 | n.a. | n.a. | n.a. | n.a. | n.a. |
| Other | 8.9 | 2.3 | 3.9 | 5.0 | −2.1 | −.1 | .2 | .8 | .4 | .0 |
| Basic metals | 6.9 | 1.6 | 3.9 | 4.3 | −4.7 | −.2 | .2 | 1.3 | −.4 | −.7 |
| Nondurable | 5.9 | −2.5 | 3.6 | 4.5 | −2.6 | −.2 | −.1 | −.1 | 1.0 | −.5 |
| Textile | 8.9 | −7.2 | 2.7 | 3.2 | −5.2 | −.2 | .1 | 1.8 | −.7 | .5 |
| Paper | 5.1 | −2.8 | 4.3 | 4.7 | −1.4 | −.1 | 1.1 | 1.4 | 1.5 | −.3 |
| Chemical | 5.7 | −.8 | 5.1 | 5.0 | −4.0 | −.4 | −.6 | −1.0 | 1.7 | −1.5 |
| Other | 5.6 | −3.0 | .5 | 3.8 | .4 | −.2 | −.2 | −.1 | .0 | 1.1 |
| Energy | 2.0 | .6 | .8 | .3 | 1.9 | −.1 | −.2 | .3 | −.8 | −.9 |
| Primary | 3.3 | .3 | −.7 | .2 | 1.9 | .0 | −.2 | .3 | −.2 | −1.4 |
| Converted fuel | −.3 | 1.1 | 3.6 | .5 | 1.9 | −.1 | −.1 | .6 | −1.8 | .0 |
| *Special aggregates* | | | | | | | | | | |
| Total excluding: Computers and office equipment | 6.1 | 2.9 | 4.6 | 5.9 | .7 | .0 | .2 | .9 | .6 | .5 |
| Business equipment excluding: Computers and office equipment | 7.7 | 3.8 | 6.8 | 10.5 | 4.6 | .8 | 1.5 | 1.1 | 1.5 | 3.0 |

NOTE. Growth rates are calculated as the percentage change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified. For 1998, the growth rates are calculated from the fourth quarter of 1997 to the third quarter of 1998 and annualized.

A.4. Rates of growth in industrial production, by industry group, 1994–98

| Series | SIC code[1] | Revised growth rate (percent) | | | | | Difference between growth rates: revised less earlier (percentage points) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1994 | 1995 | 1996 | 1997 | 1998 | 1994 | 1995 | 1996 | 1997 | 1998 |
| **Total index** | ... | **6.5** | **3.5** | **5.3** | **6.6** | **1.8** | **.0** | **.3** | **1.1** | **.9** | **.8** |
| Manufacturing | ... | 7.5 | 3.6 | 5.9 | 7.3 | 1.8 | .0 | .3 | 1.2 | .9 | 1.0 |
| Primary processing | ... | 6.5 | –.3 | 4.1 | 3.9 | –.9 | –.1 | .1 | .6 | .4 | –.3 |
| Advanced processing | ... | 8.0 | 5.5 | 6.7 | 8.8 | 3.0 | .0 | .4 | 1.5 | 1.2 | 1.7 |
| Durable manufacturing | ... | 9.9 | 6.9 | 8.6 | 11.1 | 4.2 | .0 | .8 | 2.1 | 1.6 | 1.8 |
| Lumber and products | 24 | 5.3 | .8 | 1.8 | 3.1 | 3.7 | .2 | –.4 | –1.0 | 1.0 | –1.1 |
| Furniture and fixtures | 25 | 5.6 | –.8 | 4.7 | 3.3 | 1.4 | .3 | –1.2 | –2.6 | –.3 | 3.8 |
| Stone, clay, and glass products | 32 | 5.2 | 2.7 | 6.3 | 2.6 | 2.5 | –.3 | 1.2 | 2.5 | –2.0 | 2.5 |
| Primary metals | 33 | 8.7 | –.2 | 4.6 | 4.9 | –6.4 | –.2 | .2 | 1.1 | –.7 | –1.1 |
| Iron and steel | 331,2 | 7.7 | –.3 | 3.6 | 5.0 | –9.6 | –.1 | .6 | 1.3 | –.7 | –1.1 |
| Raw steel | 331pt | 6.2 | .7 | –1.7 | 7.3 | –2.6 | .0 | .0 | .0 | .0 | .0 |
| Nonferrous metals | 333–6,9 | 10.1 | –.1 | 5.9 | 4.9 | –2.5 | –.3 | –.3 | .9 | –.6 | –.8 |
| Fabricated metal products | 34 | 8.9 | 1.2 | 4.1 | 4.5 | –.3 | –.1 | .0 | .9 | .7 | .8 |
| Industrial machinery and equipment | 35 | 15.3 | 14.1 | 9.8 | 13.4 | 14.8 | .0 | 1.6 | 2.1 | 2.1 | 4.0 |
| Computer and office equipment | 357 | 30.8 | 41.6 | 42.9 | 43.6 | 55.9 | .4 | 3.7 | 6.4 | 7.2 | 5.6 |
| Electrical machinery | 36 | 25.4 | 25.9 | 22.2 | 24.2 | 9.2 | –1.8 | .2 | 9.6 | 5.7 | 1.6 |
| Semiconductors and related electronic components | 3672–9 | 48.8 | 58.0 | 44.6 | 48.6 | 18.0 | –6.1 | –1.3 | 19.1 | 8.8 | .6 |
| Transportation equipment | 37 | 2.1 | –4.2 | 4.9 | 13.1 | –1.3 | .8 | 1.0 | –.6 | .9 | 2.1 |
| Motor vehicles and parts | 371 | 8.9 | –.6 | –1.4 | 12.8 | –9.2 | 1.1 | 1.0 | .0 | .9 | .0 |
| Autos and light trucks | 371pt | 4.2 | –5.1 | 1.9 | 10.9 | –12.9 | –1.0 | –.6 | .9 | 1.3 | –1.1 |
| Aerospace and miscellaneous transportation equipment | 372–6,9 | –6.7 | –9.7 | 15.3 | 13.4 | 9.9 | .4 | 1.1 | –1.7 | .8 | 5.1 |
| Instruments | 38 | 1.9 | 4.2 | 3.0 | 3.6 | 1.3 | 1.3 | 2.3 | –1.2 | .3 | .7 |
| Miscellaneous manufactures | 39 | 3.8 | 2.5 | 2.7 | 1.4 | –1.6 | –.2 | –.7 | –2.5 | –3.4 | –.6 |
| Nondurable manufacturing | ... | 4.8 | –.3 | 2.6 | 2.6 | –1.3 | –.1 | –.2 | .1 | .0 | –.1 |
| Foods | 20 | 2.3 | .5 | 1.1 | 1.9 | –.4 | –.1 | –1.1 | –.6 | .0 | .2 |
| Tobacco products | 21 | 43.6 | –4.4 | –.1 | –.8 | –5.3 | .0 | .8 | –2.4 | –2.7 | –3.8 |
| Textile mill products | 22 | 5.9 | –4.6 | 1.9 | 3.5 | –1.6 | .0 | .6 | 1.8 | –.5 | .8 |
| Apparel products | 23 | 6.4 | –3.6 | –.9 | –2.0 | –4.0 | –.2 | .9 | 2.5 | –.1 | .1 |
| Paper and products | 26 | 4.5 | –2.5 | 3.0 | 4.2 | –.9 | –.2 | .4 | .7 | 1.1 | –.6 |
| Printing and publishing | 27 | 1.1 | –.2 | 1.9 | 3.6 | –2.2 | –.1 | –.2 | .3 | –.3 | 2.7 |
| Chemicals and products | 28 | 4.6 | 1.6 | 4.9 | 3.1 | –2.5 | –.1 | –.5 | –.5 | .2 | –1.2 |
| Petroleum products | 29 | –.8 | .7 | 3.7 | 2.0 | 3.0 | .1 | .2 | .4 | –.2 | –3.0 |
| Rubber and plastic products | 30 | 9.6 | .2 | 4.0 | 4.3 | 2.3 | .0 | .2 | .7 | .4 | –.1 |
| Leather and products | 31 | –8.4 | –5.6 | 1.3 | –8.7 | –8.3 | .5 | 5.4 | 5.3 | –1.5 | 2.0 |
| Mining | ... | .8 | –.9 | 2.0 | 2.1 | –2.7 | –.1 | –.1 | .4 | .0 | –2.5 |
| Metal mining | 10 | –3.2 | 4.6 | 4.6 | 4.4 | –6.1 | –.2 | .1 | 1.2 | 1.7 | .0 |
| Coal mining | 12 | 8.9 | –1.4 | 4.3 | 2.2 | 5.9 | –.2 | –1.3 | 1.8 | –2.5 | 3.2 |
| Oil and gas extraction | 13 | –1.2 | –1.4 | 1.0 | 1.8 | –5.1 | .1 | .1 | .1 | –.1 | –3.5 |
| Stone and earth minerals | 14 | 6.7 | –1.1 | 4.8 | 3.4 | 2.3 | –.2 | .0 | –.5 | 2.8 | –7.7 |
| Utilities | ... | –.4 | 6.3 | 1.1 | 1.9 | 6.4 | –.1 | –.1 | –.3 | –.5 | 1.9 |
| Electric | 491,493pt | 1.7 | 5.2 | 1.0 | 2.6 | 7.1 | .0 | –.1 | .0 | –.3 | 1.0 |
| Gas | 492,493pt | –8.0 | 10.8 | 1.8 | –1.3 | 2.9 | –.3 | .0 | –1.3 | –2.1 | 4.9 |
| *Special aggregates* | | | | | | | | | | | |
| Computers, communications equipment, and semiconductors[2] | ... | 36.6 | 42.0 | 36.7 | 38.5 | 25.1 | –2.6 | 1.4 | 13.8 | 7.9 | 4.8 |
| Manufacturing excluding computers, communications equipment, and semiconductors[2] | ... | 5.4 | .5 | 3.0 | 4.3 | –.5 | .1 | .3 | .0 | .1 | .5 |
| Manufacturing excluding motor vehicles and parts | ... | 7.4 | 3.9 | 6.4 | 6.9 | 2.5 | –.1 | .3 | 1.3 | 1.0 | 1.1 |

NOTE. Growth rates are calculated as the percentage change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified. For 1998, the growth rates are calculated from the fourth quarter of 1997 to the third quarter of 1998 and annualized.

Primary-processing manufacturing includes textile mill products; paper and products; industrial chemicals, synthetic materials, and fertilizers; petroleum products; rubber and plastics products; lumber and products; primary metals; fabricated metals; and stone, clay, and glass products. Advanced-processing manufacturing includes foods, tobacco products, apparel products, printing and publishing, chemical products and other agricultural chemicals, leather and products, furniture and fixtures, industrial and commercial machinery and computer equipment, electrical machinery, transportation equipment, instruments, and miscellaneous manufactures.

1. Standard Industrial Classification; see Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual, 1987* (U.S. Government Printing Office, 1987).

2. Semiconductors include related electronic components.

pt Part of classification.

A.5. Rates of growth in capacity, by industry group, 1994–98

| Industry group | SIC code[1] | Revised growth rate (percent) | | | | | Difference between growth rates: revised less earlier (percentage points) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1994 | 1995 | 1996 | 1997 | 1998[2] | 1994 | 1995 | 1996 | 1997 | 1998[2] |
| **Total index** | ... | **3.6** | **5.4** | **5.7** | **5.1** | **5.0** | **–.1** | **.5** | **1.2** | **.4** | **.6** |
| Manufacturing | .. | 4.0 | 6.0 | 6.4 | 5.8 | 5.6 | –.1 | .5 | 1.2 | .5 | .7 |
| Primary processing | .. | 2.4 | 3.3 | 3.8 | 3.9 | 3.0 | .1 | .4 | .5 | .6 | –.1 |
| Advanced processing | ... | 4.8 | 7.4 | 7.4 | 6.4 | 6.6 | –.2 | .6 | 1.5 | .2 | .9 |
| Durable manufacturing | .. | 5.8 | 9.5 | 9.7 | 8.6 | 7.9 | –.1 | 1.1 | 2.2 | .6 | .3 |
| Lumber and products | 24 | 3.1 | 3.0 | 3.9 | 4.2 | 2.9 | .2 | –.8 | –.5 | .2 | 1.4 |
| Furniture and fixtures | 25 | 2.0 | 2.5 | 5.9 | 5.1 | 1.9 | –.5 | –1.4 | .1 | .2 | –.6 |
| Stone, clay, and glass products | 32 | –.1 | 5.7 | 4.9 | 2.9 | .6 | –.9 | 3.4 | 1.6 | –.8 | –2.7 |
| Primary metals | 33 | 3.0 | 2.7 | 3.6 | 3.4 | 3.4 | .6 | .2 | .0 | –.4 | –1.5 |
| Iron and steel | 331,2 | 2.8 | 1.9 | 5.0 | 3.9 | 5.1 | .0 | .3 | .7 | .1 | –.1 |
| Raw steel | 331pt | .9 | 3.1 | 2.8 | 5.8 | 6.8 | .0 | .0 | .0 | .0 | 1.2 |
| Nonferrous metals | 333–6,9 | 3.2 | 3.5 | 2.0 | 2.8 | 1.4 | 1.3 | .0 | –.8 | –.8 | –3.1 |
| Fabricated metal products | 34 | 3.0 | 5.2 | 5.5 | 6.5 | 4.3 | .4 | 1.3 | .8 | 1.5 | –.3 |
| Industrial machinery and equipment | 35 | 9.2 | 11.5 | 13.0 | 12.1 | 14.6 | .9 | .7 | 1.7 | .4 | 4.1 |
| Computer and office equipment | 357 | 21.7 | 34.7 | 46.1 | 43.2 | 59.4 | –.2 | 3.5 | 6.2 | 2.2 | 17.8 |
| Electrical machinery | 36 | 16.3 | 28.8 | 30.3 | 23.6 | 18.4 | –2.0 | 2.9 | 11.0 | 4.4 | .6 |
| Semiconductors and related electronic components | 3672–9 | 31.6 | 58.7 | 56.6 | 46.7 | 33.4 | –9.6 | 2.7 | 24.8 | 9.9 | –1.7 |
| Transportation equipment | 37 | 2.7 | 4.3 | 2.5 | 2.0 | 2.1 | –.5 | .5 | .1 | –1.4 | –1.6 |
| Motor vehicles and parts | 371 | 5.5 | 8.4 | 3.9 | 3.2 | 2.5 | –1.5 | .3 | –.8 | –1.4 | –1.8 |
| Autos and light trucks | 371pt | 3.7 | 4.5 | –.5 | .8 | 2.7 | –1.5 | –1.4 | –1.7 | –1.5 | .2 |
| Aerospace and miscellaneous transportation equipment | 372–6,9 | –.6 | –.4 | .5 | .2 | 1.4 | .5 | .9 | 1.3 | –1.6 | –1.3 |
| Instruments | 38 | 1.6 | 2.6 | .1 | 1.3 | 2.4 | 1.5 | 2.2 | –.6 | –.5 | –.9 |
| Miscellaneous manufactures | 39 | 1.5 | 1.7 | 1.9 | 1.9 | 1.9 | –.4 | –1.1 | –1.3 | –1.4 | –1.6 |
| Nondurable manufacturing | ... | 1.9 | 2.1 | 2.3 | 2.0 | 2.6 | –.1 | –.2 | –.1 | –.2 | .8 |
| Foods | 20 | 1.7 | 2.2 | 2.0 | 1.2 | 2.8 | –.5 | –.7 | –.5 | –1.2 | .9 |
| Textile mill products | 22 | 3.4 | 2.0 | 2.2 | 4.6 | .9 | –.3 | –1.2 | .1 | 2.7 | –.1 |
| Apparel products | 23 | 1.3 | 2.3 | .7 | 1.8 | –.7 | –.1 | .1 | .4 | 1.8 | .0 |
| Paper and products | 26 | 1.7 | 2.4 | 2.9 | 2.4 | 3.0 | .3 | .1 | .5 | .6 | .9 |
| Printing and publishing | 27 | .6 | .7 | .3 | .1 | 3.1 | –.1 | .0 | –.6 | –.7 | 2.2 |
| Chemicals and products | 28 | 2.5 | 2.8 | 3.5 | 2.7 | 2.5 | –.2 | .0 | –.1 | –.6 | .2 |
| Petroleum products | 29 | 1.9 | –.2 | .8 | 1.3 | 1.1 | .0 | .0 | .5 | –.4 | –1.9 |
| Rubber and plastics products | 30 | 4.7 | 4.4 | 4.9 | 5.1 | 4.8 | .3 | –.6 | .5 | .9 | 1.5 |
| Leather and products | 31 | –1.5 | 3.4 | 3.5 | –3.3 | –.4 | .7 | 5.9 | 5.9 | –.6 | 4.5 |
| Mining | ... | .9 | –.4 | .4 | 1.5 | .9 | –.1 | .1 | .2 | .8 | –.1 |
| Metal mining | 10 | –1.5 | .7 | 1.6 | 2.9 | .8 | .0 | –.2 | .9 | 2.2 | –.7 |
| Coal mining | 12 | 3.3 | .6 | 1.7 | 1.7 | 1.7 | –.8 | .9 | .7 | .0 | .0 |
| Oil and gas extraction | 13 | .3 | –1.0 | –.2 | 1.0 | .4 | .0 | .0 | .1 | .8 | –.1 |
| Stone and earth minerals | 14 | 2.4 | 2.4 | 3.5 | 4.4 | 4.0 | .0 | –.1 | .2 | .4 | .5 |
| Utilities | ... | 1.2 | 1.7 | 1.9 | .3 | .7 | –.1 | –.3 | .4 | –1.1 | –.2 |
| Electric | 491,3pt | 1.0 | 2.2 | 1.9 | –.1 | .6 | .0 | –.4 | .3 | –1.5 | –.4 |
| Gas | 492,3pt | .4 | .5 | 2.1 | 1.9 | 1.5 | .0 | .0 | .0 | .0 | –.1 |
| *Special aggregates* | | | | | | | | | | | |
| Computers, communications equipment, and semiconductors[3] | ... | 23.2 | 41.0 | 46.3 | 37.4 | 34.8 | –4.2 | 3.2 | 16.2 | 7.0 | 5.2 |
| Manufacturing excluding computers, communications equipment, and semiconductors[3] | .. | 2.5 | 3.2 | 2.9 | 2.7 | 2.6 | .2 | .3 | .0 | –.4 | –.1 |

NOTE. See general note to table A.4.

1. Standard Industrial Classification; see table A.4, note 1.

2. Through the fourth quarter of 1998.

3. Semiconductors include related electronic components.

pt Part of classification.

A.6. Capacity utilization rates, by industry group, 1967–98

| Item | SIC code[1] | Revised rate (percent of capacity, seasonally adjusted) | | | | | | Difference between rates: revised less earlier (percentage points) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1967–97 avg. | 1988–89 high | 1990–91 low | 1996:Q4 | 1997:Q4 | 1998:Q3 | 1996:Q4 | 1997:Q4 | 1998:Q3 |
| **Total index** | ... | **82.1** | **85.4** | **78.1** | **82.2** | **83.4** | **81.5** | **–.1** | **.2** | **.3** |
| Manufacturing | ... | 81.1 | 85.7 | 76.6 | 81.3 | 82.5 | 80.2 | –.1 | .3 | .6 |
| Primary processing | ... | 82.3 | 88.9 | 77.7 | 85.4 | 85.3 | 82.8 | –.5 | –.7 | –.9 |
| Advanced processing | ... | 80.5 | 84.2 | 76.1 | 79.6 | 81.4 | 79.3 | .2 | 1.0 | 1.4 |
| Durable manufacturing | ... | 79.4 | 84.6 | 73.1 | 80.2 | 82.1 | 79.9 | –.2 | .5 | 1.4 |
| Lumber and products | 24 | 82.5 | 93.6 | 75.5 | 82.1 | 81.3 | 81.7 | –.6 | .1 | –1.4 |
| Furniture and fixtures | 25 | 81.4 | 86.6 | 72.5 | 79.2 | 77.9 | 77.6 | –1.8 | –2.1 | .4 |
| Stone, clay, and glass products | 32 | 78.2 | 83.5 | 69.7 | 80.9 | 80.7 | 81.7 | –.5 | –1.4 | 1.7 |
| Primary metals | 33 | 81.1 | 92.7 | 73.7 | 90.7 | 92.0 | 85.4 | –.1 | –.3 | –.1 |
| Iron and steel | 331,2 | 81.1 | 95.2 | 71.8 | 90.9 | 91.8 | 82.0 | .7 | .0 | –.7 |
| Raw steel | 331pt | 80.9 | 92.7 | 71.5 | 88.8 | 90.0 | 84.0 | .1 | .1 | –.6 |
| Nonferrous metals | 333–6,9 | 81.3 | 89.3 | 74.2 | 90.5 | 92.3 | 89.6 | –1.0 | –.9 | .7 |
| Fabricated metal products | 34 | 78.0 | 82.0 | 71.9 | 80.3 | 78.8 | 76.1 | –.3 | –.8 | –.1 |
| Industrial machinery and equipment | 35 | 81.3 | 85.4 | 72.3 | 84.4 | 85.4 | 85.6 | –.4 | .9 | 1.0 |
| Computer and office equipment | 357 | 81.2 | 86.9 | 66.9 | 83.3 | 83.5 | 82.5 | .8 | 3.7 | –1.0 |
| Electrical machinery | 36 | 81.1 | 84.0 | 75.0 | 81.3 | 81.7 | 76.6 | –.7 | .2 | .6 |
| Semiconductors and related electronic components | 3672–9 | 80.0 | 81.1 | 75.6 | 82.7 | 83.8 | 76.0 | –.6 | –1.3 | –.5 |
| Transportation equipment | 37 | 75.9 | 85.8 | 68.5 | 72.2 | 80.0 | 78.0 | .3 | 2.0 | 4.0 |
| Motor vehicles and parts | 371 | 76.8 | 89.1 | 55.9 | 74.4 | 81.3 | 74.2 | 2.3 | 4.2 | 4.7 |
| Autos and light trucks[2] | 371pt | ... | 92.3 | 53.3 | 79.6 | 87.6 | 77.3 | 3.0 | 5.5 | 4.1 |
| Aerospace and miscellaneous transportation equipment | 372–6,9 | 75.0 | 87.3 | 79.2 | 69.3 | 78.4 | 83.3 | –2.2 | –.7 | 3.0 |
| Instruments | 38 | 81.7 | 81.4 | 77.2 | 79.1 | 80.8 | 80.2 | –.4 | .3 | 1.2 |
| Miscellaneous manufactures | 39 | 75.6 | 79.0 | 71.7 | 80.1 | 79.7 | 77.6 | .9 | –.7 | –.1 |
| Nondurable manufacturing | ... | 83.4 | 87.3 | 80.7 | 82.8 | 83.3 | 81.0 | .2 | .4 | –.1 |
| Foods | 20 | 83.0 | 85.4 | 82.7 | 81.6 | 82.1 | 80.2 | .7 | 1.6 | 1.3 |
| Textile mill products | 22 | 85.7 | 90.4 | 77.7 | 85.5 | 84.7 | 83.0 | 3.0 | .4 | .9 |
| Apparel products | 23 | 81.1 | 85.1 | 75.5 | 79.1 | 76.2 | 74.2 | 2.2 | .8 | .8 |
| Paper and products | 26 | 89.2 | 93.5 | 85.0 | 87.8 | 89.3 | 86.8 | –.7 | –.3 | –1.2 |
| Printing and publishing | 27 | 85.8 | 91.7 | 79.6 | 82.1 | 85.1 | 81.9 | .7 | 1.0 | 1.5 |
| Chemicals and products | 28 | 79.5 | 86.2 | 79.3 | 79.5 | 79.8 | 76.8 | –.2 | .4 | –.4 |
| Petroleum products | 29 | 86.6 | 88.5 | 85.1 | 94.5 | 95.2 | 96.5 | .1 | .3 | –.5 |
| Rubber and plastics products | 30 | 84.5 | 89.6 | 77.4 | 86.2 | 85.5 | 84.0 | –1.7 | –2.1 | –3.0 |
| Leather and products | 31 | 80.8 | 83.3 | 76.1 | 70.9 | 66.9 | 63.0 | –.4 | –1.0 | –1.9 |
| Mining | ... | 87.5 | 88.0 | 87.0 | 88.1 | 88.6 | 86.3 | –.2 | –.9 | –2.5 |
| Metal mining | 10 | 79.1 | 89.4 | 79.9 | 90.8 | 92.2 | 87.3 | .4 | –.1 | .2 |
| Coal mining | 12 | 86.6 | 91.5 | 83.4 | 84.2 | 84.5 | 87.1 | –2.0 | –4.2 | –2.3 |
| Oil and gas extraction | 13 | 88.6 | 88.2 | 88.7 | 88.9 | 89.6 | 86.0 | .2 | –.6 | –2.9 |
| Stone and earth minerals | 14 | 84.8 | 89.0 | 79.4 | 86.3 | 85.5 | 84.5 | –.5 | 1.5 | –3.4 |
| Utilities | ... | 87.3 | 92.6 | 83.4 | 89.4 | 90.8 | 94.6 | –.6 | –.1 | 1.4 |
| Electric | 491,3pt | 89.2 | 95.0 | 87.1 | 90.8 | 93.2 | 97.7 | –.1 | 1.0 | 2.0 |
| Gas | 492,3pt | 82.4 | 85.0 | 67.1 | 83.7 | 81.1 | 81.9 | –1.6 | –3.3 | –.2 |
| *Special aggregates* | | | | | | | | | | |
| Computers, communications equipment, and semiconductors[3] | ... | 80.3 | 81.9 | 72.4 | 81.4 | 82.0 | 77.4 | .2 | .7 | .7 |
| Manufacturing excluding computers, communications equipment, and semiconductors[3] | ... | 81.2 | 86.1 | 76.8 | 81.3 | 82.6 | 80.7 | –.1 | .3 | .6 |

NOTE. The "high" column refers to periods in which utilization generally peaked; the "low" column refers to recession years in which utilization generally bottomed out. The monthly highs and lows are specific to each series, and all did not occur in the same month.

1. Standard Industrial Classification; see table A.4, note 1.
2. Series begins in 1977.
3. Semiconductors include related electronic components.
pt Part of classification.

A.7. Annual proportions in industrial production, by industry group, 1990–97

| Item | SIC code[1] | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|
| **Total index** | . . . | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| Manufacturing | . . . | 84.4 | 84.5 | 85.4 | 85.9 | 86.7 | 86.8 | 86.8 | 87.8 |
| Primary processing | . . . | 26.8 | 26.1 | 26.6 | 27.0 | 28.2 | 28.0 | 27.6 | 27.8 |
| Advanced processing | . . . | 57.6 | 58.4 | 58.9 | 58.9 | 58.5 | 58.8 | 59.2 | 60.0 |
| Durable manufacturing | . . . | 44.8 | 44.2 | 44.9 | 45.6 | 46.3 | 46.8 | 47.6 | 48.5 |
| Lumber and products | 24 | 1.8 | 1.8 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 |
| Furniture and fixtures | 25 | 1.4 | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| Stone, clay, and glass products | 32 | 2.2 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.3 | 2.4 |
| Primary metals | 33 | 3.3 | 3.1 | 3.1 | 3.3 | 3.5 | 3.5 | 3.5 | 3.6 |
| Iron and steel | 331,2 | 1.9 | 1.7 | 1.8 | 1.9 | 2.0 | 1.9 | 1.9 | 2.0 |
| Raw steel | 331pt | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 |
| Nonferrous metals | 333–6,9 | 1.4 | 1.4 | 1.4 | 1.4 | 1.6 | 1.6 | 1.6 | 1.6 |
| Fabricated metal products | 34 | 5.1 | 4.9 | 5.0 | 5.1 | 5.2 | 5.3 | 5.4 | 5.5 |
| Industrial machinery and equipment | 35 | 8.3 | 7.9 | 7.8 | 8.1 | 8.4 | 8.9 | 9.2 | 9.4 |
| Computer and office equipment | 357 | 1.8 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.8 | 1.9 |
| Electrical machinery | 36 | 6.7 | 6.8 | 7.1 | 7.4 | 7.8 | 8.3 | 8.6 | 8.8 |
| Semiconductors and related electronic components | 3672–9 | 2.2 | 2.3 | 2.5 | 2.6 | 2.9 | 3.4 | 3.6 | 3.7 |
| Transportation equipment | 37 | 9.7 | 9.6 | 9.4 | 9.5 | 9.3 | 8.9 | 8.8 | 9.2 |
| Motor vehicles and parts | 371 | 4.7 | 4.6 | 4.7 | 5.1 | 5.5 | 5.4 | 5.2 | 5.3 |
| Autos and light trucks[2] | 371pt | 2.7 | 2.6 | 2.5 | 2.6 | 2.8 | 2.7 | 2.7 | 2.6 |
| Aerospace and miscellaneous transportation equipment | 372–6,9 | 5.0 | 5.0 | 4.7 | 4.4 | 3.8 | 3.5 | 3.6 | 3.9 |
| Instruments | 38 | 5.1 | 5.4 | 5.4 | 5.3 | 4.9 | 4.8 | 4.9 | 4.8 |
| Miscellaneous manufactures | 39 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 |
| Nondurable manufacturing | . . . | 39.6 | 40.3 | 40.6 | 40.3 | 40.4 | 40.1 | 39.3 | 39.3 |
| Foods | 20 | 9.0 | 9.4 | 9.6 | 9.6 | 9.3 | 9.2 | 9.0 | 8.9 |
| Tobacco products | 21 | 1.5 | 1.6 | 1.6 | 1.1 | 1.2 | 1.3 | 1.3 | 1.3 |
| Textile mill products | 22 | 1.7 | 1.7 | 1.8 | 1.8 | 1.8 | 1.7 | 1.6 | 1.6 |
| Apparel products | 23 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | 2.0 | 1.9 | 1.8 |
| Paper and products | 26 | 3.7 | 3.7 | 3.5 | 3.4 | 3.8 | 3.9 | 3.5 | 3.5 |
| Printing and publishing | 27 | 6.7 | 6.8 | 6.8 | 6.8 | 6.6 | 6.6 | 6.6 | 6.7 |
| Chemicals and products | 28 | 9.8 | 9.9 | 10.0 | 9.9 | 10.0 | 9.9 | 9.7 | 9.8 |
| Petroleum products | 29 | 1.6 | 1.5 | 1.4 | 1.5 | 1.6 | 1.5 | 1.6 | 1.6 |
| Rubber and plastics products | 30 | 3.2 | 3.3 | 3.5 | 3.6 | 3.8 | 3.7 | 3.7 | 3.8 |
| Leather and products | 31 | .3 | .3 | .3 | .3 | .2 | .2 | .2 | .2 |
| Mining | . . | 7.9 | 7.5 | 6.8 | 6.4 | 6.0 | 6.1 | 6.5 | 5.9 |
| Metal mining | 10 | .5 | .5 | .5 | .4 | .5 | .5 | .4 | .4 |
| Coal mining | 12 | 1.2 | 1.1 | 1.0 | .9 | .9 | .9 | .9 | .9 |
| Oil and gas extraction | 13 | 5.6 | 5.3 | 4.7 | 4.4 | 4.0 | 4.1 | 4.6 | 4.1 |
| Stone and earth minerals | 14 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 |
| Utilities | . . . | 7.7 | 8.0 | 7.8 | 7.7 | 7.4 | 7.1 | 6.7 | 6.3 |
| Electric | 491,3pt | 6.3 | 6.5 | 6.2 | 6.1 | 5.8 | 5.6 | 5.4 | 5.2 |
| Gas | 492,3pt | 1.5 | 1.5 | 1.6 | 1.6 | 1.5 | 1.5 | 1.3 | 1.1 |
| *Special aggregates* | | | | | | | | | |
| Computers, communications equipment, and semiconductors[2] | . | 5.4 | 5.3 | 5.7 | 5.8 | 6.2 | 6.9 | 7.3 | 7.6 |
| Manufacturing excluding computers, communications equipment, and semiconductors[2] | . | 79.0 | 79.2 | 79.8 | 80.1 | 80.4 | 80.0 | 79.5 | 80.1 |

NOTE. The IP proportion data are estimates of the industries' relative contribution to overall IP growth in the following year. For example, a 1 percent increase in durable goods manufacturing in 1998 would account for a 0.485 percent increase in total IP.

1. Standard Industrial Classification; see table A.4, note 1.
2. Semiconductors include related electronic components.
pt Part of classification.

A.8. Rates of growth in electric power use, 1994–98

| Item | SIC code[1] | Revised growth rate (percent) | | | | | Difference between growth rates: revised less earlier (percentage points) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1994 | 1995 | 1996 | 1997 | 1998 | 1994 | 1995 | 1996 | 1997 | 1998 |
| **Total** | ... | **4.9** | **–.8** | **1.5** | **1.0** | **–2.6** | **.2** | **.3** | **.5** | **–.1** | **.0** |
| Manufacturing | ... | 5.1 | –.9 | 1.4 | 1.1 | –2.9 | .2 | .3 | .5 | .0 | .0 |
| Durable manufacturing | ... | 3.4 | .5 | –.2 | 3.1 | –1.0 | .1 | .4 | .7 | –.5 | 1.1 |
| Lumber and products | 24 | 2.9 | 1.5 | 4.3 | –.1 | 5.4 | .0 | –.6 | –.8 | –1.4 | –2.0 |
| Furniture and fixtures | 25 | 7.6 | –3.6 | 4.2 | 1.4 | –1.4 | .4 | –.3 | –.1 | –.2 | .8 |
| Stone, clay, and glass products | 32 | 2.1 | .2 | 3.4 | .8 | .6 | .6 | .4 | .4 | –.2 | .9 |
| Primary metals | 33 | 3.0 | 1.5 | –3.8 | 4.0 | –1.2 | .0 | 1.4 | 2.3 | –.7 | .6 |
| Fabricated metal products | 34 | 5.5 | .1 | 3.7 | 3.1 | –2.0 | .3 | .4 | .2 | –.2 | .4 |
| Industrial machinery and equipment | 35 | 4.0 | .4 | 1.4 | 3.0 | 2.6 | .5 | .5 | –.2 | –.1 | 1.2 |
| Electrical machinery | 36 | 2.4 | 1.5 | 2.5 | 2.3 | 2.0 | .2 | –1.0 | –1.1 | –.8 | 5.1 |
| Transportation equipment | 37 | 4.1 | –2.0 | –.3 | 5.2 | –7.5 | –.5 | –.8 | –.7 | –.4 | 1.1 |
| Instruments | 38 | 1.7 | .4 | –2.8 | .6 | 1.3 | .8 | .9 | .6 | –.3 | –.6 |
| Miscellaneous manufactures | 39 | 11.1 | –4.7 | 6.9 | .3 | –3.8 | –.2 | –1.1 | –1.4 | –.7 | .7 |
| Nondurable manufacturing | ... | 6.5 | –2.0 | 2.6 | –.5 | –4.4 | .3 | .2 | .3 | .3 | –.9 |
| Foods | 20 | 4.5 | 2.5 | 1.7 | 2.2 | –.2 | 1.0 | .9 | .7 | .5 | –.7 |
| Tobacco products | 21 | –5.5 | 6.3 | –.2 | .5 | –5.0 | –.3 | –1.2 | –2.2 | –2.3 | 3.2 |
| Textile mill products | 22 | 6.0 | –3.4 | 2.9 | 2.1 | 2.6 | .6 | –.2 | .3 | –1.0 | –.9 |
| Apparel products | 23 | 6.8 | –6.4 | –1.8 | –2.0 | –8.5 | .5 | .4 | .8 | .5 | .3 |
| Paper and products | 26 | 2.7 | –.6 | .4 | 2.2 | –4.0 | –.1 | –.1 | .0 | 1.3 | .1 |
| Printing and publishing | 27 | 4.2 | .7 | .8 | 3.0 | –2.3 | .5 | .0 | .3 | –.4 | .8 |
| Chemicals and products | 28 | 9.7 | –6.5 | 5.7 | –4.2 | –9.7 | .3 | .2 | .1 | –.1 | –2.2 |
| Petroleum products | 29 | 2.7 | 7.3 | –3.3 | 2.5 | –2.0 | .0 | 1.1 | 1.2 | 2.0 | 1.2 |
| Rubber and plastics products | 30 | 9.0 | –.5 | 3.4 | .6 | 3.7 | .3 | –.3 | –.2 | –.4 | –.1 |
| Leather and products | 31 | –3.5 | –9.2 | –1.4 | –1.7 | –8.0 | –.6 | .8 | –4.5 | –.6 | 1.4 |
| Mining | ... | 2.2 | 1.0 | 2.8 | –.4 | 1.8 | .0 | .0 | .5 | –1.2 | .6 |
| Metal mining | 10 | 5.6 | 8.5 | 2.5 | .4 | .0 | –.2 | –.2 | –.1 | –.1 | –1.6 |
| Coal mining | 12 | 7.4 | –1.3 | .0 | –.6 | 8.1 | –.1 | .0 | .0 | .3 | 1.0 |
| Oil and gas extraction | 13 | –4.8 | –4.9 | 4.4 | 1.0 | –4.5 | .0 | .0 | 1.4 | –.8 | –1.0 |
| Stone and earth minerals | 14 | 7.5 | 5.7 | 3.7 | –4.2 | 10.5 | .2 | .5 | .2 | –5.8 | 7.3 |
| *Supplementary groups* | | | | | | | | | | | |
| Total, excluding nuclear nondefense | ... | 3.7 | .6 | .9 | 2.2 | –1.5 | .2 | .3 | .4 | –.1 | .2 |
| Utilities sales to industry | ... | 5.3 | –1.2 | 1.9 | 1.0 | –2.6 | .3 | .4 | .3 | .1 | .4 |
| Industrial generation | ... | 1.3 | 4.8 | –5.7 | .8 | 2.4 | –.3 | –.1 | –.1 | .4 | .4 |

NOTE. Growth rates are calculated as the percentage change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified. For 1998, the growth rates are calculated from the fourth quarter of 1997 to the third quarter of 1998 and annualized.

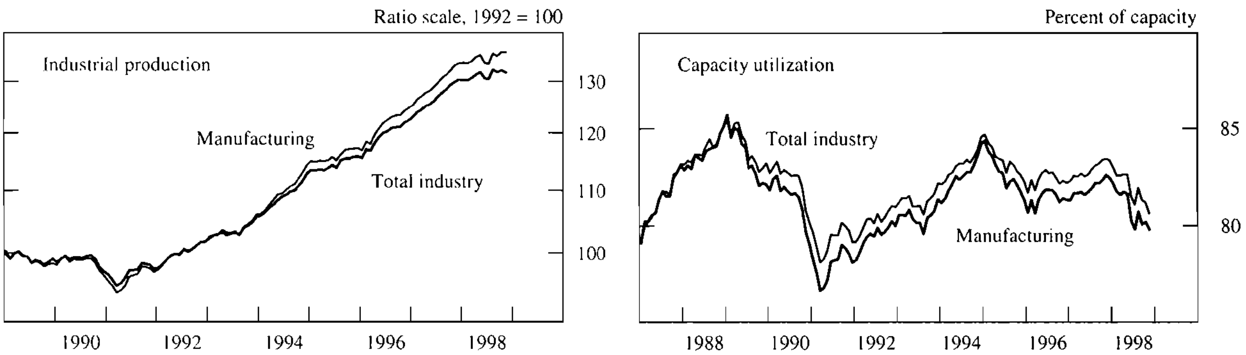
1. Standard Industrial Classification; see table A.4, note 1.

# Industrial Production and Capacity Utilization for November 1998

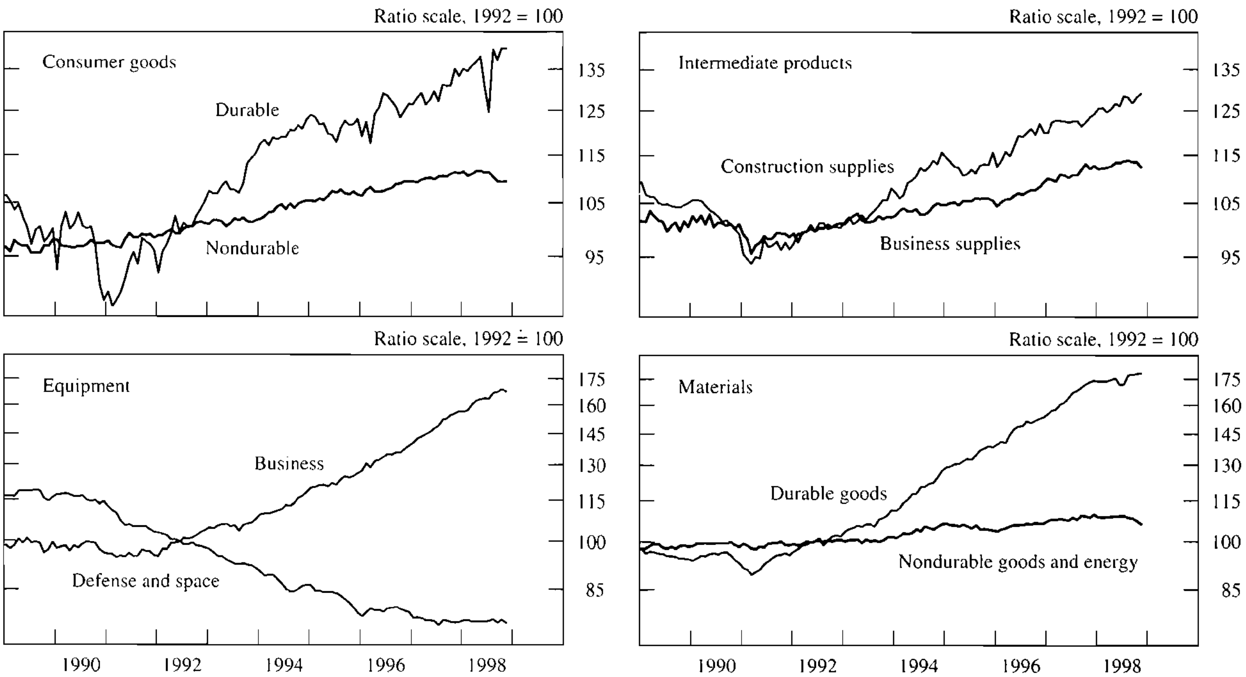
*Released for publication December 16*

Industrial production declined 0.3 percent in November after an upwardly revised increase of 0.2 percent in October. The decline in the index resulted from a fall of 3.4 percent in the output of utilities and of 1.2 percent in the output of mines. Manufacturing output was unchanged after having risen 0.6 percent in October. At 131.8 percent of its 1992 average, industrial production in November was 1.5 percent higher than it was in November 1997. Capacity utilization fell 0.6 percentage point, to 80.6 percent, a level 1½ percentage points below its 1967–97 average.

Industrial production and capacity utilization




Industrial production, market groups




All series are seasonally adjusted. Latest series, November. Capacity is an index of potential industrial production.

Industrial production and capacity utilization, November 1998

| Category | Industrial production, index, 1992=100 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1998 | | | | Percentage change | | | | |
| | | | | | 1998[1] | | | | Nov. 1997 to Nov. 1998 |
| | Aug.[r] | Sept.[r] | Oct.[r] | Nov.[p] | Aug.[r] | Sept.[r] | Oct.[r] | Nov.[p] | |
| **Total** | **132.4** | **131.9** | **132.2** | **131.8** | **1.4** | **–.4** | **.2** | **–.3** | **1.5** |
| Previous estimate | 132.5 | 132.0 | 132.0 | . . | 1.6 | –.4 | .0 | . . | . . . |
| *Major market groups* | | | | | | | | | |
| Products, total[2] | 124.9 | 124.2 | 124.8 | 124.4 | 1.3 | –.6 | .5 | –.3 | 1.8 |
| Consumer goods | 116.1 | 114.8 | 115.3 | 115.4 | 1.9 | –1.1 | .4 | .1 | –.5 |
| Business equipment | 166.6 | 167.2 | 168.7 | 167.7 | 1.9 | .4 | .9 | –.6 | 7.9 |
| Construction supplies | 128.0 | 126.7 | 128.1 | 129.0 | –.3 | –1.0 | 1.1 | .7 | 4.4 |
| Materials | 144.4 | 144.4 | 144.1 | 143.7 | 1.7 | .0 | –.2 | –.3 | .9 |
| *Major industry groups* | | | | | | | | | |
| Manufacturing | 135.7 | 135.2 | 136.0 | 135.9 | 1.6 | –.4 | .6 | .0 | 2.0 |
| Durable | 159.8 | 159.5 | 160.7 | 160.4 | 3.5 | –.2 | .8 | –.2 | 4.7 |
| Nondurable | 111.3 | 110.6 | 111.0 | 111.2 | –.8 | –.6 | .4 | .2 | –1.3 |
| Mining | 103.7 | 102.7 | 101.9 | 100.7 | –.9 | –1.0 | –.8 | –1.2 | –4.1 |
| Utilities | 120.2 | 120.5 | 116.1 | 112.2 | 1.6 | .2 | –3.7 | –3.4 | –1.2 |

| Category | Capacity utilization, percent | | | | | | | | Memo Capacity, percentage change, Nov. 1997 to Nov. 1998 |
|---|---|---|---|---|---|---|---|---|---|
| | Average, 1967–97 | Low, 1982 | High, 1988–89 | 1997 | 1998 | | | | |
| | | | | Nov. | Aug.[r] | Sept.[r] | Oct.[r] | Nov.[p] | |
| **Total** | **82.1** | **71.1** | **85.4** | **83.4** | **82.0** | **81.3** | **81.2** | **80.6** | **5.0** |
| Previous estimate | . . | . . . | . . . | . . . | 82.0 | 81.4 | 81.1 | . . . | . . . |
| Manufacturing | 81.1 | 69.0 | 85.7 | 82.6 | 80.7 | 80.1 | 80.2 | 79.8 | 5.6 |
| Advanced processing | 80.5 | 70.4 | 84.2 | 81.6 | 79.9 | 79.5 | 79.6 | 79.3 | 6.6 |
| Primary processing | 82.3 | 66.2 | 88.9 | 85.4 | 83.1 | 82.0 | 82.1 | 81.7 | 3.0 |
| Mining | 87.5 | 80.3 | 88.0 | 87.9 | 86.3 | 85.4 | 84.7 | 83.5 | .9 |
| Utilities | 87.3 | 75.9 | 92.6 | 90.3 | 95.1 | 95.2 | 91.6 | 88.5 | .7 |

NOTE. Data seasonally adjusted or calculated from seasonally adjusted monthly data.
1. Change from preceding month.
2. Contains components in addition to those shown.
r Revised.
p Preliminary.

## *Market Groups*

The output of consumer goods edged up 0.1 percent after an upwardly revised increase of 0.4 percent in October. Among consumer durables, production of automotive products decreased, but remained near the high level in October; the decline was offset, however, by a 0.7 percent increase in the production of other consumer durables, mainly computers and appliances. The output of nondurable consumer goods other than energy products, which rose 0.3 percent, was led by a second month of strong gains in the production of foods and consumer chemicals. The output of consumer energy products fell 1.2 percent, a drop that reflected the lowering of residential demand for electricity and gas that came from the abnormally warm weather during the month.

The production of business equipment fell 0.6 percent, reversing the upward-revised increase in October. The drop reflected widespread declines in the production of most types of business equipment. A notable exception was the production of computers, where continued strength pushed up the reading on the output of information processing equipment. Declines in the production of civilian aircraft and business vehicles lowered the overall output of transit equipment, and further weakness in the production of farm machinery reduced output in the "other equipment" category.

The output of construction supplies increased 0.7 percent after having risen 1.1 percent in October. Gains continued to be widespread among most of the underlying components of this index. In contrast, the production of business supplies fell 1.0 percent, a drop that reflected, in part, the reduced commercial use of energy.

The production of materials fell 0.3 percent after having dropped 0.2 percent in October. The production of durable goods materials edged up 0.2 percent, as continued strength in the production of semiconductors, printed circuit boards, and other electronic components was only partly offset by a sharp drop in the production of basic metals; the production of iron and steel fell 5.0 percent. The output of nondurable goods materials slipped again, with weakness in the production of chemicals, textiles, and paper. Because of the drop in electricity generation, the output of energy materials fell 1.8 percent.

### *Industry Groups*

Manufacturing output was unchanged as gains in the production of nondurable goods were offset by a falloff in the production of durables. Among durables, declines in the production of primary metals, industrial machinery other than computers, and transportation equipment contributed to the November weakness. In contrast, the production of nondurable goods edged up 0.2 percent and was led by increases of ½ percent or more in the production of foods, petroleum products, and rubber and plastic products. The reading on mining production continued to fall, being pulled down by the continued contraction in oil and gas extraction and declines in natural gas output and coal mining activity.

The factory operating rate dropped 0.4 percentage point, to 79.8 percent—more than 2¾ percentage points below the level it had reached in November 1997. Utilization rates for both primary- and advanced-processing industries have fallen this year to levels below their historical averages. Similarly, utilization at mines fell to 83.5 percent—more than 4 percentage points below its year-ago level and well below its historical averages.

### *Revision of Industrial Production and Capacity Utilization*

On November 24, the Federal Reserve published revisions to its measures of industrial production (IP), capacity, capacity utilization, and industrial use of electric power. The revisions began with 1992 and incorporated updated source data for more recent years.

This regular updating of source data for IP included annual data from the Bureau of the Census's *1996 Annual Survey of Manufactures* and from selected editions of its *1997 Current Industrial Reports.* Annual data from the Department of the Interior on metallic and nonmetallic minerals (except fuels) for 1996 and 1997 were also introduced. The updating also included revisions to the monthly indicators for each industry (physical product data, production-worker hours, or electric power usage) and revised seasonal factors. In addition, the revision introduced improved measures of production for semiconductors, coal, lawn and garden equipment, and aircraft.

Capacity and capacity utilization were revised to incorporate preliminary data from the Census Bureau's *1997 Survey of Plant Capacity.* The statistics on the industrial use of electric power incorporated more complete reports received from utilities for the past few years as well as data from the *1996 Annual Survey of Manufactures.*

The revised data are available on the Board's web site, http://www.federalreserve.gov/releases/g17, and on diskettes from Publications Services (telephone 202-452-3245). Further information on these revisions is available from the Board's Industrial Output Section (telephone 202-452-3197).

A document with printed tables of the revised estimates of series shown in the G.17 release is available upon request to the Industrial Output Section, Mail Stop 82, Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, DC 20551. □

# Announcements

## *Reduction in the Discount Rate*

The Federal Reserve on November 17, 1998, announced the following set of policy actions:

- The Board of Governors approved a reduction in the discount rate by 25 basis points from 4¾ percent to 4½ percent.
- The federal funds rate is expected to fall 25 basis points from around 5 percent to around 4¾ percent.

Although conditions in financial markets have settled down materially since mid-October, unusual strains remain. With the 75 basis point decline in the federal funds rate since September, financial conditions can reasonably be expected to be consistent with fostering sustained economic expansion while keeping inflationary pressures subdued.

In taking the discount rate action, the Board approved requests submitted by the boards of directors of the Federal Reserve Banks of New York, Philadelphia, and Dallas. Subsequently, the Board approved similar actions by the board of directors of the Federal Reserve Bank of San Francisco, also effective November 17; by the boards of directors of the Federal Reserve Banks of Boston, Richmond, Atlanta, and Kansas City, effective November 18; by the board of directors of the Federal Reserve Bank of St. Louis, effective November 19; and by the boards of directors of the Federal Reserve Banks of Cleveland, Chicago, and Minneapolis, also effective November 19. The discount rate is the interest rate that is charged depository institutions when they borrow from their District Federal Reserve Banks.

## *Reductions in Fees for Payment Services of the Federal Reserve Banks*

The Federal Reserve Board on November 4, 1999, announced continued price reductions in fees for electronic payment services provided to depository institutions by the Federal Reserve Banks. Most of the new fees become effective January 4, 1999.

Prices across all electronic payment services will decline 17.5 percent in 1999, reflecting lower prices for Fedwire and automated clearinghouse (ACH) transactions. In large part, the savings reflect the efficiencies gained from the successful completion of a five-year project to consolidate the Federal Reserve's computer facilities.

For 1999, the Reserve Banks will reduce the basic fee for a Fedwire funds transfer and a Fedwire securities transfer by almost 30 percent and 25 percent respectively. The Reserve Banks will eliminate some ACH fees and reduce other fees for their ACH customers, including the fee for items received, which will decline more than 12 percent.

Fees for paper check products, which include forward-processed, fine-sort, and returned checks, will increase about 2.6 percent on a volume-weighted basis (a 3.7 percent increase from January 1998 fee levels). This increase is driven primarily by increases in fine-sort and returned-check fees.

Fees for forward-processed items will remain stable. Fees for payor bank services, which include electronic check products, will increase about 0.6 percent (a 1.2 percent increase from January 1998 fee levels).

Besides these fee changes, the Reserve Banks will implement a volume-based fee structure for the Fedwire funds transfer service and a new fee structure for the Fedwire securities transfer service. These structure changes become effective February 1, 1999.

During the first quarter of 1999, the Reserve Banks will also implement an enhanced multilateral settlement service that will allow participants in settlement arrangements to submit settlement files to the Federal Reserve electronically, improving operational efficiency over current methods. The fees and fee structure for the new and existing multilateral settlement services have been revised by lowering the per-entry fee, introducing a settlement file fee, and increasing the off-line surcharge.

Working with other industry participants, the Reserve Banks also plan to expand their efforts to educate depository institutions and end users about the benefits of the ACH. This campaign, coupled with ACH fee decreases for 1999, is expected to spur commercial ACH growth and help broaden the use of electronic payment systems.

The Monetary Control Act of 1980 requires that the Federal Reserve recover the costs of providing certain payment services over the long term. During the 1988–97 period, the Reserve Banks recovered 99.6 percent of the costs of priced services.

The Reserve Banks project that they will recover 101.0 percent of their priced services costs for 1999, including imputed expenses and targeted return on equity, generating a net income of $64.2 million. The Reserve Banks estimate that they will recover 102.2 percent of their costs in 1998.

On November 4, 1998, the Board also approved the 1999 private-sector adjustment factor (PSAF) for Reserve Bank priced services of $115.8 million, an increase of $7.3 million, or 6.7 percent, from the 1998 targeted PSAF of $108.5 million. The PSAF is an allowance for taxes and other imputed expenses that would have been paid and return on capital that would have been earned had the Federal Reserve's priced services been provided by a private business firm.

## *Provision for Enhanced Settlement Services to Depository Institutions*

The Federal Reserve Board on November 3, 1998, announced plans for providing an enhanced settlement service to depository institutions. The enhanced service combines and improves selected features from the Reserve Banks' existing net settlement services.

Under the enhanced service beginning March 29, 1999, the Federal Reserve Banks will offer a fully automated settlement service that provides participants in clearing arrangements with finality of settlement intraday on the settlement date.

The service will provide the settling participants with an on-line mechanism to submit an electronic file of settlement information to the Federal Reserve. Besides increasing operational efficiency, the enhanced service is intended to facilitate a reduction in the duration of settlement risk for private-sector clearing arrangements.

## *Decrease in the Net Transaction Accounts to Which a 3 Percent Reserve Requirement Will Apply in 1999*

The Federal Reserve Board on November 24, 1998, announced a decrease from $47.8 million to $46.5 million in the net transaction accounts to which a 3 percent reserve requirement will apply in 1999. This adjustment is known as the low reserve tranche adjustment.

The Board also changed from $4.7 million to $4.9 million the amount of reservable liabilities of each depository institution that is subject to a reserve requirement of 0 percent.

Additionally, the Board increased the deposit cutoff levels that are used in conjunction with the exemption level to determine the frequency and detail of deposit reporting required for each institution from $78.9 million to $81.9 million for nonexempt depository institutions and from $50.7 million to $52.6 million for exempt depository institutions.

For depository institutions that report weekly, the low reserve tranche adjustment and the reservable liabilities exemption adjustment will apply to the reserve computation period that begins Tuesday, December 1, 1998, and the corresponding reserve maintenance period that begins Thursday, December 31, 1998.

For institutions that report quarterly, the low reserve tranche adjustment and the reservable liabilities exemption adjustment will apply to the reserve computation period that begins Tuesday, December 15, 1998, and the corresponding reserve maintenance period that begins Thursday, January 14, 1999.

## *Joint Statement on the Allowance for Loan Losses of Depository Institutions*

The Securities and Exchange Commission, the Federal Deposit Insurance Corporation, the Federal Reserve Board, the Office of the Comptroller of the Currency, and the Office of Thrift Supervision on November 24, 1998, jointly issued the following statement on the allowance for loan losses of depository institutions.

The Securities and Exchange Commission, Federal Deposit Insurance Corporation, Federal Reserve Board, Office of the Comptroller of the Currency and Office of Thrift Supervision (the Agencies) recognize the importance of meaningful financial statements and disclosure for both the benefit of investors and a safe and sound financial system. The Agencies also recognize the importance of depository institutions having prudent, conservative, but not excessive loan loss allowances that fall within an acceptable range of estimated losses. Accordingly, the Agencies are issuing this Statement to better ensure the consistent application of loan loss accounting policy and to improve the transparency of financial statements.

In 1986, the Securities and Exchange Commission issued FRR 28 concerning *Procedural Discipline in Determining the Allowance and Provision for Loan Losses to be Reported.* In 1993, the four Federal banking agencies jointly issued the *Interagency Policy Statement on the Allowance for Loan and Lease Losses* (Interagency Statement). These documents provide guidance to depository institutions on the establishment and maintenance of an allowance consistent with generally accepted accounting principles (GAAP). As these materials make clear, the allowance for loan losses should reflect estimated credit losses for specifically identified loans, as well as estimated probable credit losses inherent in the remainder of the loan portfolio at the balance sheet date. When determining the appropriate level for the allowance, management should always ensure that the overall allowance appropriately reflects a margin for the imprecision inherent in most estimates of expected credit losses. Management's judgment should be exercised in a disciplined manner that is based on and reflective of adequate detailed analyses of the loan portfolio.

Although management's process for determining allowance adequacy is judgmental and results in a range of estimated losses, it must not be used to manipulate earnings or mislead investors, funds providers, regulators or other affected parties. Management's process must be based on a comprehensive, adequately documented, and consistently applied analysis of the institution's loan portfolio. The depository institution must ensure that its allowance is supportable in light of the accompanying disclosures made to investors, including those made in management's discussion and analysis and financial footnotes, with respect to the underlying economics and trends in the portfolio and any other factors that significantly affect the collectibility of loans.

The Agencies have discussed their respective concerns about accounting for allowances for loan losses and agree that the approach to the allowance should be consistent with the guidance noted above. Accordingly, each of the Agencies will continue to fulfill its respective responsibilities for ensuring that the allowance for loan losses is appropriately determined and that earnings are not improperly managed, consistent with safety and soundness objectives and investor protection objectives. The banking agencies understand that the SEC's general concerns about earnings management issues extend to all SEC registrants, not merely banking organizations, and that questions have arisen with respect to loan loss allowances in this context only with regard to a small number of banking organizations.

The Agencies today have agreed to work together with the public accounting profession and banking industry in developing further guidance consistent with GAAP, the Interagency Statement and FRR 28. This additional guidance will help to ensure the transparency of the reported amounts, improve auditability, and serve as a benchmark for the exercise of prudent judgment. The Chief Accountants of each of the Agencies will meet quarterly to coordinate this and other projects of mutual interest.

## *Enforcement Actions*

The Federal Reserve Board on November 17, 1998, announced the issuance of a cease and desist order against the Frontier Bank of Laramie County, Cheyenne, Wyoming.

The order, which includes provisions addressing year 2000 readiness, was issued jointly with the Wyoming Department of Audit, Division of Banking.

Also on November 17, 1998, the Federal Reserve Board announced the issuance of a cease and desist order against William Shilstone, a former institution-affiliated party of the New York branch of Société Générale, New York, New York. □

# Minutes of the Federal Open Market Committee Meeting Held on September 29, 1998

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Tuesday, September 29, 1998, at 9:00 a.m.

*Present:*

Mr. Greenspan, Chairman
Mr. McDonough, Vice Chairman
Mr. Ferguson
Mr. Gramlich
Mr. Hoenig
Mr. Jordan
Mr. Kelley
Mr. Meyer
Ms. Minehan
Mr. Poole
Ms. Rivlin

Messrs. Boehne, McTeer, Moskow, and Stern, Alternate Members of the Federal Open Market Committee

Messrs. Broaddus, Guynn, and Parry, Presidents of the Federal Reserve Banks of Richmond, Atlanta, and San Francisco respectively

Mr. Kohn, Secretary and Economist
Mr. Bernard, Deputy Secretary
Ms. Fox, Assistant Secretary
Mr. Gillum, Assistant Secretary
Mr. Mattingly, General Counsel
Mr. Baxter, Deputy General Counsel
Mr. Truman, Economist

Messrs. Cecchetti, Dewald, Hakkio, Lindsey, Simpson, Sniderman, and Stockton, Associate Economists

Mr. Fisher, Manager, System Open Market Account

Mr. Winn, Assistant to the Board, Office of Board Members, Board of Governors[1]

Mr. Ettin, Deputy Director, Division of Research and Statistics, Board of Governors

Messrs. Madigan and Slifman, Associate Directors, Divisions of Monetary Affairs and Research and Statistics respectively, Board of Governors

Messrs. Alexander, Hooper, and Ms. Johnson, Associate Directors, Division of International Finance, Board of Governors

Mr. Reinhart, Deputy Associate Director, Division of Monetary Affairs, Board of Governors

Mr. Struckmeyer, Assistant Director, Division of Research and Statistics, Board of Governors

Ms. Low, Open Market Secretariat Assistant, Division of Monetary Affairs, Board of Governors

Messrs. Spillenkothen and Parkinson,[2] Director, Division of Supervision and Regulation, and Associate Director, Division of Research and Statistics respectively, Board of Governors

Mr. Connolly, First Vice President, Federal Reserve Bank of Boston

Messrs. Eisenbeis, Goodfriend, Hunter, Kos, Lang, and Rolnick, Senior Vice Presidents, Federal Reserve Banks of Atlanta, Richmond, Chicago, New York, Philadelphia, and Minneapolis respectively

Messrs. Judd and Rosengren, Vice Presidents, Federal Reserve Banks of San Francisco and Boston respectively

Ms. Yucel, Research Officer, Federal Reserve Bank of Dallas

By unanimous vote, the minutes of the meeting of the Federal Open Market Committee held on August 18, 1998, were approved.

The Manager of the System Open Market Account reported on recent developments in foreign exchange markets. There were no open market operations in foreign currencies for the System's account in the period since the previous meeting, and thus no vote was required of the Committee.

The Manager also reported on developments in domestic financial markets and on System open mar-

1. Attended portion of the meeting relating to the Committee's disclosure policies.

2. Attended portion of meeting relating to developments stemming from the financial difficulties of a large hedge fund.

ket transactions in government securities and federal agency obligations during the period August 18, 1998, through September 28, 1998. By unanimous vote, the Committee ratified these transactions.

The Committee then turned to a discussion of the economic and financial outlook, and the implementation of monetary policy over the intermeeting period ahead. A summary of the economic and financial information available at the time of the meeting and of the Committee's discussion is provided below, followed by the domestic policy directive that was approved by the Committee and issued to the Federal Reserve Bank of New York.

The information reviewed at this meeting suggested that economic activity was expanding at a moderate rate. Growth of private domestic final demand had slowed from its pace in the first half of the year, though it was still relatively robust, and reduced spending on U.S. exports and rising import competition were exerting appreciable restraint on overall activity, as was a slowing in inventory investment. Reflecting the moderation in growth from the first half of the year, total payroll employment was trending up at a somewhat slower pace. Despite the pressures on labor resources associated with still-tight labor markets, trends in wages and prices remained stable.

Growth in nonfarm payroll employment slowed somewhat over the July–August period. The deceleration reflected further job losses in the manufacturing sector, notably in the apparel and electronic components industries on which the crisis in Asia was having a sizable adverse effect. Outside of manufacturing, employment increases remained strong in the service-producing industries, and even though anecdotal reports continued to indicate shortages of skilled workers, further sizable job gains were recorded in construction. The civilian unemployment rate stayed at 4.5 percent in August.

Industrial output rebounded in August as production at General Motors resumed following the settlement of the labor strike. Outside the motor vehicle sector, however, output had changed little on balance over recent months in association with the erosion in net exports stemming from the turmoil in Asia and its repercussions on a number of other U.S. trading partners; production of consumer goods edged down on balance in July and August, and the growth of output of business equipment slowed. The rise in industrial production in August boosted the rate of utilization of manufacturing capacity, but the factory operating rate remained somewhat below the level of late last year.

Total retail sales were held down in July and August by a sharp contraction in spending for motor vehicles, but non-auto sales continued to rise at a brisk pace. The gains were widespread, with increases in spending on furniture and appliances, apparel, and miscellaneous nondurables especially strong. Purchases of services also were up appreciably further in July and August after a rapid second-quarter rise. Sales and construction of residential buildings remained quite strong on balance, reflecting very favorable homebuying conditions. Housing starts slipped in August but were still above the high level of the first half of the year. Sales of existing homes dropped back in August from the record high registered in July, while sales of new homes were slightly higher in July (latest data) than in the first half of the year.

Available indicators pointed to more moderate growth in business fixed investment after the surge in capital spending during the first half of the year. Shipments of nondefense capital goods declined in July and August, retracing much of June's large increase, while sales of medium and heavy trucks continued to increase at a rapid pace. Nonresidential construction weakened in July, extending a pattern of sluggish building activity; construction of industrial structures remained in a downtrend, and office building activity changed little on balance over June and July.

Business inventory accumulation eased further in July after having slowed sharply in the second quarter, and inventory–sales ratios remained moderate. Stockbuilding in manufacturing was at a somewhat lower rate in July than in the second quarter, and the stock–shipments ratio for the sector stayed a little above the low level that had prevailed over the past year. At the wholesale level, a further decline in inventories reflected additional reductions in motor vehicles; the inventory–shipments ratio remained in the upper part of its narrow range for the past year. In the retail sector, a sharp drop in stocks at automotive dealerships more than offset a rise in stocks of other goods. The aggregate inventory–sales ratio for the retail sector was at a relatively low level.

The nominal deficit on U.S. trade in goods and services narrowed slightly in July from its second-quarter average, with the value of imports falling more than the value of exports. Much of the decline in imports and exports involved trade in automotive products with Canada and Mexico. Economic activity in the major foreign industrial countries other than Japan decelerated on average in the second quarter, with a deterioration in net exports partially offsetting continued strength in domestic final demand. In Japan, activity contracted for a third consecutive quarter; net exports made a large positive contribution as imports dropped sharply, but domestic demand, most notably business fixed investment, fell steeply.

Both the overall and the core CPI again rose moderately in August; a further increase in food prices was offset by a sizable decrease in energy prices. For the twelve months ended in August, core consumer prices rose slightly more than they had in the year-earlier period. At the producer level, prices of finished goods dropped appreciably in August, largely reflecting declines in the prices of finished foods and, notably, energy goods. Producer prices of finished goods other than food and energy moved slightly higher in the twelve months ended in August after having edged down in the year-earlier period. Producer prices at earlier stages of production were under strong downward pressure; prices of intermediate materials fell during the year ended in August by slightly more than they had risen in the year-earlier period, and prices of crude materials plunged further in the twelve months ended in August. Average hourly earnings of production or nonsupervisory workers continued to increase at a relatively moderate pace in the July–August period, and for the twelve months ended in August they rose slightly more than in the year-earlier period.

At its meeting on August 18, 1998, the Committee adopted a directive that called for maintaining conditions in reserve markets that would be consistent with the federal funds rate continuing to average around 5½ percent. However, in light of mounting financial strains abroad, their potential implications for the U.S. economy, and less accommodative conditions in domestic financial markets, the Committee concluded that the risks to the outlook were no longer tilted toward rising inflation but had become more balanced. Accordingly, the Committee adopted a directive that did not include a presumption about the likely direction of any adjustment to policy during the intermeeting period. The reserve conditions associated with this directive were expected to be consistent with moderate growth of M2 and M3 over coming months.

Open market operations were directed throughout the intermeeting period toward maintaining the existing degree of pressure on reserve positions, and the federal funds rate remained close to its intended level of 5½ percent. In an atmosphere of greatly increased volatility in financial asset values worldwide and a reduced appetite for risk among many investors, interest rates on U.S. Treasury securities, and to a much smaller extent on investment-grade corporate debt, fell appreciably during the intermeeting period; in contrast, yields on the bonds of lower-rated firms increased sharply, and a number of large banks tightened terms and standards for making business loans to sizable firms. Credit conditions also tightened in Europe, Asia, and Latin America. Share prices in U.S. and foreign equity markets remained volatile during the intermeeting period, and major U.S. equity price indexes declined considerably further on balance.

In foreign exchange markets, the trade-weighted value of the dollar depreciated substantially over the intermeeting period in relation to other major currencies. A spreading perception that the United States was more vulnerable than either Europe or Japan to an economic downturn in Latin America, increasing expectations of monetary easing in the United States, and shifts into yen associated with the end of the fiscal half-year in Japan and the unwinding of some investment positions financed in yen were factors that weighed on the dollar. By contrast, the dollar appreciated slightly in terms of an index of currencies that includes the developing countries of Latin America and Asia that are important trading partners of the United States.

Growth of M2 and M3 picked up considerably in August and apparently strengthened further in September. The acceleration was the result of unusually large inflows to money market funds that in part reflected households' preference for relatively safe, liquid placements for funds shifted out of equities and lower-rated corporate debt. For the year through September, both aggregates recorded growth rates well above the Committee's ranges for the year. Expansion of total domestic nonfinancial debt had moderated somewhat in recent months after having picked up earlier in the year.

The staff forecast prepared for this meeting incorporated a considerably weaker assessment of underlying aggregate demand, owing to downward revisions to growth abroad and to the less accommodative conditions that were evolving in U.S. financial markets. The staff projected that the expansion of economic activity would slow for a time to a pace appreciably below the estimated growth of the economy's potential and then would pick up to a rate more in line with that potential. Damped expansion of foreign economic activity and the lagged effects of the earlier rise in the foreign exchange value of the dollar were expected to place considerable restraint on the demand for U.S. exports for a period ahead and to lead to further substitution of imports for domestic products. Domestic production also would be held back for a while by the efforts of firms to bring inventories into better balance with the anticipated moderation in the trajectory of final sales. In addition, private final demand would be restrained by tighter lending terms and conditions as well as the drop that had occurred in equity prices. Pressures on labor resources were likely to ease somewhat as the expansion of economic activity slowed, but inflation was projected to pick up gradually in association with a partial reversal of the decline in energy prices this year.

In the Committee's discussion of current and prospective economic conditions, members focused on developments that pointed to the potential for a significant weakening in the growth of spending. They recognized that there were at present few statistical indications that the economy was on a significantly slower growth track. Indeed, the available data suggested that consumer expenditures and business investment retained considerable strength. At the same time, however, investors' perceptions of risks and their aversion to taking on more risk had increased markedly in financial markets around the world. That change in sentiment was exacerbating financial and economic problems in a number of important trading partners of the United States. In addition, it was generating lower equity prices and tightening credit availability in U.S. financial markets. As a consequence, the downside risks to the domestic expansion appeared to have risen substantially in recent weeks. Though labor markets were expected to remain relatively tight for some time, the members saw little prospect that inflation would gather significant momentum in coming quarters. Declining commodity and other import prices would be restraining prices and inflation expectations for a while. Overall consumer prices might rise a little more rapidly next year as the effects of a number of favorable factors, such as falling energy prices, diminished or reversed, but underlying inflation was expected to stay quite subdued as inflation expectations remained damped and pressures in labor markets became less pronounced.

The intensification and further spread of turmoil in international financial markets, notably since the outbreak of a financial crisis in Russia in mid-August, had spilled over into U.S. financial markets. Strong demands for safety and liquidity had driven down yields on U.S. Treasury securities, but spreads of private rates over Treasury rates had gapped higher. Increases in risk spreads were especially large for lower-grade borrowers and on bonds below investment grade, whose rates had increased considerably since mid-August. In addition, many banks had tightened their credit standards and terms. Prices in U.S. equity markets, which had weakened appreciably before the crisis in Russia, had declined substantially further. These market developments strongly suggested, and anecdotal reports tended to confirm, the emergence of widespread perceptions of greater risks in a broad range of financial investment activities and of considerably greater reluctance to put capital at risk. The members did not believe that the tightness in credit markets and strong demand for safety and liquidity were likely to lead to a "credit crunch," though some members expressed the view that such an outcome could not be ruled out. At a time when business balance sheets already indicated a significant softening of cash flows owing to weaker profits, many business firms were experiencing increased difficulty and costs in their efforts to raise funds in debt or equity markets or to borrow from lending institutions; if these conditions were to persist, the sustainability of the current strength in business capital expenditures would come into question. The decline in stock market prices also appeared likely to damp the growth of consumer spending over time, with added implications for business capital expenditures.

Despite the emergence of decidedly less hospitable financial conditions, there were few indications in the data available to the Committee of any weakening as yet in consumer and business spending. Consumer expenditures, though temporarily held back by shortages of new motor vehicles stemming from the work stoppage at General Motors, had remained on a solid uptrend, with overall growth in recent months apparently slipping only a little from a remarkably rapid pace in the first half of the year. Strong growth in jobs and incomes along with substantial further increases in stock market prices through mid-July had fostered a high level of consumer confidence and spending. Members commented that the more recent weakness in the stock market and the related decline in household net worth had removed an important support for the growth of consumer spending, but they noted that recent surveys indicated only a slight deterioration in consumer sentiment and that the stimulus from earlier stock market gains probably would dissipate only gradually. Looking further ahead, consumer spending could be expected to expand at a pace that was more in line with the growth of household incomes than it had been in recent years.

Growth in business investment spending, while apparently moderating from an extraordinary pace during the first half of the year, likewise seemed to have been little affected to date by the tightening in credit conditions and the increased aversion to risk-taking. Data on shipments of capital equipment continued to display a clear uptrend, and members reported very strong construction activity in many parts of the country. Declining relative prices and rapid technological advances were likely to generate appreciable further growth in spending for computer and office equipment over the projection horizon. Moreover, new orders for capital equipment did not suggest any general weakening, though such orders had declined dramatically in the steel industry under the weight of intense foreign competition. Even so, the members anticipated that the pronounced increase in investor and lender perceptions of risk would result in considerable moderation in the growth of overall business investment, especially in light of concurrent expectations of reduced gains in sales and profits and evidence of some diminution in both internal and external sources of financing. Reports from nearly every Federal Reserve District suggested that executives had become considerably more concerned about business prospects. In a number of cases they already had seen a substantial downturn in their exports or a surge in competing imports at prices they found difficult to match. In other cases they were anticipating such developments or were reacting to the general sense of unease and uncertainty evident in financial markets. Forthcoming data on capital spending, including new orders and contracts, were likely to point to a weaker uptrend in business fixed investment. How much weaker was a major uncertainty in the economic outlook and a key to determining the extent to which financial market turmoil was likely to affect the real economy.

Very favorable underlying factors, including a strong job market and declining mortgage rates, had helped to sustain homebuilding activity at an elevated level. The large further advance in stock market prices earlier in the year also appeared to have been a positive factor in the strong performance of the housing market. While anecdotal reports suggested that softening was confined to only a few areas, the delayed effects of the drop in stock market prices and forecasts of slower employment and income growth suggested some moderation in housing activity at some point. Even so, the continued affordability of new homes for many households was likely to sustain housing demand at a relatively high albeit diminished level, and homebuilding activity would be bolstered for a time as backlogs created by shortages of skilled construction workers in many areas were worked off.

Net exports, while subject to a great deal of uncertainty, were seen as likely to continue to restrain demand and production to a substantial extent over coming quarters. Members cited examples from across the country of business firms, notably in the manufacturing sector but also in energy, agriculture, forest products, and some other industries, that already were being adversely affected by weaker export markets and increased competition from lower-priced imports. Moreover, the intensification of turmoil in international financial markets since the Russian devaluation and debt moratorium had led to tighter financial conditions in key U.S. trading partners—especially in the Americas—a development that was likely to weaken growth in those markets and demand for U.S. products. Of potentially greater importance for the domestic economic outlook, however, was the spread of international financial unsettlement to U.S. financial markets and the attendant deterioration in business and investor confidence. It was clear that the contagious effects of international economic and financial turmoil had markedly increased the downside threat to the domestic expansion.

In their comments about the outlook for inflation, members referred to the persistence of very tight labor markets across the nation and to indications of escalating increases in labor compensation in a number of areas. At the same time, price inflation generally had remained subdued, with little evidence of acceleration. As had been true for an extended period, competitive pressures were widely reported to be preventing employers from passing through rising labor costs to consumer prices. Looking ahead, members cited a variety of factors bearing on the prospects for inflation that on the whole suggested that the risks of an inflationary uptrend had receded. Favorable factors in the outlook for prices included the lingering effects of the dollar's earlier appreciation, ample industrial capacity, generally declining commodity and other import prices, and an apparently more rapid trend of productivity gains. Over time, some slowing in economic growth and less intense pressures on labor resources would hold down increases in labor costs. Developments that might tend to offset these positive factors, at least in part, included a possible turnaround in energy prices after sizable declines over the past year and an upturn in the costs of worker benefits, notably for medical expenses. A few members also observed that the rapid growth of key monetary aggregates, including M2, over a period of several quarters was a worrisome element in the outlook for inflation, though the most recent surge in M2 probably was induced in large measure by a flight to quality and liquidity.

In their discussion of policy for the intermeeting period ahead, all the members endorsed a proposal calling for a slight easing in reserve markets to produce a decline of ¼ percentage point in the federal funds rate to an average of about 5¼ percent. In their view, such an action was desirable to cushion the likely adverse consequences on future domestic economic activity of the global financial turmoil that had weakened foreign economies and of the tighter conditions in financial markets in the United States that had resulted in part from that turmoil. At a time of abnormally high volatility and very substantial uncertainty, it was impossible to predict how financial conditions in the United States would evolve. In the view of many members, equity prices and risk spreads in U.S. financial markets previously had embodied an overly optimistic assessment of business prospects, and they saw some correction in these markets as a positive development. Moreover, they expected markets to become much more settled once the initial adjustments to new risk assessments had been made. On balance, however, credit conditions were likely to remain tighter and equity prices lower than earlier, and in the context of continued damped inflation, monetary policy had the room to adjust to these new circumstances. In any event, an easing policy action at this point could provide added insurance against the risk of a further worsening in financial conditions and a related curtailment in the availability of credit to many borrowers.

The members agreed that the decrease in the federal funds rate should be limited to 25 basis points. Several emphasized in this regard that although the risk of rising inflation might have receded, it was still present, especially in light of the persistence to date of very tight labor markets and relatively robust economic growth. In these circumstances, while an easing move was warranted to provide some insurance against undesirably tight domestic financial conditions, many members saw the need for a cautious policy action. A more sizable policy move at this point might convey an exaggerated impression of the Committee's current thinking regarding the extent of downside risks in the economy.

The members were divided over whether to retain the current symmetrical directive or to adopt an asymmetrical directive that would be tilted toward ease. A small majority favored moving to asymmetry on the grounds that it seemed more consistent with the increased downside risks to the economy that they believed would exist even after the contemplated policy action and that it would underscore the Committee's readiness to respond promptly to conditions that might threaten the sustainability of the expansion. Other members expressed a preference for a symmetric directive but indicated that they could accept a directive that was tilted toward ease. In their opinion, the uncertainties relating to the direction of the next policy move were sufficiently great on both sides to justify a neutral directive. Some commented that unanticipated developments were likely in any event to provide the principal basis for future policy actions. They suggested that the Committee would undoubtedly confer by telephone should such developments materialize during the intermeeting period, and the symmetry or asymmetry of the directive would have little bearing on whatever policy decision might be reached.

At the conclusion of the Committee's discussion, all the members supported a directive that called for conditions in reserve markets that would be consistent with a slight decrease in the federal funds rate to an average of about 5¼ percent. All the members also indicated that they could accept a change in the directive to include a bias toward easing. Accordingly, in the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments, the Committee decided that a slightly higher federal funds rate might be acceptable or a somewhat lower federal funds rate would be acceptable during the intermeeting period. The reserve conditions contemplated at this meeting were expected to be consistent with some moderation in the growth of M2 and M3 over the months ahead.

Federal Reserve Bank of New York was authorized and directed, until instructed otherwise by the Committee, to execute transactions in the System Account in accordance with the following domestic policy directive:

The information reviewed at this meeting suggests that the economy has been growing at a moderate rate, paced by brisk, albeit slowing, increases in spending by businesses and households, while expansion in overall economic activity has continued to be restrained by developments abroad. Nonfarm payroll employment grew somewhat more slowly over July and August, mostly reflecting job losses in the manufacturing sector; the civilian unemployment rate was unchanged at 4.5 percent in August. Industrial production has changed little on balance over recent months. Total retail sales over July and August were held down by a sharp contraction in spending for motor vehicles. Residential sales and construction have remained quite strong in recent months. Available indicators point to continued growth in business capital spending, but at a more moderate pace than in the first half of the year. Business inventory accumulation slowed further in July. The nominal deficit on U.S. trade in goods and services narrowed slightly in July from its second-quarter average. Trends in wages and prices have remained stable in recent months.

Most interest rates have fallen appreciably since the meeting on August 18, though yields on the bonds of lower-rated firms have increased and a number of large banks have tightened terms and standards for making business loans. Broadly similar developments have occurred in major foreign markets. Share prices in U.S. and global equity markets have remained volatile and major indexes have declined considerably further on balance over the intermeeting period. In foreign exchange markets, the trade-weighted value of the dollar declined substantially over the intermeeting period in relation to other major currencies; it was up slightly in terms of an index of the currencies of the developing countries of Latin America and Asia that are important trading partners of the United States.

Growth of M2 and M3 strengthened considerably in August and appeared to have picked up further in September, partly reflecting shifts of funds by households out of investments in equities and lower-rated corporate debt. For the year through September, both aggregates rose at rates well above the Committee's ranges for the year. Expansion of total domestic nonfinancial debt has moderated somewhat in recent months after a pickup earlier in the year.

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. In furtherance of these objectives, the Committee reaffirmed at its meeting on June 30–July 1 the ranges it had established in February for growth of M2 and M3 of 1 to 5 percent and 2 to 6 percent respectively, measured from the fourth quarter of 1997 to the fourth quarter of 1998. The range for growth of total domestic nonfinancial debt was maintained at 3 to 7 percent for the year. For 1999, the Committee agreed on a tentative basis to set the same ranges for growth of the monetary aggregates and debt, measured from the fourth quarter of 1998 to the fourth quarter of 1999. The behavior of the monetary aggregates will continue to be evaluated in the light of progress toward price level stability, movements in their velocities, and developments in the economy and financial markets.

In the implementation of policy for the immediate future, the Committee seeks conditions in reserve markets consistent with decreasing the federal funds rate to an average of around 5¼ percent. In the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments, a slightly higher federal funds rate might or a somewhat lower federal funds rate would be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consistent with some moderation in the growth in M2 and M3 over coming months.

Votes for this action: Messrs. Greenspan, McDonough, Ferguson, Gramlich, Hoenig, Jordan, Kelley, Meyer, Ms. Minehan, Mr. Poole, and Ms. Rivlin. Votes against this action: None.

## *Release of Information about FOMC Meetings*

At this meeting, the Committee reviewed its current practices relating to its policy announcements, meeting minutes, and directive wording. This discussion was part of an ongoing appraisal of the Committee's disclosure policies. The Committee took no action at this meeting but agreed that further review of some of these issues would be appropriate.

## *Financial Problems of a Large Hedge Fund*

The Committee discussed the limited role of the Federal Reserve Bank of New York in facilitating a private-sector resolution of the severe financial problems encountered in the portfolio managed by Long-Term Capital Management L.P. The size and nature of the positions of this fund were such that their sudden liquidation in already unsettled financial markets could well have induced further financial dislocations around the world that could have impaired the economies of many nations, including that of the United States. Against this background, the Federal Reserve Bank of New York had brought together key interested parties with the aim of increasing the probability of an orderly private-sector solution to the hedge fund's difficulties.

It was agreed that the next meeting of the Committee would be held on Tuesday, November 17, 1998.

The meeting on September 29 adjourned at 2:40 p.m.

## *Conference Call*

In a telephone conference held on October 15, 1998, the Committee members discussed recent economic and financial developments and their implications for monetary policy. Risk aversion in financial markets had increased further since the Committee's meeting in September, raising volatility and risk spreads even more, eroding market liquidity, and constraining borrowing and lending in a number of sectors of the financial markets. Although indications of any softening in the pace of the economic expansion across the country remained sparse, the widespread signs of deteriorating business confidence and evidence of less accommodative domestic financial conditions suggested that the downside risks to the expansion had continued to mount.

Against this background, a consensus emerged in favor of a ¼ percentage point reduction in the federal funds rate that would accompany a reduction in the discount rate that the Board of Governors was expected to approve at a meeting following this telephone conference. Some members were concerned that a policy move so soon after the late September action might be misread as indicative of a degree of concern about prospective developments in financial markets or the economic outlook that did not represent the Committee's thinking. However, the members generally concluded that the risk of adverse market reactions was worth taking and that the easing actions under consideration were more likely to help settle volatile financial markets and cushion the effects of more restrictive financial conditions on the ongoing expansion. At the conclusion of this discussion, the Chairman indicated that he would instruct the Federal Reserve Bank of New York to lower the intended federal funds rate by 25 basis points, consistent with the Committee's directive issued at the meeting on September 29, 1998.

Donald L. Kohn
Secretary

# Legal Developments

## *Final Rule—Amendment to Regulation A*

The Board of Governors is amending 12 C.F.R. Part 201, its Regulation A (Extensions of Credit by Federal Reserve Banks; Change in Discount Rate), to reflect its approval of a decrease in the basic discount rate at each Federal Reserve Bank. The Board acted on requests submitted by the Boards of Directors of the twelve Federal Reserve Banks.

The amendments to 12 C.F.R. Part 201 were effective on November 17, 1998. The rate changes for adjustment credit were effective on the dates specified in 12 C.F.R. 201.51.

### Part 201—Extensions of Credit by Federal Reserve Banks (Regulation A)

1. The authority citation for Part 201 continues to read as follows:

*Authority*: 12 U.S.C. 343 *et seq.*, 347a, 347b, 347c, 347d, 348 *et seq.*, 357, 374, 374a and 461.

2. Section 201.51 is revised to read as follows:

*Section 201.51 Adjustment credit for depository institutions.*

The rates for adjustment credit provided to depository institutions under section 201.3(a) are:

| Federal Reserve Bank | Rate | Effective |
|---|---|---|
| Boston | 4.5 | November 18, 1998 |
| New York | 4.5 | November 17, 1998 |
| Philadelphia | 4.5 | November 17, 1998 |
| Cleveland | 4.5 | November 19, 1998 |
| Richmond | 4.5 | November 18, 1998 |
| Atlanta | 4.5 | November 18, 1998 |
| Chicago | 4.5 | November 19, 1998 |
| St. Louis | 4.5 | November 19, 1998 |
| Minneapolis | 4.5 | November 19, 1998 |
| Kansas City | 4.5 | November 18, 1998 |
| Dallas | 4.5 | November 17, 1998 |
| San Francisco | 4.5 | November 17, 1998 |

## *Final Rule—Amendment to Regulation D*

The Board of Governors is amending 12 C.F.R. Part 204, its Regulation D (Reserve Requirements of Depository Institutions), to decrease the amount of transaction accounts subject to a reserve requirement ratio of three percent, as required by section 19(b)(2)(C) of the Federal Reserve Act, from $47.8 million to $46.5 million of net transaction accounts. This adjustment is known as the low reserve tranche adjustment. The Board is increasing from $4.7 million to $4.9 million the amount of reserveable liabilities of each depository institution that is subject to a reserve requirement of zero percent. This action is required by section 19(b)(11)(B) of the Federal Reserve Act, and the adjustment is known as the reserveable liabilities exemption adjustment. The Board is also increasing the deposit cutoff levels that are used in conjunction with the reserveable liabilities exemption to determine the frequency of deposit reporting from $78.9 million to $81.9 million for nonexempt depository institutions and from $50.7 million to $52.6 million for exempt institutions. (Nonexempt institutions are those with total reserveable liabilities exceeding the amount exempted from reserve requirements ($4.9 million) while exempt institutions are those with total reserveable liabilities not exceeding the amount exempted from reserve requirements.) Thus, beginning in September 1999, nonexempt institutions with total deposits of $81.9 million or more will be required to report weekly while nonexempt institutions with total deposits less than $81.9 million may report quarterly, in both cases on form FR 2900. Similarly, exempt institutions with total deposits of $52.6 million or more will be required to report quarterly on form FR 2910q while exempt institutions with total deposits less than $52.6 million may report annually on form FR 2910a.

Effective December 1, 1998, 12 C.F.R. Part 204 is amended as follows:

### Part 204—Reserve Requirements of Depository Institutions (Regulation D)

1. The authority citation for Part 204 continues to read as follows:

*Authority*: 12 U.S.C. 248(a), 248(c), 371a, 461, 601, 611, and 3105.

2. Section 204.9 is revised to read as follows:

*Section 204.9 Reserve requirement ratios.*

(a) *Reserve percentages*. The following reserve ratios are prescribed for all depository institutions, Edge and Agreement corporations, and United States branches and agencies of foreign banks:

(b) *Exemption from reserve requirements*. Each depository institution, Edge or agreement corporation, and U.S. branch or agency of a foreign bank is subject to a zero percent reserve requirement on an amount of its transaction accounts subject to the low reserve tranche in paragraph (a) of this section not in excess of $4.9 million determined in accordance with section 204.3(a)(3).

| Category | Reserve requirements[1] |
|---|---|
| *Net transaction accounts:* | |
| $0 to $46.5 million | 3 percent of amount |
| over $46.5 million | $1,395,000 plus 10 percent of amount over $46.5 million |
| Nonpersonal time deposits | 0 percent |
| Eurocurrency liabilities | 0 percent |

1. Before deducting the adjustment to be made by the paragraph (b) of this section.

### *FINAL RULE—AMENDMENT TO REGULATION Y*

The Board of Governors is amending 12 C.F.R. Part 225, Subpart G of its Regulation Y (Appraisal Standards for Federally Related Transactions), which exempts from the Board's appraisal requirements transactions involving the underwriting or dealing of mortgage-backed securities. This amendment permits bank holding company subsidiaries engaged in underwriting and dealing in securities (so-called section 20 subsidiaries) to underwrite and deal in mortgage-backed securities without demonstrating that the loans underlying the securities are supported by appraisals that meet the Board's appraisal requirements.

Effective December 28, 1998, 12 C.F.R. Part 225 is amended as follows:

### Part 225—Bank Holding Companies and Change in Bank Control (Regulation Y)

1. The authority citation for Part 225 continues to read as follows:

*Authority*: 12 U.S.C. 1817(j)(13), 1818, 1828o, 1831i, 1831p-1, 1843(c)(8), 1844(b), 1972(l), 3106, 3108, 3310, 3331-3351, 3907, and 3909.

2. In Subpart G, section 225.63 is amended by removing the word ''or'' at the end of paragraph (a)(11), by redesignating paragraph (a)(12) as paragraph (a)(13), and by adding a new paragraph (a)(12) to read as follows:

*Section 225.63*

*Appraisals required; transactions requiring a State certified or licensed appraiser.*

(a) * * *

(12) The transaction involves underwriting or dealing in mortgage-backed securities; or

* * * * *

### *FINAL RULE—AMENDMENT TO RULES REGARDING DELEGATION OF AUTHORITY*

The Board of Governors is amending 12 C.F.R. Part 265, its Rules Regarding Delegation of Authority, pursuant to sections 11(i) and (k) of the Federal Reserve Act (12 U.S.C. 248(i) and (k)). Specifically, the Board is revising and expanding the delegation of authority to the Director of Division of Consumer and Community Affairs to include: issuing interpretations under the Fair Credit Reporting Act, adjusting the dollar amount to determine coverage under the Home Ownership and Equity Protection Act, adjusting the depository institution exemption threshold under the Home Mortgage Disclosure Act, making certain determinations under the Community Reinvestment Act regulations, and holding public hearings on financial service issues in keeping with congressional mandates.

Effective December 28, 1998, 12 C.F.R. Part 265 is amended as follows:

### Part 265—Rules Regarding Delegation of Authority

1. The authority citation for Part 265 continues to read as follows:

*Authority*: 12 U.S.C. 248(i) and (k).

2. Section 265.9 is amended by revising paragraphs (a) introductory text, (a)(1), (c)(1), (c)(4), and (c)(5), and adding new paragraphs (a)(8) and (d) through (g). The revisions and additions read as follows:

* * * * *

*Section 265.9 Functions delegated to the Director of Division of Consumer and Community Affairs.*

* * * * *

(a) *Issuing examination manuals, forms, and other materials.* To issue examination or inspection manuals; report, agreement, and examination forms; examination procedures, guidelines, instructions, and other similar materials pursuant to: section 11(a) of the Federal Reserve Act (12 U.S.C. 248(a)); sections 108(b), 621(c), 704(b), 814(c), and 917(b) of the Consumer Credit Protection Act (15 U.S.C. 1607(b), 1681s(b), 1691c(b), 1692l(c) and 1693o(b)); section 305(c) of the Home Mortgage Disclosure Act (12 U.S.C. 2804(c)); section 18(f)(3) of the Federal Trade Commission Act (15 U.S.C. 57a(f)(3)); section 808(c) of the Civil Rights Act of 1968 (42 U.S.C. 3608(c)); section 270(b) of the Truth in Savings Act (12 U.S.C. 4309); and section 5 of the Bank Holding Company Act of 1956 (12 U.S.C. 1844(c)). The foregoing manuals, forms, and other materials are for use within the Federal Reserve System in the administration of enforcement responsibilities in connection with:

(1) Sections 1–200 and 501–921 of the Consumer Credit Protection Act (15 U.S.C. 1601-1693r), in regard to the Truth in Lending Act, the Consumer Leasing Act, the Equal Credit Opportunity Act, the Electronic Fund Transfer Act, the Fair Credit Re-

porting Act and the Fair Debt Collection Practices Act;

* * * * *

(8) Sections 261–274 of the Truth in Savings Act (12 U.S.C. 4301-4313).

* * * * *

(c) *Determining inconsistencies between state and federal laws.* * * *

(1) Sections 111, 171(a) and 186(a) of the Truth in Lending Act (15 U.S.C. 1610(a), 1666j(a), 1667e(a)) and section 226.28 of Regulation Z (12 C.F.R. Part 226) and section 213.7 of Regulation M (12 C.F.R. Part 213);

* * * * *

(4) Section 306(a) of the Home Mortgage Disclosure Act (12 U.S.C. 2805(a)) and section 203.3 of Regulation C (12 C.F.R. Part 203); and

(5) Section 273 of the Truth in Savings Act (12 U.S.C. 4312) and section 230.1 of Regulation DD (12 C.F.R. Part 230).

(d) *Interpreting the Fair Credit Reporting Act.* To issue interpretations pursuant to section 621(e) of the Fair Credit Reporting Act (15 U.S.C. 1681s(e));

(e) *Annual adjustments.* To adjust as required by law:

(1) The amount specified in section 103(aa)(1)(B)(ii) of the Truth in Lending Act and section 226.32(a)(1)(ii) of Regulation Z (12 C.F.R. Part 226), relating to mortgages bearing fees above a certain amount in accord with section 103(aa)(3) of that act (15 U.S.C. 1602(aa)); and

(2) The amount specified in section 309(b)(1) of the Home Mortgage Disclosure Act (12 U.S.C. 2808(b)(1)) and section 203.3(a)(1)(ii) of Regulation C (12 C.F.R. Part 203) relating to the asset threshold above which a depository institution must collect and report data.

(f) *Community Reinvestment Act determinations.* To make determinations, pursuant to section 804 of the Community Reinvestment Act (12 U.S.C. 2903), approving or disapproving:

(1) Strategic plans and any amendments thereto pursuant to section 228.27(g) and (h) of Regulation BB (12 C.F.R. Part 228); and

(2) Requests for designation as a wholesale or limited purpose bank or the revocation of such designation, pursuant to section 228.25(b) of Regulation BB (12 C.F.R. Part 228).

(g) *Public hearings.* To conduct hearings or other proceedings required by law, concerning consumer law or other matters within the responsibilities of the Division of Consumer and Community Affairs, in consultation with other interested divisions of the Board where appropriate.

* * * * *

## *Orders Issued Under Bank Holding Company Act*

### Orders Issued Under Section 3 of the Bank Holding Company Act

*CAB Holding, LLC*
*Wilmington, Delaware*

Order Approving Formation of a Bank Holding Company

CAB Holding, LLC ("CAB") has requested the Board's approval under section 3(a)(1) of the Bank Holding Company Act ("BHC Act") (12 U.S.C. § 1842(a)(1)) to become a bank holding company by acquiring all the voting shares of The Chinese American Bank, New York, New York ("Bank").

Notice of the application, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 12,813 (1998)). The time for filing comments has expired, and the Board has considered the application and all comments received in light of the factors set forth in section 3 of the BHC Act.

CAB is a newly formed nonoperating corporation that would become a bank holding company by the acquisition of Bank. Bank is the 122d largest commercial banking organization in New York, with deposits of $188 million, representing less than 1 percent of total deposits in commercial banking organizations in the state.[1] Based on all the facts of record, the Board has concluded that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of banking resources in any relevant banking market and that competitive considerations are consistent with approval.

Based on all the facts of record, including confidential supervisory information and other information concerning Bank and the sole shareholder of CAB, the Board concludes that considerations relating to the financial and managerial resources and future prospects of CAB and Bank, the convenience and needs of the communities to be served, and other supervisory factors that the Board is required to consider under section 3 of the BHC Act are consistent with approval of the proposal. In addition, the Board has received commitments that ensure the Board's access to information on the operations and activities of CAB and its affiliates, in order to permit the Board to determine and enforce compliance with the BHC Act and other federal banking laws.

Based on the foregoing and all the facts of record, the Board has determined that the application should be, and hereby is, approved. The Board's approval is expressly conditioned on compliance with all the commitments made by CAB, Bank, and CAB's sole shareholder in connection with the application. For purposes of this action, the com-

1. Deposit and market data are as of June 30, 1997. CFBanc Holdings, Inc.

mitments and conditions relied on by the Board in reaching this decision are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The proposal shall not be consummated before the fifteenth calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of New York, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 30, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Meyer, Ferguson, and Gramlich.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

*CFBanc Holdings, Inc.*
*Washington, D.C.*

*CFBanc Corporation*
*Washington, D.C.*

Order Approving Formation of Bank Holding Companies and Acquisition of a Bank

CFBanc Holdings, Inc. ("Holdings") and CFBanc Corporation ("Corporation") have requested the Board's approval under section 3(a)(1) of the Bank Holding Company Act ("BHC Act") (12 U.S.C. § 1842(a)(1)) to become bank holding companies by acquiring control of more than 25 percent of the voting shares of City First Bank of D.C., Washington, D.C. ("Bank"), a *de novo* national bank that will operate with a community development focus.[1] Corporation would acquire all of the voting shares of Bank, and Holdings, a nonstock, nonprofit corporation organized under the laws of the District of Columbia, would acquire approximately 48 percent of the voting shares of Corporation.[2]

Notice of the applications, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 29,996 (1998)). The time for filing comments has expired, and the Board has considered the applications and all comments received in light of the factors set forth in section 3 of the BHC Act.

Holdings and Corporation are nonoperating corporations formed for the purpose of acquiring control of Bank, a *de novo* institution.[3] The Board previously has noted that the establishment of a *de novo* bank enhances competition in the relevant banking market and is a positive consideration in an application under section 3 of the BHC Act.[4] Accordingly, the Board concludes that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of banking resources in any relevant banking market and that competitive considerations are consistent with approval. In light of all the facts of record, the Board also concludes that the financial and managerial resources and future prospects of Holdings, Corporation, and Bank, and the other supervisory factors that the Board is required to consider under section 3 of the BHC Act are consistent with approval of the proposal.

Bank intends to operate with a community development focus and to seek to increase the availability of credit, capital, and financial services in low- and moderate-income neighborhoods and to low- and moderate-income individuals in the District of Columbia. Bank intends to serve the identified credit and banking needs of low-and moderate-income areas in the District of Columbia by offering a range of commercial, real estate, and consumer loans, as well as checking, savings, and other traditional deposit products. In light of Bank's objectives and all other facts of

1. Bank would engage primarily in lending and other activities designed to promote the welfare of low- and moderate-income neighborhoods and individuals in the District of Columbia.

2. Georgetown University and the National Community Investment Fund ("NCIF"), a community development fund sponsored by Shorebank Corporation, Chicago, Illinois ("Shorebank"), propose to make investments in Corporation. Georgetown University, NCIF, and Shorebank have made a number of commitments, including commitments that the Board has relied on in previous cases, to limit the ability of these companies to exercise a controlling influence over Corporation or Bank. Based on these commitments, the fact that Holdings (which is a company independent of the other investors in Corporation) will control nearly 50 percent of the voting shares of Corporation, the purpose and nature of the activities of Bank, and all the other facts of record, the Board concludes that the facts do not warrant a conclusion at this time that Georgetown, NCIF, or Shorebank would control Corporation or Bank for purposes of the BHC Act. The Board expressly retains its authority to initiate a control proceeding if the facts presented at a later date indicate that any such entity in fact controls Corporation or Bank for purposes of the BHC Act.

3. The Federal National Mortgage Association ("Fannie Mae") proposes to acquire up to 4.9 percent of the voting shares and up to 9.9 percent of the total equity of Corporation. Section 18(s) of the Federal Deposit Insurance Act ("FDI Act") prohibits depository institutions from being an affiliate of, sponsored by, or accepting financial support directly or indirectly from Fannie Mae or any other Government-sponsored enterprise. 12 U.S.C. § 1828(s)(1). Section 18(s)(3), however, permits a Government-sponsored enterprise to provide financial assistance to a depository institution as permitted by the statutes governing the enterprise. *See id.* at § 1828(s)(3). In this case, Fannie Mae has not sponsored and would not be an affiliate of Bank. Fannie Mae also asserts that its purchase of Corporation stock is permissible under section 18(s)(3) of the FDI Act because the proposed investment is authorized under, and consistent with, the purposes of the Fannie Mae Charter Act. *See* 12 U.S.C. §§ 1716, 1723a(a); 62 *Federal Register* 68,060 (1997). Fannie Mae's purchase of a noncontrolling interest in Corporation would increase the resources of Bank available for residential mortgage financing and, thus, appears consistent with the purposes of the Charter Act. *See id.* at § 1716. The Board notes, moreover, that Bank intends to focus its lending efforts on low- and moderate-income areas, and that Federal law encourages Fannie Mae to assist primary lenders to make housing credit available in areas with concentrations of low-income and minority families. *See id.* at § 4565(a). In light of all the facts of record, and after consulting with the Federal Deposit Insurance Corporation, the Board concludes that Fannie Mae's proposed investment in Corporation is permitted under section 18(s)(3) of the FDI Act.

4. *See Wilson Bank Holding Company*, 82 *Federal Reserve Bulletin* 568 (1996).

record, the Board concludes that convenience and needs are consistent with approval of the proposal.

Based on the foregoing and all the facts of record, the Board has determined that the applications should be, and hereby are, approved. The Board's approval is expressly conditioned on compliance by all relevant parties with the commitments made in connection with the applications. For purposes of this action, the commitments and conditions relied on by the Board in reaching this decision are deemed to be conditions imposed in writing by the Board in connection with its findings and decision, and as such, may be enforced in proceedings under applicable law.

The transaction shall not be consummated before the fifteenth calendar day following the effective date of this order, or later than three months following the effective date of this order, unless such periods are extended for good cause by the Board or by the Federal Reserve Bank of Richmond, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 9, 1998.

Voting for this action: Vice Chair Rivlin and Governors Kelley, Meyer, Ferguson, and Gramlich. Absent and not voting: Chairman Greenspan.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

## *City Holding Company Charleston, West Virginia*

### Order Approving the Acquisition of a Bank Holding Company

City Holding Company ("Applicant"), a bank holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 3 of the BHC Act (12 U.S.C. § 1842) to acquire Horizon Bancorp, Inc., Beckley, West Virginia ("Horizon Bancorp"), and its wholly owned subsidiary banks, Bank of Raleigh, Beckley; First National Bank in Marlinton, Marlinton; Greenbrier Valley National Bank, Lewisburg; National Bank of Summers, Hinton; and The Twentieth Street Bank, Huntington, all in West Virginia.

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 54,712 (1998)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in section 3 of the BHC Act.

Applicant is the sixth largest depository institution in West Virginia, controlling approximately $916.9 million in deposits, representing approximately 4.8 percent of total deposits in depository institutions in the state ("state deposits").[1] Horizon Bancorp is the seventh largest depository institution in West Virginia, controlling approximately $831.8 million in deposits, representing 4.4 percent of state deposits. On consummation of the proposal, and accounting for the proposed divestitures, Applicant would be the fourth largest depository institution in West Virginia, controlling approximately $1.65 billion in deposits in the state, representing approximately 8.7 percent of state deposits.

*Competitive Considerations*

The BHC Act prohibits the Board from approving an application under section 3 of the BHC Act if the proposal would result in a monopoly or would be in furtherance of any attempt to monopolize the business of banking. The BHC Act also prohibits the Board from approving a proposed combination that would substantially lessen competition or tend to create a monopoly in any relevant banking market, unless the Board finds that the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[2]

Applicant and Horizon Bancorp compete directly in four banking markets in West Virginia: Beckley, Charleston, Greenbrier and Huntington.[3] The Board has carefully reviewed the competitive effects of the proposal in these banking markets in light of all the facts of record, including the number of competitors that would remain in the markets, the characteristics of the markets, and the projected increase in the concentration of total deposits in depository institutions in the markets ("market deposits")[4] as measured by the Herfindahl–Hirshman Index ("HHI") under the Department of Justice Merger Guidelines ("DOJ Guidelines").[5] Consummation of the proposal without divestitures would be consistent with the DOJ Guidelines and prior Board decisions in the Huntington and Charleston, banking markets.[6]

To mitigate the potential anticompetitive effects of the proposal in the Greenbrier banking market, Applicant has

1. State and market data are as of June 30, 1997, and are updated for merger activity as of October 23, 1998.

2. 12 U.S.C. § 1842(c).

3. The banking markets are described in Appendix A.

4. Market share data are based on calculations that include the deposits of thrift institutions at 50 percent. The Board previously has indicated that thrift institutions have become, or have the potential to become, significant competitors of commercial banks. *See, e.g., Midwest Financial Group*, 75 *Federal Reserve Bulletin* 386 (1989); *National City Corporation*, 70 *Federal Reserve Bulletin* 743 (1984). Thus, the Board has regularly included thrift deposits in the calculation of market share on a 50-percent weighted basis. *See, e.g., First Hawaiian Inc.*, 77 *Federal Reserve Bulletin* 52 (1991).

5. Under DOJ Guidelines, 49 *Federal Register* 26,823 (1984), a market in which the post-merger HHI is more than 1800 is considered highly concentrated. The Department of Justice has informed the Board that a bank merger or acquisition generally will not be challenged (in the absence of other factors indicating anticompetitive effects) unless the post-merger HHI is at least 1800 and the merger increases the HHI by more than 200 points. The Justice Department has stated that the higher than normal HHI thresholds for screening bank mergers for anticompetitive effects implicitly recognize the competitive effects of limited-purpose lenders and other nondepository financial institutions.

6. Market data for these banking markets after consummation of the proposal are described in Appendix B.

committed to divest one branch that controls approximately $37.8 million in deposits in the market.[7] With the proposed divestitures, the concentration levels in the Greenbrier banking market as measured by the HHI would be consistent with the DOJ Guidelines after consummation of the proposal. The HHI would increase by approximately 88 points to not more than 2529, and five competitors would remain in the Greenbrier banking market.

Applicant is the fifth largest commercial banking organization in the Beckley banking market, controlling deposits of $109.8 million, representing 8.8 percent of market deposits. Horizon Bancorp is the largest in the market, controlling $361.1 million of deposits, representing 29 percent of total market deposits.

Applicant has committed to divest one branch that controls approximately $57 million in deposits and that represents approximately 4.6 percent of the market deposits. On consummation of the proposal and divestiture, Applicant would be the largest depository institution in the market, controlling $413.9 million in deposits, representing approximately 33.3 percent of market deposits. The post-merger HHI would increase by not more than 208 points to not more than 2132.

Consummation of the transaction with the proposed divestiture would exceed the DOJ Guidelines, in the Beckley banking market. As the Board has indicated in previous cases, in a market in which the competitive effects of a proposal exceed the DOJ Guidelines, the Board will consider whether other factors tend to mitigate the competitive effects of the proposal. The number and strength of factors necessary to mitigate competitive effects depend on the level of market concentration and size of the increase in market concentration.[8]

The Beckley banking market has characteristics that make it attractive for entry when compared to similar counties in West Virginia.[9] For example, from 1994 to 1997, the increase in population in the Beckley banking market was three times larger than the increase in population in comparable counties. In addition, the average number of residents per branch and amount of deposits per branch in the banking market exceeded those statistics for comparable counties in West Virginia. The entry of a commercial bank *de novo* in 1995 also appears to confirm the attractiveness of the Beckley banking market.

The proposed divestiture of approximately 4.6 percent of market deposits to an out-of-market commercial banking organization would create another market entrant, and the number of depository institutions competing in the market would remain unchanged at nine competitors. These competitors include three large national and regional banking organizations that each have significant market shares.

The Department of Justice has conducted a detailed review of the proposal and has advised the Board that, in light of the proposed divestitures, consummation of the proposal would not likely have a significantly adverse effect on competition in any relevant banking market. The Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation and the West Virginia Commissioner of Banking also have been afforded an opportunity to comment and have not objected to consummation of the proposal.

After carefully reviewing all the facts of record and for the reasons discussed in this order and appendices, the Board concludes that consummation of the proposal would not likely result in any significantly adverse effects on competition or on the concentration of banking markets in the Beckley, Charleston, Greenbrier and Huntington banking markets where Applicant and Horizon Bancorp compete or in any other relevant banking market. Accordingly, based on all of the facts of record and subject to completion of the proposed divestitures, the Board has determined that the competitive factor is consistent with approval of the proposal.

### *Other Factors Under the BHC Act*

The BHC Act also requires the Board, in acting on an application, to consider the financial and managerial resources and future prospects of the companies and banks involved in a proposal, the convenience and needs of the community to be served, and certain other supervisory factors.[10]

The Board has carefully considered the financial and managerial resources and future prospects of Applicant and Horizon Bancorp, and their respective subsidiary banks, and other supervisory factors in light of all the facts of record. As part of this consideration, the Board has reviewed relevant reports of examination and other supervisory information prepared by the Reserve Banks and other

7. With respect to each divestiture, Applicant has committed to execute a sales agreement for the proposed divestiture with a new market entrant prior to consummation of the proposal, and to complete the divestiture within 180 days of consummation. Applicant also has committed that, in the event it is unsuccessful in completing the divestiture within 180 days of consummation, it will transfer the unsold branch to an independent trustee that is acceptable to the Board and will instruct the trustee to sell the branch promptly to one or more alternative purchasers acceptable to the Board. *See BankAmerica Corporation*, 78 *Federal Reserve Bulletin* 338 (1992); *United New Mexico Financial Corporation*, 77 *Federal Reserve Bulletin* 484 (1991). In the Beckley banking market, Applicant has committed that the purchaser of the divested branch of a one-branch bank would be given the option of retaining the name of that bank.

8. *See, e.g., First Union Corporation*, 84 *Federal Reserve Bulletin* 489 (1998); *NationsBank Corporation*, 84 *Federal Reserve Bulletin* 129 (1998).

9. Beckley is not a Metropolitan Statistical Area ("MSA"). Accordingly, the market characteristics of the Beckley banking market were compared with other non-MSA counties in West Virginia.

10. A commenter has asserted that First National Bank in Marlinton ("Bank") is the subject of several lawsuits as a result of its business relationships with local public agencies. There have been no adjudications of wrongdoing by Bank in these proceedings, and each matter is before a forum that can provide adequate remedies if the allegations of wrongdoing can be sustained. Commenter also alleges, without providing any supporting information, that Bank is under investigation for the misuse of federal and state grants. In reviewing this case, the Board has contacted and considered the views of federal banking agencies and the Department of Justice.

federal agencies. The Board notes that the bank holding companies and their subsidiary banks currently are well capitalized and are expected to remain so after consummation of the proposal.

The Board also has considered other aspects of the financial condition and resources of the two organizations, the structure of the proposed transaction, and the managerial resources of each of the entities and the combined organization. Based on these and other facts of record, the Board concludes that considerations relating to the financial and managerial resources and future prospects of Applicant, Horizon Bancorp, and their respective subsidiaries are consistent with approval of the proposal, as are the other supervisory factors that the Board must consider under section 3 of the BHC Act.

The Board has carefully considered the effect of the proposed acquisition on the convenience and needs of the community to be served in light of all the facts of record. All of Applicant's and Horizon's subsidiary banks have received "outstanding" or "satisfactory" ratings from their appropriate federal supervisors at the most recent examinations of their performance under the Community Reinvestment Act ("CRA") (12 U.S.C. § 2901 *et seq.*). Based on all the facts of record, including the CRA performance records of the subsidiary banks of Applicant and Horizon Bancorp, the Board concludes that convenience and needs considerations are consistent with approval of the proposal.

*Conclusion*

Based on the foregoing, and in light of all the facts of record, the Board has determined that the application should be, and hereby is, approved. Approval of the application is specifically conditioned on compliance by Applicant with all the commitments made in connection with the proposal and with the conditions stated or referred to in this order, including Applicant's divestiture commitments. For purposes of this transaction, the commitments and conditions referred to in this order shall be deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The acquisition shall not be consummated before the fifteenth calendar day after the effective date of this order, and the proposal shall not be consummated later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of Richmond, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 30, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Meyer, Ferguson, and Gramlich.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

*Appendix A*

The Beckley, West Virginia, banking market is defined as the Beckley Ranally Metro Area ("RMA") and includes the town of Whitesville in Boone County, the remainder of Raleigh County, Summers County, and the portion of Fayette County that excludes the towns of Montgomery and Smithers.

The Charleston, West Virginia, banking market is defined as the Charleston, West Virginia, RMA and includes the remainders of Kanawha and Putman Counties, and the towns of Montgomery and Smithers in Fayette County.

The Greenbrier, West Virginia, banking market is defined as Greenbrier County, West Virginia.

The Huntington banking market is defined as Huntington, West Virginia-Kentucky-Ohio RMA and the remainder of Boyd County, Kentucky; Lawrence County, Ohio; and Cabell and Wayne Counties, West Virginia.

*Appendix B*

In the Charleston, West Virginia, banking market applicant would control 13.8 percent of market deposits and would remain the second largest depository institution in the market after consummation of the proposal. The HHI would increase by 34 points to 1841.

In the Huntington, West Virginia, banking market applicant would control 9.3 percent of the market deposits and would become the second largest depository institution in the market after consummation of the proposal. The HHI would increase by 25 points to 636.

## *Peoples Heritage Financial Group, Inc.*
## *Portland, Maine*

Order Approving Acquisition of a Bank Holding Company

Peoples Heritage Financial Group, Inc., Portland, Maine ("Peoples"), a bank holding company within the meaning of the Bank Holding Company Act ("BHC Act"), and its wholly owned subsidiary, Peoples Heritage Merger Corp., Portland, Maine ("Peoples Merger"), have requested the Board's approval under section 3 of the BHC Act (12 U.S.C. § 1842) to merge with SIS Bancorp, Inc., Springfield, Massachusetts ("SIS"), and to acquire the subsidiary banks of SIS, Springfield Institution for Savings, Springfield, Massachusetts ("SIS Bank"), and Glastonbury Bank & Trust Company, Glastonbury, Connecticut ("Glastonbury Bank").[1]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 54,140 (1998)). The time for filing comments has expired, and the Board has considered the

1. Peoples also has requested Board approval to hold and exercise options to acquire up to 19.9 percent of the voting shares of SIS, if certain events occur. The options would not be exercised if the merger is consummated.

proposal and all comments received in light of the factors set forth in section 3 of the BHC Act.

Peoples, with total consolidated assets of approximately $9.8 billion, operates depository institutions in Maine, New Hampshire, and Massachusetts.[2] Peoples is the tenth largest depository institution in Massachusetts, controlling deposits of approximately $1 billion in the state, representing less than 1 percent of total deposits in insured depository institutions in the state ("state deposits"). SIS, with total consolidated assets of approximately $1.8 billion, operates depository institutions in Massachusetts and Connecticut. SIS is the ninth largest depository institution in Massachusetts, controlling deposits of approximately $1.1 billion in that state, representing less than 1 percent of state deposits. On consummation of the proposal, Peoples would be the eighth largest depository organization in Massachusetts, controlling deposits of $2.1 billion, representing 1.8 percent of state deposits.

*Interstate Analysis*

Section 3(d) of the BHC Act allows the Board to approve an application by a bank holding company to acquire control of a bank located in a state other than the home state of the bank holding company if certain conditions are met.[3] For purposes of the BHC Act, the home state of Peoples is Maine, and SIS controls banks in Massachusetts and Connecticut.[4] All the conditions for an interstate acquisition enumerated in section 3(d) are met in this case.[5] In view of all the facts of record, the Board is permitted to approve the proposal under section 3(d) of the BHC Act.

*Competitive, Financial and Managerial Considerations*

Peoples and SIS do not compete in any banking market. Based on all the facts of record, the Board concludes that consummation of the proposal would not result in a monopoly or have a significantly adverse effect on competition in any relevant banking market.

The BHC Act also requires the Board, in acting on an application, to consider the financial and managerial resources and future prospects of the companies and banks involved, and other supervisory factors. The Board has reviewed these factors in light of the record, including supervisory reports of examination assessing the financial and managerial resources of the organizations and financial information provided by Peoples. Based on all the facts of record, the Board concludes that the financial and managerial resources and future prospects of Peoples, SIS, and their respective subsidiary banks are consistent with approval, as are other supervisory factors the Board must consider under section 3 of the BHC Act.

*Convenience and Needs Considerations*

In acting on a proposal under section 3 of the BHC Act, the Board is required to consider the effect of the proposal on the convenience and needs of the community to be served. The Board has carefully reviewed the effect of the proposal on the convenience and needs of the communities to be served in light of all the facts of record, including comments submitted on the proposal.[6]

The Board has long held that consideration of the convenience and needs factor includes a review of the records of the relevant depository institutions under the Community Reinvestment Act (12 U.S.C. § 2901 *et seq.*) ("CRA"). As provided in the CRA, the Board has evaluated this factor in light of examinations by the primary federal supervisors of the CRA performance records of the relevant institutions. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed on-site evaluation of the institution's overall record of performance under the CRA by its primary federal supervisor.[7] All the insured depository institutions controlled by Peoples received "outstanding" or "satisfactory" CRA performance ratings in their most recent CRA examination by their primary federal supervisor: Family Bank, FSB, Haverhill, Massachusetts ("Family FSB"), received an "outstanding" rating from the Office of Thrift Supervision ("OTS"), as of July 28, 1997; Peoples Heritage Savings Bank, Portland, Maine, received an "outstanding" rating from the Federal Deposit Insurance Corporation ("FDIC"), as of April 8, 1996; and Bank of New Hampshire received a "satisfactory" rating from the FDIC, as of January 17, 1995.

2. Asset and deposit data are as of June 30, 1998, unless otherwise noted.

3. *See* 12 U.S.C. § 1842(d).

4. A bank holding company's home state is that state in which the operation of the bank holding company's banking subsidiaries were principally conducted on July 1, 1966, or the date on which the company became a bank holding company, whichever is later. 12 U.S.C. § 1841(o)(4)(C).

5. *See* 12 U.S.C. §§ 1842(d)(1)(A) and (B) and 1842(d)(2)(A) and (B). Peoples is adequately capitalized and adequately managed, as defined in the BHC Act, and the subsidiary banks of SIS have been in existence and operated for the minimum periods of time necessary to satisfy age requirements established by applicable state law. *See* Mass. Gen. Laws Ann. ch. 167A, § 2 (West 1998) (three years); Conn. Gen. Stat. Ann. § 36a-412 (West 1998) (five years). Peoples also would not exceed applicable state law deposit limitations as calculated under state law. On consummation of the proposal, Peoples would control less than 10 percent of the total amount of deposits in insured depository institutions in the United States. All other requirements of section 3(d) of the BHC Act also would be met on consummation of the proposal.

6. The Board received a comment letter signed by several community groups ("commenters") which expressed concern that the acquisition of SIS by Peoples would adversely affect the positive impact SIS has had on the Springfield, Massachusetts, community. Commenters favorably noted some current programs of Peoples, but expressed concern about the record of Peoples in meeting the residential lending needs of low- and moderate-income and minority borrowers.

7. The Statement of the Federal Financial Supervisory Agencies Regarding the Community Reinvestment Act provides that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record and that reports of these examinations will be given great weight in the applications process. 54 *Federal Register* 13,742 and 13,745 (1989).

In reviewing this case, the Board has paid particular attention to the record of performance of Family FSB in helping to meet the convenience and needs of the community because Peoples proposes to merge SIS Bank into Family FSB.[8] In its most recent CRA examination of Family FSB, examiners noted that Family FSB offered a full range of residential, commercial, and consumer loans. Examiners commented favorably on the institution's no-fee checking accounts, telephone banking services, and an electronic banking card program for social security and public assistance income distribution. Examiners also noted that Family FSB's services were readily accessible and tailored to the convenience of all segments of its assessment area. Examiners stated that all of the institution's branches offered automated teller machines ("ATMs") and 16 of the institution's 21 full-service retail offices offered extended hours at drive-through facilities. Peoples also indicates that it maintains full-service branches operated by students at local high schools to provide business training opportunities for the students.

Examiners stated that, according to data reported for 1995 pursuant to the Home Mortgage Disclosure Act (12 U.S.C. § 2801 *et seq.*) ("HMDA"), Family FSB originated a substantially higher percentage of residential loans to low- and moderate-income ("LMI") borrowers than the aggregate average percentage for all HMDA lenders in the area. Based on 1995 HMDA data, Family FSB made more than 400 residential loans, totaling more than $25 million, to LMI borrowers. Examiners particularly noted that the institution met many low-income lending needs through special credit programs with flexible debt-to-income ratios, down payment assistance, government guarantees, and mortgage insurance. Examiners stated that Family FSB significantly enhanced efforts to promote home ownership for low-income borrowers through the institution's Community Outreach Program and its participation in first-time home buyer and down payment assistance programs offered by community groups, government agencies, and secondary market sources.[9] Examiners also stated that Family FSB's residential loan originations were substantially concentrated in its assessment area from January 1, 1995, to July 31, 1997. Examiners noted that Family FSB participated in affordable housing programs sponsored by government agencies such as the Massachusetts Housing Finance Authority ("MHFA"), the Federal Housing Administration ("FHA"), and the Department of Veterans Affairs ("VA"). Peoples states that the majority of the mortgage loans originated in 1997 by Family FSB were to borrowers earning less than the median income of the assessment area and 36 percent of mortgage loans were to borrowers earning less than 80 percent of the median income.

Examiners noted that Family FSB made almost 500 loans, totaling more than $84 million, to small businesses in its assessment area from January 1, 1996, to July 31, 1997. Examiners noted that these loans represented more than 60 percent of Family FSB's commercial loans and more than 90 percent of the institution's small business loans. Moreover, examiners stated that Family FSB made 80 small business loans, totaling more than $12 million, in LMI census tracts. Peoples states that, in cooperation with the North Quabbin Community Advisory Board, Family FSB made loans totaling more than $250,000 pursuant to a $1 million commitment to a small business loan pool since the pool was established in June 1998. Peoples also states that Family FSB has been designated a "Preferred Lender" by the Small Business Administration.

Examiners stated that, from January 1, 1996, to July 31, 1997, Family FSB made 28 loans, totaling more than $5 million, to organizations in its assessment area that supported affordable housing, economic and community development, and neighborhood stabilization. Examiners also noted that, of these loans, almost 40 percent by number and more than 30 percent by dollar amount were made in LMI census tracts. Examiners favorably commented on the more than $2 million in investments in community development organizations made by Family FSB during the examination period, including investments in low-income housing limited partnerships, small business loan funds, and programs for housing rehabilitation. Peoples states that, in 1996 and 1997, Family FSB made grants and donations of more than $200,000 to organizations such as The United Way, Merrimack Valley Housing Partnership, Worcester County Food Bank, Worcester East Side CDC, and the North County Land Trust. Examiners also noted that the institution's management and officers contributed financial expertise to a significant number of community organizations and programs, including affordable housing development and rehabilitation corporations, credit and home ownership counseling agencies, job training and placement services for low-income individuals, and financial intermediaries that lend to small businesses in LMI areas.

SIS Bank received an "outstanding" rating from the FDIC at its most recent CRA examination, as of September 22, 1997.[10] Glastonbury Bank received a "satisfacto-

8. Immediately after consummation of the merger of SIS into Peoples Merger, Peoples anticipates that SIS Bank would merge with and into Family FSB. The merger of SIS Bank into Family FSB is subject to the prior approval of the OTS under the Bank Merger Act.

9. Peoples states that, as part of its Community Outreach Program, Family FSB offers mortgages with special terms for LMI borrowers, including an adjustable rate mortgage with discounted pricing based on the borrower's income level compared with the median income of the area, with the most favorable pricing reserved for borrowers earning less than 50 percent of the area's median income level; permitting up to 2 percent of the required 5 percent down payment to come from a gift, grant, or Family FSB unsecured loan with no interest for applicants earning less than 60 percent of the area's median income; and flexible requirements for debt-to-income ratios. Peoples also states that more than $6 million in mortgage loans have been made through its Community Outreach Program since the program began in late 1994.

10. For purposes of CRA, the assessment area of SIS Bank consists of the Springfield, Massachusetts, Metropolitan Statistical Area ("MSA") and some contiguous towns in the same census tracts as towns located in the Springfield MSA.

ry" rating from the FDIC at its most recent CRA examination, as of August 26, 1996. Examiners noted that, based on 1995 HMDA data, SIS Bank was the market leader in its assessment area with 8.7 percent by number and 11 percent by dollar amount of the HMDA loans reported in the assessment area. Examiners also noted that, based on 1996 HDMA data, SIS Bank made almost 50 HMDA loans, totaling more than $2.7 million, in LMI census tracts and 250 HMDA loans, totaling more than $14 million, to LMI borrowers. Examiners stated that, during 1996, SIS Bank made more than 80 home equity loans, totaling more than $2 million, in LMI census tracts and more than 470 home equity loans, totaling more than $12 million, to LMI borrowers. Examiners commented favorably on the innovative and flexible lending programs offered by SIS Bank, many of which were focused on first-time home buyers in LMI areas. Examiners noted that, in 1996, SIS Bank made approximately $1.5 million in mortgage loans under its Soft Seconds Program which provides LMI borrowers with two mortgages; the second mortgage is subsidized with public funds and provides for significantly reduced payments during the first nine years of the loan.

Examiners also stated that, during 1996, SIS Bank made 38 mortgage loans, totaling more than $2.7 million, under a program sponsored by the MHFA to assist first-time home buyers that includes a 30-year fixed rate mortgage at below market interest rates with low down payment requirements and flexible underwriting guidelines. Examiners also noted that, in 1996, SIS Bank made 21 mortgage loans, totaling more than $2 million, in a VA mortgage program that provides 100 percent financing to eligible veterans.

Examiners stated that, in 1996, SIS Bank made more than 260 commercial loans, totaling more than $10 million, in amounts equal to or less than $100,000, representing more than 60 percent by number of the commercial loans made by SIS Bank during the period. Examiners also noted that 65 percent of commercial loans made by SIS Bank with original balances of $1 million or less during the period were originated to businesses with gross annual revenues of $1 million or less.

Examiners stated that the number and distribution of SIS Bank's branches provided reasonable access to the bank's services by everyone living in the bank's assessment area. Examiners noted that most of the bank's branches offered extended operating hours. Examiners stated that SIS Bank employed numerous bilingual individuals who could provide translation services. Examiners also noted that SIS Bank offered several free deposit products, such as basic checking, statement savings, and unlimited usage of proprietary and nonproprietary ATMs.

Peoples states that, after consummation of the proposed merger, the combined organization would continue to offer many of the consumer products and services offered by SIS, including a checking account with no minimum balance, no monthly service charges, and no transaction limits; home equity loan and credit lines; relationship checking packages, which provide enhanced deposit rates and reduced fee structures; certificates of deposit with flexible interest rate terms; and telephone banking services. Peoples also states that no branch closings or consolidations are anticipated in connection with the proposed merger.

The Board has carefully considered the lending records of Family FSB and SIS Bank in light of comments on the 1996 and 1997 data reported by the institutions pursuant to the HMDA. The data for 1996 and 1997 generally show that Family FSB and SIS Bank have assisted in meeting the credit needs of the communities they served with respect to HMDA-related loans, including the credit needs of minority and LMI borrowers and borrowers in LMI census tracts.

The Board has carefully considered the data in light of other information, including examination reports that provide an on-site evaluation of the compliance by Family FSB and SIS Bank with the fair lending laws and the overall lending and community development activities of the banks. The examinations revealed no evidence of prohibited or illegal credit practices at Family FSB and SIS Bank, and the institutions were in compliance with the substantive provisions of antidiscrimination laws and regulations, including the Equal Credit Opportunity Act, the Fair Housing Act, and the HMDA. Peoples states that Family FSB conducts annual CRA and fair lending training for all employees.

The Board has carefully considered all the facts of record, including the comments received, responses to those comments, and the CRA performance record of Family FSB and SIS Bank, including relevant reports of examination and other supervisory information. Based on a review of the entire record and for the reasons discussed above, the Board concludes that convenience and needs considerations, including the CRA records of performance of the institutions involved, are consistent with approval of the proposal.

*Conclusion*

Based on all the facts of record, and for the reasons discussed above, the Board has determined that the application should be, and hereby is, approved. The Board's decision is specifically conditioned on compliance with all the commitments made in the application. The commitments relied on in reaching this decision shall be deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The acquisition of SIS may not be consummated before the fifteenth calendar day after the effective date of this order, and the proposal may not be consummated later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of Boston, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 4, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Ferguson, and Gramlich. Absent and not voting: Governor Meyer.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

*Popular, Inc.*
*Hato Rey, Puerto Rico*

*Banco Popular de Puerto Rico*
*Hato Rey, Puerto Rico*

*Popular Transition Bank*
*Hato Rey, Puerto Rico*

*Banco Popular, New York*
*New York, New York*

Order Approving the Acquisition of Banks, Merger of Banks, Establishment of Branches and an Agency, and Membership in the Federal Reserve System

Popular, Inc., Hato Rey, Puerto Rico ("Popular"), a bank holding company within the meaning of the Bank Holding Company Act ("BHC Act"), and its subsidiaries propose to reorganize their holdings in a manner that requires the Board's approval under section 3 of the BHC Act (12 U.S.C. § 1842) and section 18(c) of the Federal Deposit Insurance Act (12 U.S.C. § 1828(c)) ("Bank Merger Act"). As part of this proposal, Popular would reorganize its banking operations under two *de novo* banks, one organized under the laws of Puerto Rico and the other organized under the laws of New York, that propose to become members of the Federal Reserve System pursuant to sections 9 and 19(h) of the Federal Reserve Act ("FRA") (12 U.S.C. §§ 321 and 466). The Puerto Rican *de novo* bank, Popular Transition Bank, Hato Rey, Puerto Rico ("New Banco Popular"), also proposes to operate a branch and agency in the United States pursuant to section 7(d) of the International Banking Act ("IBA") (12 U.S.C. § 3105(d)),[1] and to establish three agreement corporations pursuant to section 25 of the FRA.[2]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 52,273 (1998)).[3] As required by the Bank Merger Act, reports on the competitive effects of the merger were requested from the U.S. Attorney General, the Office of the Comptroller of the Currency ("OCC"), and the Federal Deposit Insurance Corporation. The time for filing comments has expired, and the Board has considered the applications and notices and all comments received in light of the factors set forth in the Bank Merger Act, the BHC Act, the FRA, and the IBA.

Popular, the top-tier parent holding company of Banco Popular de Puerto Rico, Hato Rey, Puerto Rico ("Banco Popular"), has total consolidated assets of approximately $20 billion and total consolidated deposits of approximately $12 billion.[4] Banco Popular, with total consolidated assets of approximately $16 billion, is the largest commercial banking organization in Puerto Rico, controlling total consolidated deposits of approximately $8 billion, representing approximately 35 percent of total deposits in Puerto Rico.[5] Banco Popular has approximately 200 branches in Puerto Rico, as well as branches in the U.S. Virgin Islands and the British Virgin Islands. Banco Popular's U.S. banking operations include branches in New York State and an agency in Chicago, Illinois (the "Chicago Agency"). In addition to Banco Popular, Popular controls nine insured depository institutions in California, Florida, Illinois, New Jersey, and Texas.

As part of the reorganization, Popular proposes to merge certain of its current U.S. banking operations into a single state-chartered bank, Banco Popular, New York ("Banco Popular-New York"). Popular also proposes to transfer Banco Popular's current operations in Puerto Rico, the U.S. Virgin Islands and the British Virgin Islands, and a proposed state-licensed branch in New York, New York (the "New NY Branch"), and the Chicago Agency (collectively, the "Purchased Operations"), to New Banco Popular. Both Banco Popular-New York and New Banco Popular have requested approval to become members of the Federal Reserve System.[6]

*Interstate Analysis*

Under the proposal, Banco Popular-New York would operate branches in its home state of New York and in California, Florida, Illinois, and New Jersey at locations where the bank's predecessors currently operate branches.[7] Under section 9 of the FRA and section 44 of the Federal Deposit Insurance Act ("FDI Act"), a state member bank may acquire and operate branches outside the bank's home state provided certain conditions are met.[8] None of the home

1. For purposes of the application under the IBA, New Banco Popular is considered a "foreign bank" as defined in section 1(b)(7) of the IBA. *See* 12 U.S.C. § 3101(7).

2. The applications filed with the Board in connection with the proposed reorganization are listed in the Appendix.

3. Notices of the various applications submitted in connection with the proposal were also published in newspapers of general circulation in the relevant communities.

4. Asset and deposit data are as of June 30, 1998, unless otherwise noted. In September 1998, Popular received approval under the BHC Act to acquire First State Bank of Southern California, Sante Fe Springs, California, and Bronson-Gore Bancorp, and thereby acquire its subsidiary banks, Bronson-Gore Bank, Prospect Heights, Illinois; Irving Bank, Chicago, Illinois; and Water Tower Bank, Chicago, Illinois. Popular consummated these acquisitions on October 31, 1998.

5. Banco Popular deposit data and ranking are as of June 30, 1997.

6. New Banco Popular proposes to continue to operate branches in Puerto Rico at locations where Banco Popular currently operates branches.

7. The following insured depository institutions would be merged into Banco Popular-New York: Banco Popular, N.A. (California), City of Commerce, California; First State Bank of Southern California, Santa Fe Springs, California; Banco Popular, N.A. (Florida), Sanford, Florida; Banco Popular, Illinois, Irving Bank, and Water Tower Bank, all of Chicago, Illinois; and Bronson-Gore Bank, Prospect Heights, Illinois. In addition, Popular proposes to merge Banco Popular, F.S.B., Newark, New Jersey ("BP-FSB"), into Banco Popular-New York through a series of steps that require approval under section 5(d)(3) of the FDI Act (12 U.S.C. § 1815(d)(3)). All the factors under section 5(d)(3) of the FDI Act are met in this proposal.

8. *See* 12 U.S.C. §§ 321 and 1831u. Section 9 of the FRA governs the locations where a bank that is or becomes a state member bank

states of the depository institutions involved in the proposed depository institution mergers have enacted laws that prohibit the proposed mergers.[9] In addition, the Board has determined that each bank involved in the proposal would be adequately capitalized and adequately managed on consummation of the transaction, and that all other applicable conditions of section 9 of the FRA and section 44 of the FDI Act are met by this proposal.[10] Popular has notified the relevant state authorities in New York, California, Florida, Illinois, and New Jersey of its proposal to consolidate banking operations and provided a copy of its Bank Merger Act application to all the relevant state agencies. Representatives from all the states involved in the proposal have indicated that this transaction would comply with their state laws on interstate bank mergers. In light of the foregoing, it appears that the proposal complies with the interstate banking requirements of section 9 of the FRA and section 44 of the FDI Act.[11]

Under section 5(a)(7) of the IBA, a foreign bank, with the approval of the Board, may establish an agency outside its home state, provided the establishment and operation of the agency is expressly permitted by the state in which the agency is to be established.[12] For purposes of the IBA, New Banco Popular's home state would be New York, and New Banco Popular proposes to operate the Chicago Agency as an agency of the bank. After a review of section 5 of the IBA and the relevant state law of Illinois, the Board has determined that New Banco Popular may operate the Chicago Agency at this location, subject to the condition that New Banco Popular also receive the approval of the OCC.

### *Other Factors*

In reviewing this proposal under the FRA, the Bank Merger Act and section 3 of the BHC Act, the Board has considered the financial and managerial resources and future prospects of the companies and banks involved, the convenience and needs of the communities to be served, and certain supervisory factors. The Board has reviewed these factors in light of the facts of record, including supervisory reports of examination assessing the financial and managerial resources of the organizations and financial information provided by Popular. The Board notes that the resulting institutions would be well-capitalized on consummation of the proposal. Based on all the facts of record, the Board concludes that the financial and managerial resources and future prospects of the holding companies and their subsidiaries are consistent with approval, as are the other supervisory factors the Board must consider under the FRA, the Bank Merger Act and section 3 of the BHC Act.

In considering the convenience and needs factor, the Board reviewed the records of the relevant depository institutions under the Community Reinvestment Act ("CRA").[13] As provided in the CRA, the Board has evaluated this factor in light of examinations by the primary federal supervisors of the relevant institutions. All the insured depository institutions controlled by Popular received "outstanding" or "satisfactory" CRA performance ratings in their most recent CRA examinations by their primary federal supervisors. Based on a review of the entire record, the Board concludes that convenience and needs considerations, including the CRA performance records of the institutions involved, are consistent with approval of the proposal.

The Board also considered the competitive effects of the proposal as required by the Bank Merger Act and section 3 of the BHC Act. Based on all the facts of record, including the fact that this transaction is a corporate reorganization, the Board concludes that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of banking resources in any relevant banking market. Accordingly, the Board concludes that competitive considerations are consistent with approval.

In addition, the Board has considered the factors it is required to evaluate under the IBA for New Banco Popular to operate the Chicago Agency and the New NY Branch. New Banco Popular would engage directly in the business of banking outside the United States through its banking operations in Puerto Rico and elsewhere. Popular has provided the Board with the information necessary to assess the application through submissions that address the relevant issues. In addition, New Banco Popular would be subject to comprehensive consolidated supervision by the appropriate federal and Puerto Rican bank supervisory agencies. The Board also has determined that the other standards required by the IBA are met in this case and that all factors under section 25 of the FRA are consistent with approval.

### *Conclusion*

Based on the foregoing, including the commitments made to the Board by Popular and its subsidiaries in connection with these applications and notices, and in light of all the facts of record, the Board has determined that these applications and notices should be, and hereby are, approved. The Board's approval is specifically conditioned on compliance by the applicants with all commitments made in connection with these applications and notices and the conditions discussed in this order.

may establish and operate branches. That section incorporates the restrictions contained in section 44 of the FDI Act. Section 44 also governs branches that may be acquired by any state member bank in an interstate merger transaction.

9. *See* Cal. Fin. Code § 3824 (West 1998); Fla. Stat. Ann. § 658.2953 (West 1998); 205 Ill. Comp. Stat. Ann. 5/21.1 (West 1998); and N.J. Stat. Ann. § 17:9A-133.1 (West 1998).

10. *See* 12 U.S.C. § 1831u(b).

11. All the conditions for an interstate acquisition enumerated in section 3(d) of the BHC Act also would be met in this case.

12. *See* 12 U.S.C. § 3103(a)(7)

13. 12 U.S.C. § 2901 *et seq.*

The acquisition and merger of Popular's subsidiary banks shall not be consummated before the fifteenth calendar day following the effective date of this order or later than three months following the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of New York, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 16, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Meyer, Ferguson, and Gramlich.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

*Appendix*

Applications and Notices Submitted to the Board in connection with the Reorganization of Popular, Inc.

(1) Membership of New Banco Popular in the Federal Reserve System under section 19(h) of the Federal Reserve Act (12 U.S.C. § 466).
(2) Membership of Banco Popular-New York in the Federal Reserve System under section 9 of the Federal Reserve Act (12 U.S.C. § 321).
(3) Acquisition by Popular and its intermediate holding companies of control of Banco Popular-New York under section 3(a)(3) of the Bank Holding Company Act (12 U.S.C. § 1842(a)(3)).
(4) Acquisition by Popular and its intermediate holding companies of control of New Banco Popular under section 3(a)(3) of the Bank Holding Company Act (12 U.S.C. § 1842(a)(3)).
(5) Retention of ownership by Popular and its intermediate holding companies, under section 3(a)(3) of the Bank Holding Company Act, of Banco Popular, F.S.B., after its conversion from a federal savings association to a national banking association (12 U.S.C. § 1842(a)(3)).
(6) Acquisition by Banco Popular North America, Inc. of control of Banco Popular, N.A. (Texas) under section 3(a)(3) of the Bank Holding Company Act (12 U.S.C. § 1842(a)(3)).
(7) Acquisition by New Banco Popular of the Purchased Operations from Banco Popular under the Bank Merger Act (12 U.S.C. § 1828(c)).
(8) Merger of Banco Popular (with only New York operations) with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(9) Merger of Banco Popular, F.S.B. (after its conversion to a national banking association) with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(10) Merger of Banco Popular, Illinois, with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(11) Merger of Banco Popular, N.A. (California) with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(12) Merger of Banco Popular, N.A. (Florida) with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(13) Merger of First State Bank of Southern California with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(14) Merger of Bronson-Gore Bank with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(15) Merger of Irving Bank with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(16) Establishment of branches at the locations of the predecessor institutions of New Banco Popular and Banco Popular-New York under section 9 of the Federal Reserve Act (12 U.S.C. § 321).
(17) Merger of Water Tower Bank with and into Banco Popular-New York under the Bank Merger Act (12 U.S.C. § 1828(c)).
(18) Establishment by New Banco Popular of an agency in Chicago, Illinois, under section 7(d) of the International Banking Act (12 U.S.C. § 3105(d)).
(19) Establishment by New Banco Popular of a branch in New York, New York, under section 7(d) of the International Banking Act (12 U.S.C. § 3105(d)).
(20) Redemption of capital stock and reduction of capital of Banco Popular under sections 9(6) and 9(11) of the Federal Reserve Act (12 U.S.C. §§ 324 and 329), resulting from a distribution to Popular consisting of all the outstanding shares of common stock of New Banco Popular.
(21) Reduction of capital of Banco Popular-New York, under sections 9(6) and 9(11) of the Federal Reserve Act (12 U.S.C. §§ 324 and 329), resulting from a dividend to Popular North America, Inc., consisting of all the outstanding shares of common stock of Equity One, Inc.
(22) Acquisition by New Banco Popular of all the outstanding shares of Popular Leasing & Rental, Inc., Popular Mortgage, Inc., and Popular Finance, Inc. as agreement corporations under section 211.4(f) of Regulation K (12 C.F.R. 211.4(f)).
(23) Establishment by Banco Popular-New York of an international banking facility under 12 C.F.R. 204.8(a)(1).
(24) Establishment by New Banco Popular of its first two branches in foreign countries, under section 25 of the Federal Reserve Act (12 U.S.C. § 601) and section 211.3(a)(1) of Regulation K (12 C.F.R. 211.3(a)(1)).

*Susquehanna Bancshares, Inc.*
*Lititz, Pennsylvania*

Order Approving Acquisition of a Bank Holding Company

Susquehanna Bancshares, Inc. ("Susquehanna"), a bank holding company within the meaning of the Bank Holding Company Act ("BHC Act") (12 U.S.C. § 1842(a)(3)), has requested the Board's approval under section 3 of the BHC Act to acquire Cardinal Bancorp, Inc. ("Cardinal"), and thereby acquire Cardinal's subsidiary bank, First American National Bank of Pennsylvania ("FA Bank"), both of Everett, Pennsylvania.

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 38,335 (1998)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in section 3 of the BHC Act.

Susquehanna operates subsidiary banks in Pennsylvania, Maryland, and New Jersey. Susquehanna is the tenth largest depository institution in Pennsylvania, controlling approximately $1.5 billion in deposits, representing approximately 1.1 percent of total deposits in depository institutions in the state ("state deposits").[1] Cardinal is the 112th largest depository institution in Pennsylvania, controlling approximately $111.9 million in deposits, representing less than 1 percent of state deposits. On consummation of the proposal, Susquehanna would become the ninth largest depository institution in the state, controlling deposits of $1.6 billion, representing approximately 1.2 percent of state deposits.

*Competitive, Financial and Managerial Considerations*

Susquehanna and Cardinal do not compete in any banking market. Based on all the facts of record, the Board concludes that consummation of the proposal would not have a significant adverse effect on competition or on the concentration of banking resources in any relevant banking market.

The Board also has considered the financial and managerial resources and future prospects of Susquehanna, Cardinal, and their respective subsidiaries in light of all the facts of record, including supervisory reports of examination assessing the financial and managerial resources of the organizations and financial information provided by Susquehanna. The Board notes that Susquehanna and its subsidiaries are well capitalized and are expected to remain so after consummation of the proposal. The Board also has considered other aspects of the financial condition and resources of the two organizations and the structure of the proposed transaction. Based on all the facts of record, the Board concludes that considerations related to the financial and managerial resources and the future prospects of Susquehanna, Cardinal, and their respective subsidiary banks, are consistent with approval, as are the other supervisory factors the Board is required to consider under section 3 of the BHC Act.

*Convenience and Needs Considerations*

The Board also has carefully considered the effect of the proposal on the convenience and needs of the communities to be served in light of all the facts of record. As part of that review, the Board has considered a comment from a community group, New Jersey Citizen Action ("NJCA"), concerning the performance of Susquehanna's subsidiary, Equity National Bank, Atco, New Jersey ("Equity Bank"), under the Community Reinvestment Act ("CRA").[2] NJCA alleges that Susquehanna has not demonstrated its commitment to the credit needs of southern New Jersey and has failed to develop products to meet the community credit needs.[3] NJCA further alleges that, based on data filed under the Home Mortgage Disclosure Act ("HMDA"),[4] Equity Bank has an inadequate record of lending to low- and moderate-income ("LMI") census tracts and to African Americans.

The Board has long held that consideration of the convenience and needs factor includes a review of the records of the relevant depository institutions under the CRA. As provided in the CRA, the Board has evaluated the convenience and needs factor in light of examinations of the CRA performance records of the relevant institutions by their primary federal supervisors. An institution's most recent CRA performance evaluation is a particularly important consideration in the application process, because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its primary federal supervisor.

Susquehanna's largest insured depository institution subsidiary, which accounts for approximately 26.8 percent of the company's consolidated assets, received an "outstanding" rating from its primary federal supervisor, the Office of Thrift Supervision, at its most recent examination for performance under CRA, as of July 20, 1998. Equity Bank, which was acquired by Susquehanna on February 28, 1997, and represents approximately 6 percent of the total assets of Susquehanna, received a "satisfactory" rating at its most recent evaluation for CRA performance in 1996. Two of Susquehanna's other banks received "outstanding" ratings from their primary federal supervisor at their most recent evaluations for CRA performance, and all of Susquehanna's other subsidiary banks received "satisfactory" ratings at their most recent evaluations for CRA performance. FA Bank, which is the bank Susquehanna proposes to acquire, received a "satisfactory" rating from the Office of the Comptroller of the Currency at its last performance examination.

The records of examination of the subsidiary banks of Susquehanna and Cardinal indicate that the examiners found no evidence of prohibited discrimination or other

1. All banking data are as of June 30, 1998.

2. 12 U.S.C.. § 2901 *et seq.*

3. NJCA also argues that Susquehanna has failed to meet with community groups to discuss the needs of the communities that Equity Bank serves. The Board previously has noted that, although communication by depository institutions with community groups provides a valuable method of assessing and determining how best to meet the credit needs of a community, neither the CRA nor the CRA regulations of the federal supervisory agencies require depository institutions to enter into agreements with any organization. *See Fifth Third Bancorp*, 80 *Federal Reserve Bulletin* 838 (1994).

4. 12 U.S.C. § 2801 *et seq.*

illegal credit practices and found no violations of fair lending laws in any of Susquehanna's subsidiary banks. Susquehanna's lead commercial subsidiary bank, Farmers First Bank, Lititz, Pennsylvania ("FFB"), has increased its residential mortgage loans to LMI borrowers in recent years. Many of these loans were originated in conjunction with the Lancaster Housing Opportunity Program, which offers a home buyer program with flexible underwriting standards. FFB also offers Veterans Administration and Federal Housing Administration loans. In addition, FFB has originated more indirect automobile loans to LMI borrowers than to any other income group. FFB also participates in the Habitat for Humanity program and other housing projects through the Housing Development Corporation in Lancaster County.

Susquehanna's other subsidiary banks have implemented several programs to address the credit needs of LMI communities, such as a Community Homebuyers Program, which provides reduced fee loans to borrowers. Some of the banks also have a special small loan program and lines of credit for home renters. The banks also are participating lenders in affordable housing programs throughout Pennsylvania.

The Board previously reviewed the outreach programs of Susquehanna's subsidiary banks in connection with its acquisition of Equity Bank and found that Susquehanna had policies and programs in place to ascertain the credit needs of its community.[5] The Board's 1997 Order noted that Susquehanna proposed to implement a three-year lending program at Equity Bank to expand the type of loans available in its community.

Equity Bank is primarily a small business lender,[6] and the three-year CRA plan was designed to increase Equity Bank's affordable home mortgage lending, home improvement lending, community development lending, and to increase its small business lending to its community. Since its acquisition by Susquehanna, Equity Bank has increased lending in all these categories, resulting in increases in the percentage of Equity Bank's loan originations to LMI areas and individuals, and an overall increase in the percentage of lending within Equity Bank's assessment area. In 1997 and 1998, Equity Bank extended more than $687,000 in loans to first-time LMI home purchases and $263,000 in home improvement loans to qualified LMI borrowers. The bank also has commitments for $550,000 in revolving credit for the construction of affordable housing and for $178,000 for a commercial mortgage for a family services agency. Overall, data provided by Equity Bank shows that Equity Bank's lending to LMI census tracts improved from 1996 to 1997, and continued to increase in 1998. Data on small business loans indicate that the percentage of Equity Bank's loans made in LMI census tracts increased from 1996 to 1997, and increased again through August 1998. Equity Bank also recently established an advisory board to help identify the credit needs of the community.

The Board has considered carefully the entire record in its review of the convenience and needs factor under the BHC Act. Based on all the facts of record, including NJCA's submission, Susquehanna's response, and the relevant reports of examination, the Board concludes that considerations relating to convenience and needs, including the CRA performance records of the relevant institutions, are consistent with approval. The Board expects that Susquehanna will continue to implement its three-year plan at Equity Bank and to take the steps necessary to incorporate programs at Equity Bank that will help meet the credit needs of its community. The Board's action in this case is conditioned on the full implementation of these programs by Susquehanna and Equity Bank. In addition, to permit the Board to assess the effectiveness of Equity Bank's efforts, the Board's action on this proposal is conditioned on the requirement that Susquehanna report to the Federal Reserve System, on a semi-annual basis during the two-year period after consummation, its progress toward improving Equity Bank's lending in LMI areas and to LMI individuals.

*Conclusion*

Based on the foregoing, and in light of all the facts of record, the Board has determined that the application should be, and hereby is, approved.[7] The Board's approval is specifically conditioned on compliance by Susquehanna with the conditions described in this order and with all the commitments made in connection with the application. For the purpose of this action, the commitments and conditions relied on by the Board in reaching its decision are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

5. *See Susquehanna Bancshares, Inc.*, 83 *Federal Reserve Bulletin* 317 (1997) ("1997 Order").

6. According to Equity Bank's last examination, as of December 31, 1995, approximately 42 percent of the bank's loan portfolio consisted of small business loans in amounts of less than $1 million. Small business loans constituted 45.7 percent of the dollar volume of Equity Bank's loans through August 31, 1998.

7. NJCA also requested that the Board hold a public meeting or hearing on the proposal. Section 3(b) of the BHC Act does not require the Board to hold a public hearing on an application unless the appropriate supervisory authority for the bank to be acquired makes a timely written recommendation of denial. The Board has not received such a recommendation from the appropriate supervisory authorities.

Under its rules, the Board also may, in its discretion, hold a public meeting or hearing on an application to acquire a bank if a meeting or hearing is necessary or appropriate to clarify factual issues related to the application and to provide an opportunity for testimony, if appropriate. 12 C.F.R. 225.16(e). The Board has carefully considered NJCA's request in light of all the facts of record. In the Board's view, NJCA has had ample opportunity to submit its views, and did submitted written comments that have been carefully considered by the Board in acting on the proposal. NJCA's request fails to demonstrate why its written comments do not adequately present its evidence and fails to identify disputed issues of fact that are material to the Board's decision that would be clarified by a public meeting or hearing. For these reasons, and based on all the facts of record, the Board has determined that a public meeting or hearing is not required or warranted in this case. Accordingly, the request is denied.

The acquisition of Cardinal shall not be consummated before the fifteenth calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended for good cause by the Board or the Federal Reserve Bank of Philadelphia, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 23, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Ferguson, and Gramlich. Absent and not voting: Governor Meyer.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

## *Valley View Bancshares, Inc. Overland Park, Kansas*

### Order Approving Application to Acquire a Bank Holding Company

Valley View Bancshares, Inc. ("Valley View"), a bank holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 3 of the BHC Act (12 U.S.C. § 1842) to acquire Paola-Citizens Bancshares, Inc. ("Paola"), and thereby acquire control of its subsidiary bank, Citizens State Bank ("Citizens Bank"), both of Paola, Kansas.

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 53,672 (1998)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in section 3 of the BHC Act.

Valley View, with total consolidated assets of approximately $1.7 billion, operates four subsidiary banks in Kansas and one subsidiary bank in Missouri.[1] Valley View is the sixth largest commercial banking organization in Kansas, controlling approximately $1.4 billion in deposits, representing approximately 3.5 percent of total deposits in commercial banking organizations in the state ("state deposits"). Paola is the 167th largest commercial banking organization in Kansas, controlling approximately $37 million in deposits, representing less than 1 percent of state deposits. On consummation of the proposal, Valley View would remain the sixth largest commercial banking organization in Kansas, controlling deposits of approximately $1.4 billion, representing approximately 3.6 percent of state deposits.

In reviewing the proposal under the BHC Act, the Board has considered the financial and managerial resources and future prospects of the companies and banks involved, the convenience and needs of the communities to be served, and certain supervisory factors. The Board has reviewed these factors in light of the facts of record, including supervisory reports of examination assessing the financial and managerial resources of the organizations, discussions with other federal financial supervisory agencies, and confidential information provided by Valley View. The Board notes that Valley View management has adequate procedures in place to address the limited risks associated with the current activities of the holding company and its subsidiary banks. The Board further notes that the proposal represents a relatively small acquisition by Valley View, that Valley View would not incur or assume any debt in connection with the proposal, and that Valley View would remain well capitalized on consummation of the proposal. Based on the specific facts of record in this case, the Board concludes that the financial and managerial resources of Valley View, Paola, and their respective subsidiary banks and other supervisory factors are consistent with approval of the proposal.

In considering the convenience and needs factor, the Board has reviewed the records of the relevant depository institutions under the Community Reinvestment Act ("CRA").[2] As provided in the CRA, the Board has evaluated this factor in light of examinations of the CRA performance records of the relevant institutions by the Federal Deposit Insurance Corporation ("FDIC"), the institutions' appropriate federal banking supervisor. All the insured depository institutions controlled by Valley View received "satisfactory" CRA performance ratings at their most recent CRA examinations by the FDIC. Citizens Bank received an "outstanding" CRA performance rating at its most recent CRA examination by the FDIC. Based on all the facts of record, the Board concludes that convenience and needs considerations, including the CRA performance records of the relevant institutions, are consistent with approval of the proposal.

As required under the BHC Act, the Board also has considered the competitive effects of the proposal. Valley View and Paola do not compete with each other in any relevant banking market. Based on all the facts of record, the Board concludes that the proposal would not have a significantly adverse effect on competition or on the concentration of banking resources in any relevant banking market. Accordingly, the Board concludes that competitive considerations are consistent with approval.

#### *Conclusion*

Based on all the facts of record, the Board has determined that this application should be, and hereby is, approved.[3] The Board's approval is specifically conditioned on com-

1. State asset and deposit data are as of June 30, 1998.

2. 12 U.S.C. § 2901 *et seq.*

3. A former shareholder of Paola has requested that the Board, as part of its review of the proposal, monitor a private undertaking by Paola's management to compensate former shareholders from the proceeds of the proposal. The limited jurisdiction of the Board to review applications under the specific statutory factors in the BHC Act does not authorize the Board to consider matters relating to general corporate governance, such as shareholder relations and the adequacy of shareholder compensation. *See Western Bancshares, Inc. v. Board of Governors*, 480 F.2d 749 (10th Cir. 1973).

pliance by Valley View with all the commitments made in connection with this proposal. The commitments and conditions relied on by the Board in reaching its decision are deemed to be conditions imposed in writing by the Board in connection with its findings and decisions and, as such, may be enforced in proceedings under applicable law.

The proposed acquisition shall not be consummated before the fifteenth calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended by the Board or by the Federal Reserve Bank of Kansas City, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 30, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Meyer, Ferguson, and Gramlich.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

## Orders Issued Under Section 4 of the Bank Holding Company Act

### *Bank One Corporation Chicago, Illinois*

### Order Approving Investment in a Company that Performs Trust Company Activities

Bank One Corporation ("Bank One"), a bank holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 4(c)(8) of the BHC Act (12 U.S.C. § 1843(c)(8)) and section 225.24 of the Board's Regulation Y (12 C.F.R. 225.24) to acquire 50 percent of the voting interests in EquiServe Limited Partnership ("EquiServe"), a Delaware limited partnership,[1] and thereby perform functions or activities that may be performed by a trust company.[2]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 23,044 (1998)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in section 4 of the BHC Act.

Bank One, with total consolidated assets of approximately $231.7 billion, is the fifth largest commercial banking organization in the United States. Bank One controls subsidiary banks that operate in 14 states, and engages in a broad range of nonbanking activities. After consummation of this proposal, EquiServe would offer shareholder services nationwide. These shareholder services would include maintenance of records of shareholders in publicly traded companies and related services, such as acting as dividend disbursement and reinvestment agent, registrar, transfer agent, redemption agent, rights agent, exchange agent, tender agent, and reorganization agent; proxy mailing and tabulation; and annual and interim report distribution.

The Board previously has determined by regulation that the performance of functions or activities, such as shareholder servicing, that may be performed by a trust company is closely related to banking and permissible for bank holding companies under section 4(c)(8) of the BHC Act.[3] Bank One has committed to conduct these activities subject to the limitations set forth in Regulation Y. In order to approve the proposal, the Board also must find that the performance of the proposed activities by Bank One "can reasonably be expected to produce benefits to the public . . . that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[4]

As a part of its evaluation of these factors, the Board considers the financial condition and managerial resources of the notificant and its subsidiaries and the effect the transaction would have on such resources.[5] On the basis of all the facts of record, including relevant reports of examination and consultation with other relevant federal and state supervisory agencies, the Board has concluded that financial and managerial considerations are consistent with approval of the notice.

The Board also has carefully considered the competitive effects of the proposed joint venture. Both FCTC and Boston EquiServe currently engage in the activities to be conducted by the joint venture, EquiServe. On consummation of this proposal, EquiServe would become the largest shareholder servicing operation in the United States, serving approximately 1400 companies.

The Board notes that the market for shareholder services is a national market, which is currently moderately concentrated.[6] FCTC is the second largest shareholder servicing operation in the United States, managing approximately 12.1 million shareholder accounts, representing approximately 17.2 percent of total accounts in the United States. Boston EquiServe is the third largest shareholder servicing operation in the United States, managing approximately 11.5 million shareholder accounts, representing approximately 16.3 percent of total accounts in the United States. On consummation of this proposal, EquiServe would be-

1. Bank One would acquire an interest in EquiServe in exchange for contributing to the joint venture substantially all the assets of the shareholder services business conducted by its wholly owned subsidiary, First Chicago Trust Company of New York ("FCTC").
2. The remaining voting interests in EquiServe are held by Boston EquiServe Limited Partnership, Canton, Massachusetts ("Boston EquiServe"), a joint venture between BankBoston, N.A. and Boston Financial Data Services, Inc. ("BFDS"). BFDS is owned by State Street Corporation and DST Systems, Inc. ("DST").
3. *See* 12 C.F.R. 225.28(b)(5).
4. *See* 12 U.S.C. § 1843(c)(8).
5. *See* 12 C.F.R. 225.26.
6. Approximately 115 firms in the United States provide shareholder services commercially to companies issuing equity. These commercial shareholder services providers compete throughout the United States, and the Board previously has determined that the geographic market for this industry is national in scope. *See Chemical Banking Corporation*, 82 *Federal Reserve Bulletin* 239, 270 (1996).

come the largest shareholder servicing operation in the United States, managing approximately 23.6 million accounts, representing approximately 33.5 percent of total accounts in the United States.

The structure of the market for shareholder services mitigates the adverse effects of this proposal. Many companies choose to be self-providers of shareholder services.[7] Thus, the market indexes tend to overstate the relative market share controlled by specialized providers, such as Boston EquiServe and FCTC. Moreover, the decision by several large companies that currently are self-providers to outsource the function could significantly change the market share of a successful bidder for that business.[8] In addition, there are numerous potential entrants into this market. Currently, more than 200 firms specialize in providing shareholder services to groups of affiliated investment companies. Although only a few firms provide shareholder services to industrial or financial companies and to investment company groups, many of the activities and organizational features of the types of firms that provide shareholder services to investment company groups are similar to those activities of firms providing these services to industrial or financial companies. The investment company shareholder servicers appear to be fully capable of entering the commercial services industry with little difficulty. Many investment company shareholder servicers possess the technology, workforce, and experience that would enable them to manage the volume of transactions currently processed by commercial providers. Based on these and other facts of record, the Board concludes that consummation of the proposed transaction would not have a significantly adverse effect on competition in any relevant market.

The Board concludes that the proposed transaction would increase the ability of EquiServe to serve the needs of its customers and would allow the joint venture to provide existing and new customers with a broader range of products and services at lower costs. The Board also expects that combining the expertise and technology of FCTC and Boston EquiServe would enable EquiServe to become a more effective competitor in the market.

Based on the foregoing and all the other facts of record, including the commitments and representations made by Bank One, the Board has determined that the performance of the proposed activity by the joint venture can reasonably be expected to produce benefits to the public that would outweigh any possible adverse effects under the proper incident to banking standard of section 4(c)(8) of the BHC Act.

On the basis of all the facts of record, the Board has determined that the notice should be, and hereby is, approved. This determination is subject to all the conditions set forth in the Board's Regulation Y, including those in sections 225.7 and 225.25(c) (12 C.F.R. 225.7 and 225.25(c)) and to the Board's authority to require modification or termination of the activities of a bank holding company or any of its subsidiaries as the Board finds necessary to assure compliance with, or to prevent evasion of, the provisions and purposes of the BHC Act and the Board's regulations and orders issued thereunder. The Board's approval of the proposal is specifically conditioned on compliance with all the commitments made in connection with this notice. The commitments, representations and conditions relied on in reaching this decision shall be deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

This transaction shall not be consummated later than three months after the effective date of this order unless such period is extended for good cause by the Board or by the Federal Reserve Bank of Chicago, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 16, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Meyer, Ferguson, and Gramlich.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

7. The Board's analysis omits self-providers from the competitive analysis.

8. As of December 31, 1997, an estimated 425 firms were providing their own shareholder servicing. These firms included some of the largest companies in the United States. The ability and willingness of many firms to provide their own shareholder servicing has contributed to strong price competition in the industry.

*PNC Bank Corp.*
*Pittsburgh, Pennsylvania*

## Order Approving Notice to Engage in Underwriting and Dealing in All Types of Debt and Equity Securities on a Limited Basis

PNC Bank Corp. ("PNC"), a bank holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 4(c)(8) of the BHC Act (12 U.S.C. § 1843(c)(8)) and section 225.24 of the Board's Regulation Y (12 C.F.R. 225.24) to expand the activities of its section 20 subsidiary, PNC Capital Markets, Inc., Pittsburgh, Pennsylvania ("Company"), to include underwriting and dealing in, to a limited extent, all types of debt and equity securities except ownership interests in open-end investment companies. PNC seeks approval for Company to conduct the proposed underwriting and dealing activities worldwide.

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (63 *Federal Register* 50,914 (1998)). The time for filing comments has expired, and the Board has considered the notice and all comments received in light of the factors set forth in section 4(c)(8) of the BHC Act.

PNC, with total consolidated assets of approximately $75.9 billion, is the 14th largest banking organization in the United States.[1] PNC's subsidiary depository institutions operate in nine states, and PNC engages through other subsidiaries in a broad range of permissible nonbanking activities. Company currently engages in limited underwriting and dealing in certain types of bank-ineligible securities[2] as permitted under section 20 of the Glass-Steagall Act (12 U.S.C. § 377).[3] Company is, and will continue to be, registered as a broker-dealer with the Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934 (15 U.S.C. § 78a *et seq.*) and is a member of the National Association of Securities Dealers, Inc. ("NASD"). Company, therefore, is subject to the record-keeping and reporting obligations, fiduciary standards, and other requirements of the Securities Exchange Act of 1934, the SEC, and the NASD.

*Underwriting and Dealing in Bank-Ineligible Securities*

The Board has determined that, subject to the framework of prudential limitations established in previous decisions to address the potential for conflicts of interests, unsound banking practices, or other adverse effects, underwriting and dealing in bank-ineligible securities is so closely related to banking as to be a proper incident thereto within the meaning of section 4(c)(8) of the BHC Act.[4] The Board also has determined that underwriting and dealing in bank-ineligible securities is consistent with section 20 of the Glass-Steagall Act (12 U.S.C. § 377), provided that the company engaged in the activity derives no more than 25 percent of its gross revenues from underwriting and dealing in bank-ineligible securities.[5]

PNC has committed that Company will conduct its underwriting and dealing activities using the methods and procedures and subject to the prudential limitations established by the Board in the Section 20 Orders. PNC also has committed that Company will conduct its bank-ineligible securities underwriting and dealing activities subject to the Board's revenue restriction. As a condition of this order, PNC is required to conduct its bank-ineligible securities activities subject to the revenue restriction and Operating Standards established for section 20 subsidiaries.[6]

*Other Considerations*

In order to approve this notice, the Board also must determine that performance of the proposed activities is a proper incident to banking, that is, the proposed activities "can reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency, that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[7] The Board expects that consummation of the proposal would provide added convenience to PNC's customers, lead to improved methods of meeting customers' financing needs, increase the level of competition among existing providers of these services, and improve the operating efficiency of Company.

As part of its review of the statutory factors, the Board considers the financial and managerial resources of the notificant and its subsidiaries and the effect the transaction would have on such resources.[8] In considering the financial resources of the notificant, the Board has reviewed the capitalization of PNC and Company in accordance with the standards set forth in the Section 20 Orders and finds the capitalization of each to be consistent with approval. This determination is based on all the facts of record, including PNC's projections of the volume of Company's underwriting and dealing activities in bank-ineligible securities.

The Board also has reviewed the managerial resources of each of the entities involved in this proposal in light of examination reports and other supervisory information. PNC requested that the Board perform a debt-only infrastructure review of Company and stated that it later would request that the Board perform an equity infrastructure review of Company. In connection with the proposal, the Federal Reserve Bank of Cleveland ("Reserve Bank") has reviewed the policies and procedures of Company for

1. Asset and ranking data are as of June 30, 1998.

2. As used in this order, "bank-ineligible securities" refers to all types of debt and equity securities that a bank may not underwrite or deal in directly under section 16 of the Glass-Steagall Act (12 U.S.C. § 24(7)).

3. Company has authority to underwrite and deal in, to a limited extent, certain municipal revenue bonds, 1–4 family mortgage-related securities, commercial paper, and consumer-receivable-related securities. *See PNC Financial Corp.*, 73 *Federal Reserve Bulletin* 742 (1987), and *PNC Financial Corp.*, 75 *Federal Reserve Bulletin* 396 (1989). Company also is authorized to engage in a variety of other nonbanking activities.

4. *See J.P. Morgan & Co. Inc., et al.*, 75 *Federal Reserve Bulletin* 192 (1989), *aff'd sub nom. Securities Industry Ass'n v. Board of Governors of the Federal Reserve System*, 900 F.2d 360 (D.C. Cir. 1990); *Citicorp*, 73 *Federal Reserve Bulletin* 473 (1987), *aff'd sub nom. Securities Industry Ass'n v. Board of Governors of the Federal Reserve System*, 839 F.2d 47 (2d Cir.), *cert. denied*, 486 U.S. 1059 (1988), as modified by *Review of Restrictions on Director, Officer and Employee Interlocks, Cross-Marketing Activities, and the Purchase and Sale of Financial Assets Between a Section 20 Subsidiary and an Affiliated Bank or Thrift*, 61 *Federal Register* 57,679 (1996); *Amendments to Restrictions in the Board's Section 20 Orders*, 62 *Federal Register* 45,295 (1997); and *Clarification to the Board's Section 20 Orders*, 63 *Federal Register* 14,803 (1998) (collectively, "Section 20 Orders").

5. *See* Section 20 Orders. Compliance with the revenue limitation shall be calculated in accordance with the method stated in the Section 20 Orders, as modified by the *Order Approving Modifications to the Section 20 Orders*, 75 *Federal Reserve Bulletin* 751 (1989); *10 Percent Revenue Limit on Bank-Ineligible Activities of Subsidiaries of Bank Holding Companies Engaged in Underwriting and Dealing in Securities*, 61 *Federal Register* 48,953 (1996); and *Revenue Limit on Bank-Ineligible Activities of Subsidiaries of Bank Holding Companies Engaged in Underwriting and Dealing in Securities*, 61 *Federal Register* 68,750 (1996) (collectively, "Modification Orders").

6. 12 C.F.R. 225.200. Company may provide services that are necessary incidents to the proposed underwriting and dealing activities. Unless Company receives specific approval under section 4(c)(8) of the BHC Act to conduct the activities independently, any revenues from the incidental activities must be treated as ineligible revenues subject to the Board's revenue limitation.

7. 12 U.S.C. § 1843(c)(8).

8. *See* 12 C.F.R. 225.26.

underwriting and dealing in all types of debt securities, including Company's operational and managerial infrastructure, computer, audit, and accounting systems and internal risk management procedures and controls. The Board has determined on the basis of the infrastructure review that Company has established policies and procedures to ensure compliance with this order and the Section 20 Orders for underwriting and dealing in debt securities. As discussed below, a satisfactory infrastructure review of Company related to underwriting and dealing in all types of equity securities must be completed before Company may engage in these activities. On the basis of the Reserve Bank's review of Company's debt underwriting and dealing policies and procedures and all other facts of record, including the commitments provided in this case and the proposed managerial and risk management systems of Company, and subject to the completion of a satisfactory infrastructure review of Company related to underwriting and dealing in all types of equity securities, the Board has concluded that financial and managerial considerations are consistent with approval of the notice.

Based on all the facts of record, the Board has determined that performance of the proposed activities by PNC, under the framework established in this and prior decisions, can reasonably be expected to produce public benefits that outweigh any adverse effects of the proposal. Accordingly, the Board has determined that the performance of the proposed activities by PNC is a proper incident to banking for purposes of section 4(c)(8) of the BHC Act.

*Conclusion*

On the basis of all the facts of record, the Board has determined that the notice should be, and hereby is, approved, subject to all the terms and conditions described in this order. The Board's approval of the proposal extends only to activities conducted within the limitations of this order, including the Board's reservation of authority to establish additional limitations to ensure that Company's activities are consistent with safety and soundness, avoidance of conflicts of interests, and other relevant considerations under the BHC Act. Underwriting and dealing in any manner other than as approved in this order is not within the scope of the Board's approval and is not authorized for Company.

Company may commence underwriting and dealing in all types of debt securities immediately. The Board's approval of the proposed underwriting and dealing in all types of equity securities, however, is conditioned on a future determination by the Board that Company has established policies and procedures for equity underwriting and dealing to ensure compliance with the requirements of this order, the Section 20 Orders, and the Modification Orders, including Company's operational and managerial infrastructure, computer, audit, and accounting systems and internal risk management procedures and controls. After notification by the Board that this condition has been satisfied, Company may commence the proposed equity underwriting and dealing activities, subject to the other conditions of this order, the Section 20 Orders, and the Modification Orders.

The Board's determination also is subject to all the terms and conditions set forth in Regulation Y, including those in sections 225.7 and 225.25(c) (12 C.F.R. 225.7 and 225.25(c)), and to the Board's authority to require modification or termination of the activities of a bank holding company or any of its subsidiaries as the Board finds necessary to ensure compliance with, or to prevent evasion of, the provisions and purposes of the BHC Act and the Board's regulations and orders issued thereunder. The Board's decision is specifically conditioned on compliance with all the commitments made in connection with this notice, including the commitments discussed in this order and the conditions set forth in this order and the Board regulations and orders noted above. The commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

This proposal shall not be consummated later than three months after the effective date of this order, unless such period is extended for good cause by the Board or the Reserve Bank, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 16, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Meyer, Ferguson, and Gramlich.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

## *ORDERS ISSUED UNDER INTERNATIONAL BANKING ACT*

### *Credit Suisse*
### *Zurich, Switzerland*

Order Approving Establishment of Representative Offices

Credit Suisse, Zurich, Switzerland, a foreign bank within the meaning of the International Banking Act ("IBA") has applied under section 10(a) of the IBA (12 U.S.C. § 3107(a)) to establish representative offices in Miami, Florida; New York, New York; and Houston, Texas. The Foreign Bank Supervision Enhancement Act of 1991 ("FBSEA"), which amended the IBA, provides that a foreign bank must obtain the approval of the Board to establish a representative office in the United States.

Notice of the application, affording interested persons an opportunity to submit comments, was published on March 14, 1997, in a newspaper of general circulation in Houston (*Houston Chronicle*), Miami (*Miami Herald*), and New York (*New York Times*). The time for filing comments has expired, and all comments have been considered.

Credit Suisse, with total consolidated assets of approximately $89 billion,[1] is part of the second largest banking group in Switzerland, and it engages in a wide range of banking activities worldwide directly and through subsidiaries. Credit Suisse Group, Zurich, Switzerland, a holding company that engages through subsidiaries in financial and nonfinancial activities worldwide, owns 99.9 percent of the shares of Credit Suisse. No single shareholder owns 10 percent or more of the shares of Credit Suisse Group.

In the United States, Credit Suisse Group operates, through Credit Suisse First Boston ("CSFB"), Zurich, Switzerland, branches in New York, New York, and Los Angeles, California; and representative offices in San Francisco, California; Chicago, Illinois; and Houston, Texas.[2] Credit Suisse and CSFB also engage in activities in the United States through several nonbanking subsidiaries.

Credit Suisse proposes to establish the offices primarily to act as liaison with private banking clients, solicit private banking business, and provide information and advice on economic conditions and investment opportunities in Switzerland. The Houston office would report directly to the Miami office; the Miami and New York offices would report directly to Credit Suisse's head office in Switzerland. No funds would be received or disbursed at or through the representative offices.

In acting on an application to establish a representative office, the IBA and Regulation K provide that the Board shall take into account whether the foreign bank engages directly in the business of banking outside of the United States, and has furnished to the Board the information it needs to assess the application adequately. The Board also shall take into account whether the foreign bank and any foreign bank parent is subject to comprehensive supervision or regulation on a consolidated basis by its home country supervisor (12 U.S.C. § 3107(a)(2); 12 C.F.R. 211.24(d)(2)).[3] The Board also may take into account additional standards as set forth in the IBA and Regulation K (12 U.S.C. § 3105(d)(3)-(4); 12 C.F.R. 211.24(c)).

As noted above, Credit Suisse engages directly in the business of banking outside of the United States. Credit Suisse also has provided the Board with the information necessary to assess the application through submissions that address the relevant issues. With respect to supervision by home country authorities, the Board previously has determined, in connection with applications involving other banks in Switzerland, that those banks were subject to home country supervision on a consolidated basis.[4] Credit Suisse is supervised by the SFBC on substantially the same terms and conditions as those other banks. Based on all the facts of record, the Board has determined that Credit Suisse is subject to comprehensive supervision and regulation on a consolidated basis by its home country supervisor.

The Board also has taken into account the additional standards set forth in section 7 of the IBA and Regulation K (12 U.S.C. § 3105(d)(3)-(4); 12 C.F.R. 211.24(c)(2)). In this regard, the SFBC has no objection to the establishment of the proposed representative offices.

With respect to the financial and managerial resources of Credit Suisse, taking into consideration Credit Suisse's record of operations in its home country, its overall financial resources, and its standing with its home country supervisors, the Board has also determined that financial and managerial factors are consistent with approval of the proposed representative offices. Credit Suisse appears to have the experience and capacity to support the proposed representative offices and has established controls and procedures for the proposed representative offices to ensure compliance with U.S. law.

With respect to access to information about Credit Suisse's operations, the Board has reviewed the restrictions on disclosure in relevant jurisdictions in which Credit Suisse operates and has communicated with relevant government authorities regarding access to information. Credit Suisse and Credit Suisse Group have committed to make available to the Board such information on the operations of Credit Suisse and any of its affiliates that the Board deems necessary to determine and enforce compliance with the IBA, the Bank Holding Company Act of 1956, as amended, and other applicable federal law. To the extent that the provision of such information may be prohibited by law, Credit Suisse and Credit Suisse Group have committed to cooperate with the Board to obtain any necessary consents or waivers that might be required from third parties for disclosure of such information. In addition, subject to certain conditions, the SFBC may share information on Bank's operations with other supervisors, including

1. Asset data are as of June 30, 1998.

2. CSFB also operates an agency and representative office in Miami. Those offices would be closed on the establishment of the Miami office of Credit Suisse.

3. In assessing this standard, the Board considers, among other factors, the extent to which the home country supervisors:

(i) Ensure that the bank has adequate procedures for monitoring and controlling its activities worldwide;
(ii) Obtain information on the condition of the bank and its subsidiaries and offices through regular examination reports, audit reports, or otherwise;
(iii) Obtain information on the dealings with and relationship between the bank and its affiliates, both foreign and domestic;
(iv) Receive from the bank financial reports that are consolidated on a worldwide basis, or comparable information that permits analysis of the bank's financial condition on a worldwide consolidated basis;
(v) Evaluate prudential standards, such as capital adequacy and risk asset exposure, on a worldwide basis. These are indicia of comprehensive, consolidated supervision.

No single factor is essential, and other elements may inform the Board's determination.

4. *See Coutts & Co., AG*, 79 *Federal Reserve Bulletin* 636 (1993); *Union Bank of Switzerland*, 82 *Federal Reserve Bulletin* 370 (1996); *Swiss Bank Corporation*, 82 *Federal Reserve Bulletin* 690 (1996), and 83 *Federal Reserve Bulletin* 214 (1997); *UBS AG/Union Bank of Switzerland*, 84 *Federal Reserve Bulletin* 684 (1998). Credit Suisse Group, although not a bank, is also subject to consolidated supervision by the Swiss Federal Banking Commission ("SFBC").

the Board. In light of these commitments and other facts of record, and subject to the condition described below, the Board concludes that Credit Suisse has provided adequate assurances of access to any necessary information the Board may request.

On the basis of all the facts of record, and subject to the commitments made by Credit Suisse and Credit Suisse Group, as well as the terms and conditions set forth in this order, the Board has determined that Credit Suisse's application to establish the representative offices should be, and hereby is, approved. Should any restrictions on access to information on the operations or activities of Credit Suisse and its affiliates subsequently interfere with the Board's ability to obtain information to determine and enforce compliance by Credit Suisse or its affiliates with applicable federal statutes, the Board may require termination of any of Credit Suisse's or its affiliates' direct or indirect activities in the United States. Approval of this application also is specifically conditioned on compliance by Credit Suisse and Credit Suisse Group with the commitments made in connection with this application, and with the conditions in this order.[5] The commitments and conditions referred to above are conditions imposed in writing by the Board in connection with its decision and may be enforced in proceedings under 12 U.S.C. § 1818 against Credit Suisse and its affiliates.

By order of the Board of Governors, effective November 23, 1998.

Voting for this action: Chairman Greenspan, Vice Chair Rivlin, and Governors Kelley, Ferguson, and Gramlich. Absent and not voting: Governor Meyer.

ROBERT DEV. FRIERSON
*Associate Secretary of the Board*

5. The Board's authority to approve the establishment of the proposed representative offices parallels the continuing authority of the States of Florida, New York, and Texas to license offices of a foreign bank. The Board's approval of this application does not supplant the authority of those states to license the proposed offices of Credit Suisse in accordance with any terms or conditions that they may impose.

*INDEX OF ORDERS ISSUED OR ACTIONS TAKEN BY THE BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM (JULY 1, 1998-SEPTEMBER 30, 1998)*

| Applicant | Merged or Acquired Bank or Activity | Date of Approval | *Bulletin* Volume and Page |
|---|---|---|---|
| Banc One Corporation, Columbus, Ohio | First Chicago NBD Corporation, Chicago, Illinois | September 14, 1998 | 84,961 |
| BankBoston Corporation, Boston, Massachusetts | BancAmerica Robertson Stephens, San Francisco, California | August 24, 1998 | 84,849 |
| The Bank of East Asia, Ltd., Hong Kong Special Administrative Region, People's Republic of China | To establish a representative office in Flushing, New York | August 3, 1998 | 84,886 |
| Commerce Bancorp, Inc., Cherry Hill, New Jersey | Commerce Capital Markets, Inc., Philadelphia, Pennsylvania | July 13, 1998 | 84,798 |
| Cooperatieve Centrale Raiffeisen-Boerenleenbank B.A., Rabobank Nederland Utrecht, The Netherlands | Weiss, Peck & Greer, L.L.C., New York, New York | August 3, 1998 | 84,852 |
| First American Corporation, Nashville, Tennessee | The Middle Tennessee Bank, Columbia, Tennessee | August 17, 1998 | 84,845 |
| First Mariner Bancorp, Baltimore, Maryland | Glen Burnie Bancorp, Glen Burnie, Maryland<br>The Bank of Glen Burnie, Glen Burnie, Maryland | September 28, 1998 | 84,956 |
| First National Bank Group, Inc., Edinburg, Texas | Nueces National Bank, Corpus Christi, Texas | September 8, 1998 | 84,959 |
| NationsBank Corporation, Charlotte, North Carolina<br>NationsBank (DE) Corporation, Charlotte, North Carolina | BankAmerica Corporation, San Francisco, California<br>Bank of America National Trust and Savings Association, San Francisco, California<br>Bank of America, FSB, Portland, Oregon | August 17, 1998 | 84,858 |

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| Applicant | Merged or Acquired Bank or Activity | Date of Approval | *Bulletin* Volume and Page |
|---|---|---|---|
| Norwest Corporation, Minneapolis, Minnesota | Star Bancshares, Inc., Austin, Texas<br>Star Bancshares of Nevada, Inc., Carson City, Nevada<br>First State Bank, Austin, Texas | August 12, 1998 | 84,847 |
| Royal Bank of Canada, Montreal, Quebec, Canada | New Security First Network Bank, Miami, Florida | August 3, 1998 | 84,855 |
| Travelers Group, Inc., New York, New York | Citicorp, New York, New York | September 23, 1998 | 84,985 |
| WestStar Bank, Bartlesville, Oklahoma | Superior Federal Bank, F.S.B., Fort Smith, Arkansas | August 3, 1998 | 84,884 |

## *APPLICATIONS APPROVED UNDER BANK HOLDING COMPANY ACT*
### *By the Secretary of the Board*

Recent applications have been approved by the Secretary of the Board as listed below. Copies are available upon request to the Freedom of Information Office, Office of the Secretary, Board of Governors of the Federal Reserve System, Washington, D.C. 20551.

Section 3

| Applicant(s) | Bank(s) | Effective Date |
|---|---|---|
| Centura Banks, Inc., Rocky Mount, North Carolina | Scotland Bancorp, Inc., Laurinburg, North Carolina<br>Scotland Savings Bank, SSB, Laurinburg, North Carolina | November 5, 1998 |
| Wells Fargo & Company, San Francisco, California | Franklin Bancshares, Inc., Franklin, Texas<br>The First National Bank of Franklin, Franklin, Texas | November 5, 1998 |

Section 4

| Applicant(s) | Bank(s) | Effective Date |
|---|---|---|
| State Street Corporation, Boston, Massachusetts | ADP Financial Information Services, Inc., Jersey City, New Jersey | November 6, 1998 |
| Bridge Information Systems, Inc., St. Louis, Missouri | Wilco International Limited, London, England | |
| United Bancorporation, Billings, Montana | Information Network Services, Inc., Billings, Montana | November 16, 1998 |

*By Federal Reserve Banks*

Recent applications have been approved by the Federal Reserve Banks as listed below. Copies are available upon request to the Reserve Banks.

Section 3

| Applicant(s) | Bank(s) | Reserve Bank | Effective Date |
|---|---|---|---|
| AmBank Holdings, Inc., Davenport, Iowa | American Bank and Trust Company, Davenport, Iowa | Chicago | October 29, 1998 |
| Amundson Family Limited Partnership, Sioux Falls, South Dakota<br>Beulah Bancorporation, Inc., Sioux Falls, South Dakota | Robinson Bank Holding Company, Robinson, North Dakota<br>Security State Bank of Robinson, Robinson, North Dakota | Minneapolis | November 4, 1998 |
| Applachian Bancshares, Inc., Ellijay, Georgia | First National Bank of Union County, Blairsville, Georgia | Atlanta | November 4, 1998 |
| Area Bancshares Corporation, Owensboro, Kentucky | Peoples Bancorp of Winchester, Inc., Winchester, Kentucky<br>Peoples Commercial Bank, Winchester, Kentucky | St. Louis | October 29, 1998 |
| Arvest Bank Group, Inc., Bentonville, Arkansas | TRH Bank Group, Inc., Norman, Oklahoma | St. Louis | October 29, 1998 |
| Astra Financial Corporation, Prairie Village, Kansas | Mitchell County Bank, Simpson, Kansas<br>First Missouri Bancshares, Inc., Brookfield, Missouri<br>First Missouri National Bank, Brookfield, Missouri | Kansas City | November 9, 1998 |
| Bancorp of Okolona, Inc., Okolona, Mississippi | Bank of Okolona, Okolona, Mississippi | St. Louis | November 17, 1998 |
| Banknorth Group, Inc., Burlington, Vermont | Evergreen Bancorp, Inc., Glens Falls, New York<br>Evergreen Bank, N.A., Glens Falls, New York | Boston | October 22, 1998 |
| Belvedere Capital Partners, Inc., San Francisco, California<br>California Community Financial Institutions Fund Limited Partnership, San Francisco, California<br>California Financial Bancorp, Newport Beach, California | Downey Bancorp, Downey, California<br>Downey National Bank, Downey, California<br>The Bank of Orange County, Fountain Valley, California | San Francisco | October 22, 1998 |
| Bluestem Bank Holding Company, L.L.C., Sioux Falls, South Dakota | Thomson Holdings, Inc., Centerville, South Dakota | Minneapolis | November 6, 1998 |
| Bugbee Family Limited Partnership, Leawood, Kansas | Quinter Insurance Service, Inc., Quinter, Kansas | Kansas City | October 22, 1998 |
| Central South Bancorporation, Inc. Indianola, Iowa | Peoples Savings Bank, Indianola, Iowa | Chicago | November 3, 1998 |
| Chaparral Bancshares, Inc., Richardson, Texas<br>Chaparral Bancshares of Delaware, Inc., Dover, Delaware | Van Alstyne Financial Corporation, Van Alstyne, Texas | Dallas | November 4, 1998 |
| Citizens Bancorporation of New Ulm, Inc., New Ulm, Minnesota | State Bank of La Salle, La Salle, Minnesota | Minneapolis | November 17, 1998 |

Section 3—Continued

| Applicant(s) | Bank(s) | Reserve Bank | Effective Date |
|---|---|---|---|
| Columbia Bancorp, The Dalles, Oregon | Valley Community Bancorp, McMinnville, Oregon<br>Valley Community Bank, McMinnville, Oregon | San Francisco | November 12, 1998 |
| Community Bancshares, Inc., Employee Stock Ownership Plan and Trust, Neosho, Missouri | Community Bancshares, Inc., Neosho, Missouri | Kansas City | November 12, 1998 |
| Community Bancshares Corp., Indianola, Iowa | Fort Des Moines Community Bank, Des Moines, Iowa | Chicago | October 29, 1998 |
| Community Shores Bank Corporation, Roosevelt Park, Michigan | Community Shores Bank, Roosevelt Park, Michigan | Chicago | November 5, 1998 |
| Community Spirit Bancshares, Inc., Belmont, Mississippi | Community Spirit Bank - Mississippi, Belmont, Mississippi | Atlanta | November 12, 1998 |
| East West Bancorp, San Marino, California | East-West Bank, San Marino, California | San Francisco | November 12, 1998 |
| First Bank Corp, Fort Smith, Arkansas | Sebastian Bankshares, Inc., Barling, Arkansas<br>River Valley Bank and Trust, Lavaca, Arkansas | St. Louis | November 4, 1998 |
| First Commonwealth Financial Corporation, Indiana, Pennsylvania | Southwest National Corporation, Greensburg, Pennsylvania | Cleveland | November 2, 1998 |
| First York Ban Corp, York, Nebraska<br>Albion National Management Company, Inc., Albion, Nebraska | Sutton Agency, Inc., Sutton, Nebraska | Kansas City | November 4, 1998 |
| First Community Bancorp, Inc., Glasgow, Montana | Froid Bankshares, Inc., Froid, Montana<br>First State Bank of Froid, Froid, Montana | Minneapolis | November 16, 1998 |
| First Community Bancorp, Inc., Pahokee, Florida | First Community Bank of Palm Beach County, Pahokee, Florida | Atlanta | November 12, 1998 |
| First National Bancshares, Inc. ESOP and 401(k) Trusts, Goodland, Kansas | First National Bancshares, Inc., Goodland, Kansas | Kansas City | November 17, 1998 |
| First Washington Bancshares, Inc., Walla Walla, Washington | Whatcom State Bancorp, Bellingham, Washington<br>Whatcom State Bank, Ferndale, Washington | San Francisco | October 22, 1998 |
| Greene County Bancorp, MHC, Catskill, New York<br>Greene County Bancorp, Inc., Catskill, New York | Greene County Savings Bank, Catskill, New York | New York | October 29, 1998 |
| High Point Financial Services, Inc., Forreston, Illinois | Kent Bancshares, Inc., Kent, Illinois<br>Kent Bank, Kent, Illinois | Chicago | November 2, 1998 |

Section 3—Continued

| Applicant(s) | Bank(s) | Reserve Bank | Effective Date |
|---|---|---|---|
| Machias Bancorp, MHC, Machias, Maine<br>Machias Bancorp, Inc., Machias, Maine | Machias Savings Bank, Machias, Maine | Boston | November 2, 1998 |
| Mid-Atlantic Community BankGroup, Inc., Gloucester, Virginia | United Community Bankshares, Inc., Franklin, Virginia<br>The Bank of Sussex and Surry, Wakefield, Virginia<br>The Bank of Franklin, Franklin, Virginia | Richmond | October 29, 1998 |
| Mt. Sterling Bancorp, Inc., Mt. Sterling, Illinois | Mt. Sterling Bancshares, Inc., Mt. Sterling, Illinois<br>Farmers State Bank & Trust Company, Mt. Sterling, Illinois | St. Louis | November 5, 1998 |
| OGS Investments, Inc., Tallahassee, Florida | Florida Citizens Bank, Ocala, Florida | Atlanta | October 29, 1998 |
| Oneida Financial, MHC, Oneida, New York<br>Oneida Financial Corp., Oneida, New York | The Oneida Savings Bank, Oneida, New York | New York | October 29, 1998 |
| Palmer Bancshares, Inc., Kasson, Minnesota | Kasson State Bank, Kasson, Minnesota | Minneapolis | November 18, 1998 |
| Pleasants County Bankshares, Inc., St. Marys, West Virginia | The Pleasants County Bank, St. Marys, West Virginia | Richmond | November 5, 1998 |
| Regions Financial Corporation, Birmingham, Alabama | Meigs County Bancshares, Inc., Decatur, Tennessee<br>Meigs County Bank, Decatur, Tennessee<br>Saint James Bancorporation, Inc., Lutcher, Louisiana<br>Saint James Bank and Trust Company, Lutcher, Louisiana<br>Bullsboro Bancshares, Inc., Newnan, Georgia<br>The Bank of Newnan, Newnan, Georgia<br>VB&T Bancshares Corp., Valdosta, Georgia<br>Valdosta Bank and Trust, Valdosta, Georgia | Atlanta | November 3, 1998 |
| Ridgewood Financial MHC, Ridgewood, New Jersey<br>Ridgewood Financial, Inc., Ridgewood, New Jersey | Ridgewood Savings Bank of New Jersey, Ridgewood, New Jersey | New York | November 16, 1998 |
| Santa Barbara Bancorp, Santa Barbara, California | Pacific Capital Bancorp, Salinas, California<br>First National Bank of Central California, Salinas, California<br>South Valley National Bank, Morgan Hill, California | San Francisco | November 3, 1998 |

Section 3—Continued

| Applicant(s) | Bank(s) | Reserve Bank | Effective Date |
|---|---|---|---|
| Security Bank Holding Company Employee Stock Ownership Plan, Coos Bay, Oregon<br>Security Bank Holding Company, Coos Bay, Oregon | Oregon State Bank, Corvallis, Oregon | San Francisco | November 12, 1998 |
| Southern Bancorp, Inc., Marietta, Georgia | Southern National Bank, Marietta, Georgia | Atlanta | November 3, 1998 |
| St. Charles Financial Corporation, Oak Brook, Illinois | Commerce Bancorp, Inc., Berkeley, Illinois<br>National Bank of Commerce, Berkeley, Illinois | Chicago | November 2, 1998 |
| Synovus Financial Corp., Columbus, Georgia<br>TB&C Bancshares, Inc., Columbus, Georgia | Georgia Bank and Trust Company, Calhoun, Georgia | Atlanta | October 29, 1998 |
| Terry and Kathy Barrett Family Limited Partnership, Frisco, Colorado | Quinter Insurance Service, Inc., Quinter, Kansas | Kansas City | November 5, 1998 |
| Town & Country Bancshares, Inc., Guthrie, Oklahoma | Oklahoma State Bank, Guthrie, Oklahoma | Kansas City | November 2, 1998 |
| Valley National Bancorp, Wayne, New Jersey | Vista Bancorp, Inc., Phillipsburg, New Jersey | New York | October 29, 1998 |
| The Weatherford Foundation of Red Bay, AL, Inc., Red Bay, Alabama<br>Independent Bancshares, Inc., Red Bay, Alabama | Community Spirit Bancshares, Inc., Belmont, Mississippi<br>Community Spirit Bank - Mississippi, Belmont, Mississippi | Atlanta | November 12, 1998 |
| Western Reserve Bancorp, Inc., Medina, Ohio | Western Reserve Bank, Medina, Ohio | Cleveland | October 23, 1998 |

Section 4

| Applicant(s) | Nonbanking Activity/Company | Reserve Bank | Effective Date |
|---|---|---|---|
| The Bank of New York Company, Inc., New York, New York<br>Bank of New York Capital Markets, Inc., New York, New York | Patricof & Co. Capital Corp., New York, New York | New York | October 20, 1998 |
| First Frederick Financial Corporation, Frederick, Maryland | To place cash dispensing machines in locations owned or leased by unaffiliated third parties and thereby engage in data processing activities | Richmond | October 23, 1998 |
| BB&T Corporation, Winston-Salem, North Carolina | Scott & Stringfellow Financial, Inc., Richmond, Virginia<br>Scott & Stringfellow, Inc., Richmond, Virginia | Richmond | November 16, 1998 |
| Britton & Koontz Capital Corporation, Natchez, Mississippi | InterBank Systems, Inc., Natchez, Mississippi | Atlanta | October 22, 1998 |
| Community Financial Group, Inc., Nashville, Tennessee | American Growth Finance, Inc., Dallas, Texas | Atlanta | November 16, 1998 |

Section 4—Continued

| Applicant(s) | Nonbanking Activity/Company | Reserve Bank | Effective Date |
|---|---|---|---|
| Community National Bank Corporation, Venice, Florida | Community Advisory Services, Inc., Venice, Florida<br>Community Financial Centers, Inc., Venice, Florida<br>Community Investment Centers Inc., Venice, Florida | Atlanta | October 28, 1998 |
| Dresdner Bank AG, Frankfurt, Germany<br>Dresdner RCM Gobal Investors LLC, San Francisco, California | Caywood-Scholl Capital Management, San Diego, California | New York | October 19, 1998 |
| Gold Banc Corporation, Inc., Leawood, Kansas | The Trust Company, St. Joseph, Missouri | Kansas City | November 10, 1998 |
| Machias Bancorp, MHC, Machias, Maine<br>Machias Bancorp, Inc., Machias, Maine<br>MSB Leasing, Inc., Machias, Maine | M&M Consulting, LLC, Bangor, Maine | Boston | November 2, 1998 |
| Mutual Bancorp of the Berkshires, Inc., Pittsfield, Massachusetts<br>United Financial Group, Inc. Pittsfield, Massachusetts | Lenox Savings Bank, Lenox, Massachusetts<br>Trust Company of the Berkshires, N.A., Pittsfield, Massachusetts | Boston | October 26, 1998 |
| National Australia Bank Ltd., Melbourne, Australia | National Australia Capital Markets, LLC, New York, New York | Chicago | November 6, 1998 |
| Patriot Bank Corp., Pottstown, Pennsylvania | Keystone Financial Leasing Corporation, Exton, Pennsylvania | Philadelphia | November 5, 1998 |
| Tampa State Bankshares, Inc., Tampa, Kansas | Tampa Townhomes, L.L.C., Tampa, Kansas | Kansas City | October 22, 1998 |
| Warwick Community Bancorp, Inc., Warwick, New York | GSB Financial Corporation, Goshen, New York<br>Goshen Savings Bank, Goshen, New York | New York | November 12, 1998 |

Sections 3 and 4

| Applicant(s) | Nonbanking Activity/Company | Reserve Bank | Effective Date |
|---|---|---|---|
| Associated Banc-Corp, Green Bay, Wisconsin | Citizens Bankshares, Inc., Shawano, Wisconsin<br>Citizens Bank, National Association, Shawano, Wisconsin<br>Wisconsin Finance Corporation, Shawano, Wisconsin<br>Citizens Financial Services, Inc., Shawano, Wisconsin | Chicago | October 23, 1998 |

*APPLICATIONS APPROVED UNDER BANK MERGER ACT*
*By the Secretary of the Board*

Recent applications have been approved by the Secretary of the Board as listed below. Copies are available upon request to the Freedom of Information Office, Office of the Secretary, Board of Governors of the Federal Reserve System, Washington, D.C. 20551.

| Applicant(s) | Bank(s) | Effective Date |
|---|---|---|
| Centura Bank, Laurinburg, North Carolina | Scotland Savings Bank, SSB, Laurinburg, North Carolina | November 5, 1998 |

*By Federal Reserve Banks*

Recent applications have been approved by the Federal Reserve Banks as listed below. Copies are available upon request to the Reserve Banks.

| Applicant(s) | Bank(s) | Reserve Bank | Effective Date |
|---|---|---|---|
| The Citizens Banking Company, Salineville, Ohio | Century National Bank and Trust of Rochester, Rochester, Pennsylvania | Cleveland | October 27, 1998 |
| Peoples Bank and Trust Company of Lincoln County, Troy, Missouri | Winfield Banking Company, Winfield, Missouri | St. Louis | October 28, 1998 |
| The Pleasants County Bank, St. Marys, West Virginia | Pleasants County Interim Bank, St. Marys, West Virginia | Richmond | November 5, 1998 |
| Republic Security Bank, West Palm Beach, Florida | Household Bank, F.S.B., Wood Dale, Illinois | Atlanta | October 28, 1998 |
| Republic Security Bank, West Palm Beach, Florida | Northside Bank of Tampa, Tampa, Florida | Atlanta | November 9, 1998 |
| Southwest Georgia Bank, Moultrie, Georgia | Farmers and Merchants Bank, Monticello, Florida | Atlanta | November 9, 1998 |

*PENDING CASES INVOLVING THE BOARD OF GOVERNORS*

*This list of pending cases does not include suits against the Federal Reserve Banks in which the Board of Governors is not named a party.*

*Attorneys Against American Apartheid v. Board of Governors,* No. 98–1483 (D.C. Cir., filed October 21, 1998). Petition for review of denial of reconsideration of a Board order dated August 17, 1998, approving the merger of NationsBank Corporation, Charlotte, North Carolina, and BankAmerica. Corporation, San Francisco, California.

*Independent Bankers Association of America v. Board of Governors,* No. 98–1482 (D.C. Cir., filed October 21, 1998). Petition for review of a Board order dated September 23, 1998, conditionally approving the applications of Travelers Group, Inc., New York, New York, to become a bank holding company by acquiring Citicorp, New York, New York, and its bank and nonbank subsidiaries.

*Jones v. Board of Governors,* No. 98–30138 (5th Cir., filed October 1, 1998). Appeal of district court dismissal of complaint alleging violations of the Fair Housing Act.

*Cunningham v. Board of Governors*, No. 98–1459 (D.C. Cir., filed September 30, 1998). Petition for review of a Board order dated September 23, 1998, conditionally approving the applications of Travelers Group, Inc., New York, New York, to become a bank holding company by acquiring Citicorp, New York, New York, and its bank and nonbank subsidiaries. On November 12, 1998, the Board filed a motion to dismiss the petition.

*Wasserman v. Board of Governors*, No. 98-CIV-6017 (S.D.N.Y., filed August 24, 1998). Complaint alleging wrongful failure to investigate activities of a bank. On September 14, 1998, the Board filed its motion to dismiss the complaint, and on October 14 the court dismissed the action on plaintiff's withdrawal of the complaint.

*Pharaon v. Board of Governors*, No. 98–103 (U.S. Supreme Court, filed July 15, 1998). Petition for writ of certiorari seeking review of the decision of the Court of Appeals for the District of Columbia Circuit affirming the Board's order dated January 31, 1997, imposing civil money penalties and an order of prohibition for violations of the Bank Holding Company Act. On October 19, 1998, the Supreme Court denied the writ.

*Clarkson v. Greenspan*, No.98–5349 (D.C. Cir., filed July 29, 1998). Appeal of district court order granting Board's motion for summary judgment in a Freedom of Information Act case. On September 14, 1998, the Board filed a motion for summary affirmance of the district court dismissal.

*Board of Governors v. Carrasco*, No. 98 Civ. 3474 (LAK) (S.D.N.Y., filed May 15, 1998). Action to freeze assets of individual pending administrative adjudication of civil money penalty assessment by the Board. On May 26, 1998, the court issued a preliminary injunction restraining the transfer or disposition of the individual's assets and appointing the Federal Reserve Bank of New York as receiver for those assets.

*Board of Governors v. Pharaon*, No. 98–6101 (2d Cir., filed May 4, 1998). Appeal of partial denial of Board's motion for summary judgment in action to freeze assets of individual pending administrative adjudication of civil money penalty assessment by the Board. On May 22, 1998, the appellee filed a cross-appeal from the partial final judgment.

*Research Triangle Institute v. Board of Governors*, No. 97–1719 (U.S. Supreme Court, filed April 28, 1998). Petition for *writ of certiorari* to review dismissal by the United States Court of Appeals for the Fourth Circuit of a contract claim against the Board. On October 5, 1998, the Supreme Court denied the writ.

*Fenili v. Davidson*, No. C-98–01568-CW (N.D. California, filed April 17, 1998). Tort and constitutional claim arising out of return of a check. On June 5, 1998, the Board filed its motion to dismiss.

*Logan v. Greenspan*, No. 1:98CV00049 (D.D.C., filed January 9, 1998). Employment discrimination complaint.

*Goldman v. Department of the Treasury*, No. 1–97-CV-3798 (N.D. Ga., filed December 23, 1997). Declaratory judgment action challenging Federal Reserve notes as lawful money. On March 2, 1998, the Board filed a motion to dismiss the action.

*Kerr v. Department of the Treasury*, No. CV-S-97–01877-DWH (S.D. Nev., filed December 22, 1997). Challenge to income taxation and Federal Reserve notes. On September 3, 1998, a motion to dismiss was filed on behalf of all federal defendants.

*Allen v. Indiana Western Mortgage Corp.*, No. 97–7744 RJK (C.D. Cal., filed November 12, 1997). Customer dispute with a bank. On March 23, 1998, the district court dismissed the action.

*Artis v. Greenspan*, No. 97–5235 (D.C. Cir., filed September 19, 1997). Appeal of district court order dismissing employment discrimination class action. On October 20, 1998, the court of appeals affirmed the dismissal.

*Towe v. Board of Governors*, No. 97–71143 (9th Cir., filed September 15, 1997). Petition for review of a Board order dated August 18, 1997, prohibiting Edward Towe and Thomas E. Towe from further participation in the banking industry.

*In re: Subpoena Duces Tecum Served on the Office of the Comptroller of the Currency*, No. 97–5229 (D.C. Cir., filed September 12, 1997). Appeal of district court order denying motion to compel production of pre-decisional supervisory documents and testimony sought in connection with an action by Bank of New England Corporation's trustee in bankruptcy against the Federal Deposit Insurance Corporation. On June 26, 1998, the court of appeals reversed and remanded the case to the district court. On August 10, 1998, the Board filed a petition for rehearing and suggestion for rehearing in banc. On October 6, 1998, the court amended its opinion and denied the petition.

*Bettersworth v. Board of Governors*, No. 97-CA-624 (W.D. Tex., filed August 21, 1997). Privacy Act case.

## *Final Enforcement Decision Issued by the Board of Governors*

### In the Matter of a Notice to Prohibit Further Participation Against James J. Redemann Former Director of Evergreen Bank, N.A.

Evergreen Bank, N.A.
Poy Sippi, Wisconsin

Docket No. AA-EC-98–09

### *Final Decision*

This is an administrative proceeding pursuant to the Federal Deposit Insurance Act ("FDI Act") in which the Office of the Comptroller of the Currency of the United States of America ("OCC") seeks to prohibit the Respondent, James J. Redemann ("Redemann"), from further participation in the affairs of any financial institution because of his conduct as an officer of Evergreen Bank, N.A., Poy Sippi, Wisconsin (the "Bank"). Under the FDI Act, the OCC may initiate a prohibition proceeding against a former employee of a national bank, but the Board must make the final determination whether to issue an order of prohibition.

Upon review of the administrative record, the Board issues this Final Decision adopting the Recommended Decision ("Recommended Decision") of Administrative Law Judge Walter Alprin (the "ALJ"), and orders the issuance of the attached Order of Prohibition.

## I. Statement of the Case

### A. *Statutory and Regulatory Framework*

Under the FDI Act and the Board's regulations, the ALJ is responsible for conducting proceedings on a notice of charges. 12 U.S.C. § 1818(e)(4). The ALJ issues a recommended decision that is referred to the deciding agency together with any exceptions to those recommendations filed by the parties. The Board makes the final findings of fact, conclusions of law, and determination whether to issue an order of prohibition in the case of prohibition orders sought by the OCC. *Id.*; 12 C.F.R. 263.40.

The FDI Act sets forth the substantive basis upon which a federal banking agency may issue against a bank official or employee an order of prohibition from further participation in banking. In order to issue such an order, the Board must make each of three findings:

(1) that the respondent engaged in identified misconduct, including an unsafe or unsound practice or a breach of fiduciary duty;
(2) that the conduct had a specified effect, including financial loss to the institution or gain to the respondent; and
(3) that the respondent's conduct involved either personal dishonesty or a willful or continuing disregard for the safety or soundness of the institution. 12 U.S.C. § 1818(e)(1)(A)-(C).

An enforcement proceeding is initiated by the filing of a notice of charges which is served on the respondent. Under the OCC's and the Board's regulations, the respondent must file an answer within 20 days of service of the notice. 12 C.F.R. 19.19(a) and 263.19(a). Failure to file an answer constitutes a waiver of the respondent's right to contest the allegations in the notice, and a final order may be entered unless good cause is shown for failure to file a timely answer. 12 C.F.R. 19.19(c)(1) and 263.19(c)(1).

### B. *Procedural History*

On May 7, 1998, the OCC initiated a Notice of Removal and Notice of Charges (the "Notice") against Redemann. The Notice alleged that Redemann engaged in an unsafe and unsound banking practice while employed at the Bank. Specifically, the Notice alleged that while a Director of the Bank, Redemann engaged in a scheme to obtain Bank funds for the benefit of the Bank's president and vice-president, who are husband and wife. As a result of the scheme, the Bank suffered actual or potential loss. The scheme was carried out by means of money orders issued to Redemann, recorded as capitalized expenditures for the Bank. Some of the proceeds of the money orders, however, were used for payments for the benefit of the Bank president.

The Notice was personally served on Redemann on May 8, 1998. Through counsel, Redemann obtained an extension to answer to Notice to July 7, 1998. Shortly before his answer was due, Redemann filed a "Notice of Default," expressly denying the allegations but indicating that he chose "not to contest this action because he accepts the consequences of a final order entering the relief that the [Notice] seeks . . . ." Enforcement Counsel then moved for entry of an order of default, and the ALJ issued his Recommended Decision recommending issuance of an order of prohibition.

## II. Discussion

Because Redemann's default prevents him from contesting the allegations in the Notice, the Board may take those allegations as established. According to the Notice, Redemann engaged in a scheme in which he obtained cashier's checks drawn on the Bank and booked as capitalized expenditures of the Bank. A portion of the funds were paid over to the Bank's president and his wife, causing actual or potential loss to the Bank.

These actions meet all of the requirements of an order of prohibition. Redemann's action in directing Bank funds to the Bank president personally was both an unsafe or unsound banking practice and a breach of his fiduciary duty. As a result, the Bank "has suffered or will probably suffer financial loss," 12 U.S.C. § 1818(e)(1)(B)(i). Finally, Redemann's action evidenced personal dishonesty in that he arranged for the checks to be recorded as legitimate Bank expenses while transferring a portion of the funds to the Bank president. Redemann's action also constituted a willful or continuing disregard for the Bank's safety or soundness, as such action, if continued, could threaten the Bank's safety or soundness.

In sum, all elements necessary for the issuance of a prohibition order are presented in this case.

### *Conclusion*

For these reasons, the Board orders the issuance of the attached Order of Prohibition.

By Order of the Board of Governors, this 30th day of November, 1998.

Board of Governors of the
Federal Reserve System

JENNIFER J. JOHNSON
*Secretary of the Board*

### *Order of Prohibition*

WHEREAS, pursuant to section 8(e) of the Federal Deposit Insurance Act, as amended, (the "Act") (12 U.S.C. § 1818(e)), the Board of Governors of the Federal Reserve System ("the Board") is of the opinion, for the reasons set forth in the accompanying Final Decision, that a final Order of Prohibition should issue against JAMES J. REDEMANN ("Redemann");

NOW, THEREFORE, IT IS HEREBY ORDERED, pursuant to section 8(e) of the Federal Deposit Insurance Act, as amended (12 U.S.C. § 1818(e)), that:

1. In the absence of prior written approval by the Board, and by any other Federal financial institution regulatory agency where necessary pursuant to section 8(e)(7)(B) of the Act (12 U.S.C. § 1818(e)(7)(B)), Redemann is hereby prohibited:
   (a) From participating in the conduct of the affairs of any bank holding company, any insured depository institution or any other institution specified in subsection 8(e)(7)(A) of the Act (12 U.S.C. § 1818(e)(7)(A));
   (b) From soliciting, procuring, transferring, attempting to transfer, voting or attempting to vote any proxy, consent, or authorization with respect to any voting rights in any institution described in subsection 8(e)(7)(A) of the Act (12 U.S.C. § 1818(e)(7)(A));
   (c) From violating any voting agreement previously approved by the appropriate Federal banking agency; or
   (d) From voting for a director, or from serving or acting as an institution-affiliated party as defined in section 3(u) of the Act, (12 U.S.C. § 1813(u)), such as an officer, director, or employee.
2. This Order, and each provision hereof, is and shall remain fully effective and enforceable until expressly stayed, modified, terminated or suspended in writing by the Board.

This Order shall become effective at the expiration of thirty days after service is made.

By Order of the Board of Governors, this 30th day of November, 1998.

Board of Governors of the
Federal Reserve System

JENNIFER J. JOHNSON
*Secretary of the Board*

## *FINAL ENFORCEMENT ORDERS ISSUED BY THE BOARD OF GOVERNORS*

*Frontier Bank of Laramie County*
*Cheyenne, Wyoming*

The Federal Reserve Board announced on November 17, 1998, the issuance of a Cease and Desist Order against the Frontier Bank of Laramie County, Cheyenne, Wyoming.

*William Shilstone*
*New York, New York*

The Federal Reserve Board announced on November 17, 1998, the issuance of a Cease and Desist Order against William Shilstone, a former institution-affiliated party of the New York branch of Societe Generale, New York, New York.

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## *SYMBOLS AND ABBREVIATIONS*

| | |
|---|---|
| c | Corrected |
| e | Estimated |
| n.a. | Not available |
| p | Preliminary |
| r | Revised (Notation appears on column heading when about half of the figures in that column are changed.) |
| * | Amounts insignificant in terms of the last decimal place shown in the table (for example, less than 500,000 when the smallest unit given is millions) |
| 0 | Calculated to be zero |
| . . . | Cell not applicable |
| ATS | Automatic transfer service |
| BIF | Bank insurance fund |
| CD | Certificate of deposit |
| CMO | Collateralized mortgage obligation |
| CRA | Community Reinvestment Act of 1977 |
| FFB | Federal Financing Bank |
| FHA | Federal Housing Administration |
| FHLBB | Federal Home Loan Bank Board |
| FHLMC | Federal Home Loan Mortgage Corporation |
| FmHA | Farmers Home Administration |
| FNMA | Federal National Mortgage Association |
| FSLIC | Federal Savings and Loan Insurance Corporation |
| G-7 | Group of Seven |
| G-10 | Group of Ten |
| GNMA | Government National Mortgage Association |
| GDP | Gross domestic product |
| HUD | Department of Housing and Urban Development |
| IMF | International Monetary Fund |
| IO | Interest only |
| IPCs | Individuals, partnerships, and corporations |
| IRA | Individual retirement account |
| MMDA | Money market deposit account |
| MSA | Metropolitan statistical area |
| NOW | Negotiable order of withdrawal |
| OCD | Other checkable deposit |
| OPEC | Organization of Petroleum Exporting Countries |
| OTS | Office of Thrift Supervision |
| PMI | Private mortgage insurance |
| PO | Principal only |
| REIT | Real estate investment trust |
| REMIC | Real estate mortgage investment conduit |
| RP | Repurchase agreement |
| RTC | Resolution Trust Corporation |
| SCO | Securitized credit obligation |
| SDR | Special drawing right |
| SIC | Standard Industrial Classification |
| VA | Department of Veterans Affairs |

## *GENERAL INFORMATION*

In many of the tables, components do not sum to totals because of rounding.

Minus signs are used to indicate (1) a decrease, (2) a negative figure, or (3) an outflow.

"U.S. government securities" may include guaranteed issues of U.S. government agencies (the flow of funds figures also include not fully guaranteed issues) as well as direct obligations of the Treasury.

"State and local government" also includes municipalities, special districts, and other political subdivisions.

## 1.10 RESERVES, MONEY STOCK, LIQUID ASSETS, AND DEBT MEASURES

Percent annual rate of change, seasonally adjusted[1]

| Monetary or credit aggregate | 1997 | 1998 | | | 1998 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Q4 | Q1 | Q2 | Q3 | June | July[r] | Aug. | Sept. | Oct. |
| *Reserves of depository institutions*[2] | | | | | | | | | |
| 1 Total | −2.8 | −1.9 | −3.8 | −7.4 | −5.3 | −15.3 | 4.9 | −11.0[r] | −5.2 |
| 2 Required | −5.6 | −1.8 | −2.5 | −9.0 | −18.1 | −8.8 | 1.0 | −16.1 | −2.5 |
| 3 Nonborrowed | −.8 | −.6 | −4.3 | −8.4[r] | −7.9 | −15.5 | 4.6 | −10.5 | −3.2 |
| 4 Monetary base[3] | 7.9 | 6.9 | 4.1 | 6.9 | 6.2 | 5.0 | 8.9 | 11.5 | 9.3 |
| *Concepts of money, liquid assets, and debt*[4] | | | | | | | | | |
| 5 M1 | .9 | 3.0 | .2 | −2.5[r] | −3.6 | −3.0 | −3.1[r] | 3.6[r] | 7.1 |
| 6 M2 | 7.0 | 8.0 | 7.5 | 6.7 | 5.3 | 4.9 | 8.5[r] | 14.8[r] | 12.3 |
| 7 M3 | 10.0 | 11.0 | 10.3 | 7.1[r] | 6.8 | 1.5 | 11.8[r] | 14.5[r] | 13.6 |
| 8 L | 9.2 | 12.9[r] | 8.0 | −3.5 | 7.2 | −.3 | 9.6[r] | −67.5 | n.a. |
| 9 Debt | 6.0 | 6.2 | 6.2 | 5.9 | 5.8[r] | 6.2 | 5.8[r] | 5.6 | n.a. |
| *Nontransaction components* | | | | | | | | | |
| 10 In M2[5] | 9.3 | 9.8 | 10.1 | 9.9[r] | 8.4 | 7.6 | 12.5[r] | 18.6[r] | 14.0 |
| 11 In M3 only[6] | 19.5 | 20.3 | 18.8 | 8.2[r] | 10.9 | −8.3 | 21.4[r] | 13.7[r] | 17.3 |
| *Time and savings deposits* | | | | | | | | | |
| Commercial banks | | | | | | | | | |
| 12 Savings, including MMDAs | 16.3 | 13.6 | 14.3 | 13.8[r] | 10.9 | 17.0 | 15.2[r] | 18.7[r] | 14.5 |
| 13 Small time[7] | 4.5 | 1.5 | −1.0 | .8[r] | −1.0 | .2 | 5.6 | 1.7[r] | 1.7 |
| 14 Large time[8,9] | 9.9 | 19.5 | 18.0 | −2.4 | 16.8 | −29.8 | 11.7[r] | −2.7[r] | 1.8 |
| Thrift institutions | | | | | | | | | |
| 15 Savings, including MMDAs | 1.4 | 7.6 | 11.6 | 6.9 | 3.6 | 8.5 | 2.7 | 7.5[r] | 11.6 |
| 16 Small time[7] | −3.1 | −.4 | −5.6 | −5.0[r] | −1.1 | −5.3 | −12.4[r] | 1.1 | .7 |
| 17 Large time[8] | 5.4 | 14.4 | −.8 | −4.0 | 13.9 | −9.6 | −8.3 | 2.8 | 6.9 |
| *Money market mutual funds* | | | | | | | | | |
| 18 Retail | 15.1 | 19.3 | 21.7 | 21.8 | 20.8 | 5.5 | 33.1 | 48.3 | 31.5 |
| 19 Institution-only | 22.0 | 18.9 | 36.5 | 21.6 | 28.7 | −5.3 | 36.5 | 38.4 | 60.9 |
| *Repurchase agreements and Eurodollars* | | | | | | | | | |
| 20 Repurchase agreements[10] | 39.5 | 34.1 | 14.5 | 10.3 | −32.6 | 17.9 | 32.5 | 32.1 | −20.3 |
| 21 Eurodollars[10] | 24.3 | 7.6 | −7.7 | 11.7[r] | 13.9 | 18.9 | 8.4[r] | −31.0[r] | 12.9 |
| *Debt components*[4] | | | | | | | | | |
| 22 Federal | .4 | .0 | −1.4 | −1.5 | −.9 | −.9 | −.8 | −3.3 | n.a. |
| 23 Nonfederal | 7.9 | 8.3 | 8.6[r] | 8.3 | 8.0[r] | 8.4 | 8.0 | 8.4 | n.a. |

1. Unless otherwise noted, rates of change are calculated from average amounts outstanding during preceding month or quarter.

2. Figures incorporate adjustments for discontinuities, or "breaks," associated with regulatory changes in reserve requirements. (See also table 1.20.)

3. The seasonally adjusted, break-adjusted monetary base consists of (1) seasonally adjusted, break-adjusted total reserves (line 1), plus (2) the seasonally adjusted currency component of the money stock, plus (3) (for all quarterly reporters on the "Report of Transaction Accounts, Other Deposits and Vault Cash" and for all weekly reporters whose vault cash exceeds their required reserves) the seasonally adjusted, break-adjusted difference between current vault cash and the amount applied to satisfy current reserve requirements.

4. Composition of the money stock measures and debt is as follows:

M1: (1) currency outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions, (2) travelers checks of nonbank issuers, (3) demand deposits at all commercial banks other than those owed to depository institutions, the U.S. government, and foreign banks and official institutions, less cash items in the process of collection and Federal Reserve float, and (4) other checkable deposits (OCDs), consisting of negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts at depository institutions, credit union share draft accounts, and demand deposits at thrift institutions. Seasonally adjusted M1 is computed by summing currency, travelers checks, demand deposits, and OCDs, each seasonally adjusted separately.

M2: M1 plus (1) savings (including MMDAs), (2) small-denomination time deposits (time deposits—including retail RPs—in amounts of less than $100,000), and (3) balances in retail money market mutual funds (money funds with minimum initial investments of less than $50,000). Excludes individual retirement accounts (IRAs) and Keogh balances at depository institutions and money market funds. Seasonally adjusted M2 is calculated by summing savings deposits, small-denomination time deposits, and retail money fund balances, each seasonally adjusted separately, and adding this result to seasonally adjusted M1.

M3: M2 plus (1) large-denomination time deposits (in amounts of $100,000 or more), (2) balances in institutional money funds (money funds with minimum initial investments of $50,000 or more), (3) RP liabilities (overnight and term) issued by all depository institutions, and (4) Eurodollars (overnight and term) held by U.S. residents at foreign branches of U.S. banks worldwide and at all banking offices in the United Kingdom and Canada. Excludes amounts held by depository institutions, the U.S. government, money market funds, and foreign banks and official institutions. Seasonally adjusted M3 is calculated by summing large time deposits, institutional money fund balances, RP liabilities, and Eurodollars, each seasonally adjusted separately, and adding this result to seasonally adjusted M2.

L: M3 plus the nonbank public holdings of U.S. savings bonds, short-term Treasury securities, commercial paper, and bankers acceptances, net of money market fund holdings of these assets. Seasonally adjusted L is computed by summing U.S. savings bonds, short-term Treasury securities, commercial paper, and bankers acceptances, each seasonally adjusted separately, and then adding this result to M3.

Debt: The debt aggregate is the outstanding credit market debt of the domestic nonfinancial sectors—the federal sector (U.S. government, not including government-sponsored enterprises or federally related mortgage pools) and the nonfederal sectors (state and local governments, households and nonprofit organizations, nonfinancial corporate and nonfarm noncorporate businesses, and farms). Nonfederal debt consists of mortgages, tax-exempt and corporate bonds, consumer credit, bank loans, commercial paper, and other loans. The data, which are derived from the Federal Reserve Board's flow of funds accounts, are break-adjusted (that is, discontinuities in the data have been smoothed into the series) and month-averaged (that is, the data have been derived by averaging adjacent month-end levels).

5. Sum of (1) savings deposits (including MMDAs), (2) small time deposits, and (3) retail money fund balances, each seasonally adjusted separately.

6. Sum of (1) large time deposits, (2) institutional money fund balances, (3) RP liabilities (overnight and term) issued by depository institutions, and (4) Eurodollars (overnight and term) of U.S. addressees, each seasonally adjusted separately.

7. Small time deposits—including retail RPs—are those issued in amounts of less than $100,000. All IRA and Keogh account balances at commercial banks and thrift institutions are subtracted from small time deposits.

8. Large time deposits are those issued in amounts of $100,000 or more, excluding those booked at international banking facilities.

9. Large time deposits at commercial banks less those held by money market funds, depository institutions, the U.S. government, and foreign banks and official institutions.

10. Includes both overnight and term.

## 1.11 RESERVES OF DEPOSITORY INSTITUTIONS AND RESERVE BANK CREDIT[1]

Millions of dollars

| Factor | Average of daily figures | | | Average of daily figures for week ending on date indicated | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1998 | | | 1998 | | | | | | |
| | Aug. | Sept. | Oct. | Sept. 16 | Sept. 23 | Sept. 30 | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| SUPPLYING RESERVE FUNDS | | | | | | | | | | |
| 1 Reserve Bank credit outstanding | 481,257 | 486,639 | 489,496 | 486,799 | 486,081 | 487,907[r] | 488,458 | 488,624 | 490,836 | 488,188 |
| U.S. government securities[2] | | | | | | | | | | |
| 2 Bought outright—System account[3] | 441,902 | 444,223 | 447,493 | 442,785 | 444,810 | 446,239 | 446,736 | 447,673 | 447,289 | 447,209 |
| 3 Held under repurchase agreements | 3,072 | 6,303 | 3,235 | 8,038 | 5,675 | 5,441 | 3,740 | 2,672 | 4,096 | 2,025 |
| Federal agency obligations | | | | | | | | | | |
| 4 Bought outright | 469 | 417 | 394 | 403 | 403 | 403 | 403 | 400 | 388 | 388 |
| 5 Held under repurchase agreements | 3,013 | 1,923 | 3,425 | 1,729 | 1,521 | 1,170 | 2,811 | 3,077 | 4,415 | 3,457 |
| 6 Acceptances | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loans to depository institutions | | | | | | | | | | |
| 7 Adjustment credit | 27 | 56 | 86 | 27 | 11 | 138 | 315 | 31 | 4 | 13 |
| 8 Seasonal credit | 247 | 177 | 104 | 167 | 174 | 172 | 132 | 110 | 99 | 91 |
| 9 Extended credit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 Float | 414 | 622 | 186 | 530 | 678 | 796[r] | 286 | 543 | −178 | 281 |
| 11 Other Federal Reserve assets | 32,113 | 32,918 | 34,572 | 33,120 | 32,808 | 33,549 | 34,036 | 34,117 | 34,723 | 34,724 |
| 12 Gold stock | 11,045 | 11,045 | 11,043 | 11,045 | 11,045 | 11,045 | 11,044 | 11,044 | 11,044 | 11,040 |
| 13 Special drawing rights certificate account | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 |
| 14 Treasury currency outstanding | 25,950[r] | 25,990[r] | 26,033 | 25,989[r] | 25,992[r] | 25,995[r] | 26,009 | 26,023 | 26,037 | 26,051 |
| ABSORBING RESERVE FUNDS | | | | | | | | | | |
| 15 Currency in circulation | 487,952[r] | 492,822[r] | 496,396 | 493,832[r] | 492,430[r] | 492,794[r] | 493,934 | 497,334 | 497,191 | 496,617 |
| 16 Treasury cash holdings | 120 | 93 | 91 | 92 | 94 | 93 | 92 | 92 | 92 | 90 |
| Deposits, other than reserve balances, with Federal Reserve Banks | | | | | | | | | | |
| 17 Treasury | 5,130 | 6,296 | 5,407 | 5,869 | 7,144 | 6,989 | 5,779 | 5,480 | 5,322 | 5,326 |
| 18 Foreign | 167 | 176 | 224 | 175 | 165 | 201 | 194 | 321 | 209 | 206 |
| 19 Service-related balances and adjustments | 6,979 | 6,907[r] | 6,949 | 6,827 | 6,946 | 6,992[r] | 6,959 | 7,055 | 6,953 | 6,866 |
| 20 Other | 347 | 360 | 414 | 358 | 370 | 353 | 423 | 417 | 408 | 424 |
| 21 Other Federal Reserve liabilities and capital | 16,922 | 17,160 | 17,347 | 16,998 | 17,168 | 17,206 | 17,681 | 17,078 | 17,218 | 17,188 |
| 22 Reserve balances with Federal Reserve Banks[4] | 9,836 | 9,061[r] | 8,945 | 8,881 | 8,002 | 9,519[r] | 9,649 | 7,114 | 9,725 | 7,761 |

| Factor | End-of-month figures | | | Wednesday figures | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Aug. | Sept. | Oct. | Sept. 16 | Sept. 23 | Sept. 30 | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| SUPPLYING RESERVE FUNDS | | | | | | | | | | |
| 1 Reserve Bank credit outstanding | 487,877 | 496,371[r] | 494,902 | 486,641 | 491,427 | 496,371[r] | 489,458 | 491,277 | 492,306 | 489,075 |
| U.S. government securities[2] | | | | | | | | | | |
| 2 Bought outright—System account[3] | 442,135 | 446,047 | 450,179 | 442,835 | 445,804 | 446,047 | 447,457 | 447,687 | 448,032 | 447,966 |
| 3 Held under repurchase agreements | 7,942 | 12,135 | 4,286 | 9,106 | 8,630 | 12,135 | 4,538 | 2,045 | 4,115 | 2,279 |
| Federal agency obligations | | | | | | | | | | |
| 4 Bought outright | 451 | 403 | 388 | 403 | 403 | 403 | 403 | 388 | 388 | 388 |
| 5 Held under repurchase agreements | 3,566 | 2,099 | 3,538 | 795 | 2,075 | 2,099 | 2,840 | 4,570 | 5,488 | 3,440 |
| 6 Acceptances | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loans to depository institutions | | | | | | | | | | |
| 7 Adjustment credit | 66 | 896 | 1 | 31 | 9 | 896 | 3 | 101 | 0 | 1 |
| 8 Seasonal credit | 226 | 159 | 68 | 173 | 177 | 159 | 128 | 109 | 94 | 83 |
| 9 Extended credit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 Float | 973 | −1,230[r] | −314 | 142 | 836 | −1,230[r] | −40 | 2,140 | −266 | 116 |
| 11 Other Federal Reserve assets | 32,518 | 35,862 | 36,756 | 33,157 | 33,495 | 35,862 | 34,131 | 34,238 | 34,455 | 34,802 |
| 12 Gold stock | 11,046 | 11,044 | 11,041 | 11,045 | 11,045 | 11,044 | 11,044 | 11,044 | 11,044 | 11,041 |
| 13 Special drawing rights certificate account | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 |
| 14 Treasury currency outstanding | 25,984[r] | 25,995[r] | 26,065 | 25,989[r] | 25,992[r] | 25,995[r] | 26,009 | 26,023 | 26,037 | 26,051 |
| ABSORBING RESERVE FUNDS | | | | | | | | | | |
| 15 Currency in circulation | 488,645[r] | 494,244[r] | 497,402 | 494,005[r] | 493,359[r] | 494,244[r] | 495,888 | 498,474 | 497,594 | 498,039 |
| 16 Treasury cash holdings | 94 | 92 | 87 | 94 | 93 | 92 | 92 | 92 | 91 | 87 |
| Deposits, other than reserve balances, with Federal Reserve Banks | | | | | | | | | | |
| 17 Treasury | 6,704 | 4,952 | 4,440 | 6,265 | 7,508 | 4,952 | 5,291 | 4,895 | 4,842 | 6,382 |
| 18 Foreign | 162 | 347 | 154 | 163 | 166 | 347 | 196 | 189 | 177 | 213 |
| 19 Service-related balances and adjustments | 6,870 | 6,992[r] | 6,864 | 6,827 | 6,946 | 6,992[r] | 6,959 | 7,055 | 6,953 | 6,866 |
| 20 Other | 332 | 349 | 380 | 357 | 388 | 349 | 427 | 397 | 398 | 467 |
| 21 Other Federal Reserve liabilities and capital | 17,420 | 17,654 | 18,241 | 16,734 | 16,952 | 17,654 | 16,898 | 16,878 | 17,025 | 16,927 |
| 22 Reserve balances with Federal Reserve Banks[4] | 13,881 | 17,981[r] | 13,639 | 8,430 | 12,253 | 17,981[r] | 9,960 | 9,564 | 11,506 | 6,385 |

1. Amounts of cash held as reserves are shown in table 1.12, line 2.
2. Includes securities loaned—fully guaranteed by U.S. government securities pledged with Federal Reserve Banks—and excludes securities sold and scheduled to be bought back under matched sale–purchase transactions.
3. Includes compensation that adjusts for the effects of inflation on the principal of inflation-indexed securities.
4. Excludes required clearing balances and adjustments to compensate for float.

## 1.12 RESERVES AND BORROWINGS Depository Institutions[1]

Millions of dollars

| Reserve classification | Prorated monthly averages of biweekly averages | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1995 | 1996 | 1997 | 1998 | | | | | | |
| | Dec. | Dec. | Dec. | Apr. | May | June | July | Aug. | Sept.[r] | Oct. |
| 1 Reserve balances with Reserve Banks[2] | 20,440 | 13,395 | 10,673 | 11,053 | 9,646 | 9,668 | 9,646 | 9,682 | 9,284 | 9,033 |
| 2 Total vault cash[3] | 42,281 | 44,525 | 44,707 | 41,215 | 41,482 | 42,635 | 42,035 | 42,121 | 42,579 | 43,348 |
| 3 Applied vault cash[4] | 37,460 | 37,848 | 37,206 | 35,423 | 35,159 | 35,427 | 34,954 | 35,025 | 34,909 | 35,089 |
| 4 Surplus vault cash[5] | 4,821 | 6,678 | 7,500 | 5,792 | 6,323 | 7,208 | 7,081 | 7,095 | 7,670 | 8,258 |
| 5 Total reserves[6] | 57,900 | 51,242 | 47,880 | 46,475 | 44,805 | 45,095 | 44,600 | 44,707 | 44,193 | 44,122 |
| 6 Required reserves | 56,622 | 49,819 | 46,196 | 45,131 | 43,655 | 43,475 | 43,235 | 43,194 | 42,509 | 42,543 |
| 7 Excess reserve balances at Reserve Banks[7] | 1,278 | 1,423 | 1,683 | 1,345 | 1,150 | 1,620 | 1,365 | 1,513 | 1,684 | 1,579 |
| 8 Total borrowings at Reserve Banks[8] | 257 | 155 | 324 | 72 | 153 | 251 | 258 | 271 | 251 | 174 |
| 9 Seasonal borrowings | 40 | 68 | 79 | 41 | 94 | 159 | 215 | 242 | 178 | 107 |
| 10 Extended credit[9] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Biweekly averages of daily figures for two week periods ending on dates indicated | | | | | | | | | |
| | 1998 | | | | | | | | | |
| | July 1 | July 15 | July 29 | Aug. 12 | Aug. 26 | Sept. 9 | Sept. 23 | Oct. 7[r] | Oct. 21 | Nov. 4 |
| 1 Reserve balances with Reserve Banks[2] | 9,969 | 10,225 | 8,933 | 10,428 | 8,800 | 10,363 | 8,439 | 9,588 | 8,400 | 9,531 |
| 2 Total vault cash[3] | 41,919 | 42,101 | 41,984 | 41,984 | 42,355 | 41,793 | 42,900 | 42,948 | 44,084 | 42,598 |
| 3 Applied vault cash[4] | 35,060 | 35,102 | 34,770 | 35,157 | 35,024 | 34,712 | 35,039 | 34,905 | 35,321 | 34,895 |
| 4 Surplus vault cash[5] | 6,859 | 6,999 | 7,214 | 6,827 | 7,330 | 7,081 | 7,862 | 8,043 | 8,763 | 7,703 |
| 5 Total reserves[6] | 45,029 | 45,326 | 43,703 | 45,585 | 43,824 | 45,075 | 43,477 | 44,493 | 43,720 | 44,426 |
| 6 Required reserves | 43,232 | 43,999 | 42,341 | 44,147 | 42,392 | 43,153 | 42,093 | 42,514 | 42,520 | 42,597 |
| 7 Excess reserve balances at Reserve Banks[7] | 1,797 | 1,327 | 1,362 | 1,437 | 1,431 | 1,922 | 1,384 | 1,978 | 1,200 | 1,829 |
| 8 Total borrowings at Reserve Banks[8] | 285 | 198 | 314 | 271 | 280 | 247 | 190 | 379 | 122 | 103 |
| 9 Seasonal borrowings | 184 | 196 | 233 | 241 | 255 | 209 | 171 | 152 | 105 | 79 |
| 10 Extended credit[9] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

1. Data in this table also appear in the Board's H.3 (502) weekly statistical release. For ordering address, see inside front cover. Data are not break-adjusted or seasonally adjusted.
2. Excludes required clearing balances and adjustments to compensate for float and includes other off-balance-sheet "as-of" adjustments.
3. Total "lagged" vault cash held by depository institutions subject to reserve requirements. Dates refer to the maintenance periods during which the vault cash may be used to satisfy reserve requirements. The maintenance period for weekly reporters ends sixteen days after the lagged computation period during which the vault cash is held. Before Nov. 25, 1992, the maintenance period ended thirty days after the lagged computation period.
4. All vault cash held during the lagged computation period by "bound" institutions (that is, those whose required reserves exceed their vault cash) plus the amount of vault cash applied during the maintenance period by "nonbound" institutions (that is, those whose vault cash exceeds their required reserves) to satisfy current reserve requirements.
5. Total vault cash (line 2) less applied vault cash (line 3).
6. Reserve balances with Federal Reserve Banks (line 1) plus applied vault cash (line 3).
7. Total reserves (line 5) less required reserves (line 6).
8. Also includes adjustment credit.
9. Consists of borrowing at the discount window under the terms and conditions established for the extended credit program to help depository institutions deal with sustained liquidity pressures. Because there is not the same need to repay such borrowing promptly as with traditional short-term adjustment credit, the money market effect of extended credit is similar to that of nonborrowed reserves.

## 1.14 FEDERAL RESERVE BANK INTEREST RATES

Percent per year

Current and previous levels

| Federal Reserve Bank | Adjustment credit[1] | | | Seasonal credit[2] | | | Extended credit[3] | | |
|---|---|---|---|---|---|---|---|---|---|
| | On 12/4/98 | Effective date | Previous rate | On 12/4/98 | Effective date | Previous rate | On 12/4/98 | Effective date | Previous rate |
| Boston | 4.50 | 11/18/98 | 4.75 | 4.95 | 12/3/98 | 5.05 | 5.45 | 12/3/98 | 5.55 |
| New York | | 11/17/98 | | | | | | | |
| Philadelphia | | 11/17/98 | | | | | | | |
| Cleveland | | 11/19/98 | | | | | | | |
| Richmond | | 11/18/98 | | | | | | | |
| Atlanta | | 11/18/98 | | | | | | | |
| Chicago | | 11/19/98 | | | | | | | |
| St. Louis | | 11/19/98 | | | | | | | |
| Minneapolis | | 11/19/98 | | | | | | | |
| Kansas City | | 11/18/98 | | | | | | | |
| Dallas | | 11/17/98 | | | | | | | |
| San Francisco | 4.50 | 11/17/98 | 4.75 | 4.95 | 12/3/98 | 5.05 | 5.45 | 12/3/98 | 5.55 |

Range of rates for adjustment credit in recent years[4]

| Effective date | Range (or level)—All F.R. Banks | F.R. Bank of N.Y. |
|---|---|---|
| In effect Dec. 31, 1977 | 6 | 6 |
| 1978—Jan. 9 | 6–6.5 | 6.5 |
| 20 | 6.5 | 6.5 |
| May 11 | 6.5–7 | 7 |
| 12 | 7 | 7 |
| July 3 | 7–7.25 | 7.25 |
| 10 | 7.25 | 7.25 |
| Aug. 21 | 7.75 | 7.75 |
| Sept. 22 | 8 | 8 |
| Oct. 16 | 8–8.5 | 8.5 |
| 20 | 8.5 | 8.5 |
| Nov. 1 | 8.5–9.5 | 9.5 |
| 3 | 9.5 | 9.5 |
| 1979—July 20 | 10 | 10 |
| Aug. 17 | 10–10.5 | 10.5 |
| 20 | 10.5 | 10.5 |
| Sept. 19 | 10.5–11 | 11 |
| 21 | 11 | 11 |
| Oct. 8 | 11–12 | 12 |
| 10 | 12 | 12 |
| 1980—Feb. 15 | 12–13 | 13 |
| 19 | 13 | 13 |
| May 29 | 12–13 | 13 |
| 30 | 12 | 12 |
| June 13 | 11–12 | 11 |
| 16 | 11 | 11 |
| July 28 | 10–11 | 10 |
| 29 | 10 | 10 |
| Sept. 26 | 11 | 11 |
| Nov. 17 | 12 | 12 |
| Dec. 5 | 12–13 | 13 |
| 8 | 13 | 13 |
| 1981—May 5 | 13–14 | 14 |
| 8 | 14 | 14 |

| Effective date | Range (or level)—All F.R. Banks | F.R. Bank of N.Y. |
|---|---|---|
| 1981—Nov. 2 | 13–14 | 13 |
| 6 | 13 | 13 |
| Dec. 4 | 12 | 12 |
| 1982—July 20 | 11.5–12 | 11.5 |
| 23 | 11.5 | 11.5 |
| Aug. 2 | 11–11.5 | 11 |
| 3 | 11 | 11 |
| 16 | 10.5 | 10.5 |
| 27 | 10–10.5 | 10 |
| 30 | 10 | 10 |
| Oct. 12 | 9.5–10 | 9.5 |
| 13 | 9.5 | 9.5 |
| Nov. 22 | 9–9.5 | 9 |
| 26 | 9 | 9 |
| Dec. 14 | 8.5–9 | 9 |
| 15 | 8.5–9 | 8.5 |
| 17 | 8.5 | 8.5 |
| 1984—Apr. 9 | 8.5–9 | 9 |
| 13 | 9 | 9 |
| Nov. 21 | 8.5–9 | 8.5 |
| 26 | 8.5 | 8.5 |
| Dec. 24 | 8 | 8 |
| 1985—May 20 | 7.5–8 | 7.5 |
| 24 | 7.5 | 7.5 |
| 1986—Mar. 7 | 7–7.5 | 7 |
| 10 | 7 | 7 |
| Apr. 21 | 6.5–7 | 6.5 |
| 23 | 6.5 | 6.5 |
| July 11 | 6 | 6 |
| Aug. 21 | 5.5–6 | 5.5 |
| 22 | 5.5 | 5.5 |
| 1987—Sept. 4 | 5.5–6 | 6 |
| 11 | 6 | 6 |

| Effective date | Range (or level)—All F.R. Banks | F.R. Bank of N.Y. |
|---|---|---|
| 1988—Aug. 9 | 6–6.5 | 6.5 |
| 11 | 6.5 | 6.5 |
| 1989—Feb. 24 | 6.5–7 | 7 |
| 27 | 7 | 7 |
| 1990—Dec. 19 | 6.5 | 6.5 |
| 1991—Feb. 1 | 6–6.5 | 6 |
| 4 | 6 | 6 |
| Apr. 30 | 5.5–6 | 5.5 |
| May 2 | 5.5 | 5.5 |
| Sept. 13 | 5–5.5 | 5 |
| 17 | 5 | 5 |
| Nov. 6 | 4.5–5 | 4.5 |
| 7 | 4.5 | 4.5 |
| Dec. 20 | 3.5–4.5 | 3.5 |
| 24 | 3.5 | 3.5 |
| 1992—July 2 | 3–3.5 | 3 |
| 7 | 3 | 3 |
| 1994—May 17 | 3–3.5 | 3.5 |
| 18 | 3.5 | 3.5 |
| Aug. 16 | 3.5–4 | 4 |
| 18 | 4 | 4 |
| Nov. 15 | 4–4.75 | 4.75 |
| 17 | 4.75 | 4.75 |
| 1995—Feb. 1 | 4.75–5.25 | 5.25 |
| 9 | 5.25 | 5.25 |
| 1996—Jan. 31 | 5.00–5.25 | 5.00 |
| Feb. 5 | 5.00 | 5.00 |
| 1998—Oct. 15 | 4.75–5.00 | 4.75 |
| Oct. 16 | 4.75 | 4.75 |
| 1998—Nov. 17 | 4.50–4.75 | 4.50 |
| Nov. 19 | 4.50 | 4.50 |
| In effect Dec. 4, 1998 | 4.50 | 4.50 |

1. Available on a short-term basis to help depository institutions meet temporary needs for funds that cannot be met through reasonable alternative sources. The highest rate established for loans to depository institutions may be charged on adjustment credit loans of unusual size that result from a major operating problem at the borrower's facility.

2. Available to help relatively small depository institutions meet regular seasonal needs for funds that arise from a clear pattern of intrayearly movements in their deposits and loans and that cannot be met through special industry lenders. The discount rate on seasonal credit takes into account rates charged by market sources of funds and ordinarily is reestablished on the first business day of each two-week reserve maintenance period; however, it is never less than the discount rate applicable to adjustment credit.

3. May be made available to depository institutions when similar assistance is not reasonably available from other sources, including special industry lenders. Such credit may be provided when exceptional circumstances (including sustained deposit drains, impaired access to money market funds, or sudden deterioration in loan repayment performance) or practices involve only a particular institution, or to meet the needs of institutions experiencing difficulties adjusting to changing market conditions over a longer period (particularly at times of deposit disintermediation). The discount rate applicable to adjustment credit ordinarily is charged on extended-credit loans outstanding less than thirty days; however, at the discretion of the Federal Reserve Bank, this time period may be shortened. Beyond this initial period, a flexible rate somewhat above rates charged on market sources of funds is charged. The rate ordinarily is reestablished on the first business day of each two-week reserve maintenance period, but it is never less than the discount rate applicable to adjustment credit plus 50 basis points.

4. For earlier data, see the following publications of the Board of Governors: *Banking and Monetary Statistics, 1914–1941*, and *1941–1970*; and the *Annual Statistical Digest, 1970–1979*.

In 1980 and 1981, the Federal Reserve applied a surcharge to short-term adjustment-credit borrowings by institutions with deposits of $500 million or more that had borrowed in successive weeks or in more than four weeks in a calendar quarter. A 3 percent surcharge was in effect from Mar. 17, 1980, through May 7, 1980. A surcharge of 2 percent was reimposed on Nov. 17, 1980; the surcharge was subsequently raised to 3 percent on Dec. 5, 1980, and to 4 percent on May 5, 1981. The surcharge was reduced to 3 percent effective Sept. 22, 1981, and to 2 percent effective Oct. 12, 1981. As of Oct. 1, 1981, the formula for applying the surcharge was changed from a calendar quarter to a moving thirteen-week period. The surcharge was eliminated on Nov. 17, 1981.

## 1.15 RESERVE REQUIREMENTS OF DEPOSITORY INSTITUTIONS[1]

| Type of deposit | Requirement | |
|---|---|---|
| | Percentage of deposits | Effective date |
| *Net transaction accounts*[2] | | |
| 1 $0 million–$47.8 million[3] | 3 | 12/31/98 |
| 2 More than $47.8 million[4] | 10 | 12/31/98 |
| 3 Nonpersonal time deposits[5] | 0 | 12/27/90 |
| 4 Eurocurrency liabilities[6] | 0 | 12/27/90 |

1. Required reserves must be held in the form of deposits with Federal Reserve Banks or vault cash. Nonmember institutions may maintain reserve balances with a Federal Reserve Bank indirectly, on a pass-through basis, with certain approved institutions. For previous reserve requirements, see earlier editions of the *Annual Report* or the *Federal Reserve Bulletin.* Under the Monetary Control Act of 1980, depository institutions include commercial banks, mutual savings banks, savings and loan associations, credit unions, agencies and branches of foreign banks, and Edge Act corporations.

2. Transaction accounts include all deposits against which the account holder is permitted to make withdrawals by negotiable or transferable instruments, payment orders of withdrawal, or telephone or preauthorized transfers for the purpose of making payments to third persons or others. However, accounts subject to the rules that permit no more than six preauthorized, automatic, or other transfers per month (of which no more than three may be by check, draft, debit card, or similar order payable directly to third parties) are savings deposits, not transaction accounts.

3. The Monetary Control Act of 1980 requires that the amount of transaction accounts against which the 3 percent reserve requirement applies be modified annually by 80 percent of the percentage change in transaction accounts held by all depository institutions, determined as of June 30 of each year. Effective with the reserve maintenance period beginning December 31, 1998, for depository institutions that report weekly, and with the period beginning January 14, 1999, for institutions that report quarterly, the amount was decreased from $47.8 million to $46.5 million.

Under the Garn–St Germain Depository Institutions Act of 1982, the Board adjusts the amount of reservable liabilities subject to a zero percent reserve requirement each year for the succeeding calendar year by 80 percent of the percentage increase in the total reservable liabilities of all depository institutions, measured on an annual basis as of June 30. No corresponding adjustment is made in the event of a decrease. The exemption applies only to accounts that would be subject to a 3 percent reserve requirement. Effective with the reserve maintenance period beginning December 31, 1998, for depository institutions that report weekly, and with the period beginning January 14, 1999, for institutions that report quarterly, the exemption was raised from $4.7 million to $4.9 million.

4. The reserve requirement was reduced from 12 percent to 10 percent on Apr. 2, 1992, for institutions that report weekly, and on Apr. 16, 1992, for institutions that report quarterly.

5. For institutions that report weekly, the reserve requirement on nonpersonal time deposits with an original maturity of less than 1½ years was reduced from 3 percent to 1½ percent for the maintenance period that began Dec. 13, 1990, and to zero for the maintenance period that began Dec. 27, 1990. For institutions that report quarterly, the reserve requirement on nonpersonal time deposits with an original maturity of less than 1½ years was reduced from 3 percent to zero on Jan. 17, 1991.

The reserve requirement on nonpersonal time deposits with an original maturity of 1½ years or more has been zero since Oct. 6, 1983.

6. The reserve requirement on Eurocurrency liabilities was reduced from 3 percent to zero in the same manner and on the same dates as the reserve requirement on nonpersonal time deposits with an original maturity of less than 1½ years (see note 5).

## 1.17 FEDERAL RESERVE OPEN MARKET TRANSACTIONS[1]

Millions of dollars

| Type of transaction and maturity | 1995 | 1996 | 1997 | 1998 Mar. | Apr. | May | June | July | Aug. | Sept. |
|---|---|---|---|---|---|---|---|---|---|---|
| U.S. TREASURY SECURITIES[2] | | | | | | | | | | |
| *Outright transactions (excluding matched transactions)* | | | | | | | | | | |
| Treasury bills | | | | | | | | | | |
| 1 Gross purchases | 10,932 | 9,901 | 9,147 | 0 | 3,550 | 0 | 0 | 0 | 0 | 0 |
| 2 Gross sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 Exchanges | 405,296 | 426,928 | 436,257 | 34,025 | 46,802 | 35,190 | 32,830 | 40,312 | 34,607 | 33,140 |
| 4 For new bills | 405,296 | 426,928 | 435,907 | 34,025 | 46,802 | 35,190 | 32,830 | 40,312 | 34,607 | 33,140 |
| 5 Redemptions | 900 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Others within one year | | | | | | | | | | |
| 6 Gross purchases | 390 | 524 | 5,549 | 1,501 | 1,369 | 0 | 0 | 0 | 986 | 1,038 |
| 7 Gross sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 Maturity shifts | 43,574 | 30,512 | 41,716 | 1,964 | 4,369 | 6,951 | 1,520 | 2,638 | 6,367 | 2,301 |
| 9 Exchanges | −35,407 | −41,394 | −27,499 | −5,736 | −2,601 | −4,990 | −5,084 | −2,242 | −8,964 | −2,242 |
| 10 Redemptions | 1,776 | 2,015 | 1,996 | 0 | 286 | 0 | 0 | 1,311 | 0 | 0 |
| One to five years | | | | | | | | | | |
| 11 Gross purchases | 5,366 | 3,898 | 19,680 | 2,262 | 2,993 | 0 | 0 | 0 | 535 | 3,989 |
| 12 Gross sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 Maturity shifts | −34,646 | −25,022 | −37,987 | −1,964 | −4,369 | −6,620 | −1,520 | −2,638 | −2,168 | −2,301 |
| 14 Exchanges | 26,387 | 31,459 | 20,274 | 5,736 | 2,201 | 2,270 | 5,084 | 1,842 | 5,828 | 2,242 |
| Five to ten years | | | | | | | | | | |
| 15 Gross purchases | 1,432 | 1,116 | 3,849 | 283 | 495 | 0 | 0 | 0 | 303 | 351 |
| 16 Gross sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 Maturity shifts | −3,093 | −5,469 | −1,954 | 0 | 0 | −331 | 0 | 0 | −3,411 | 0 |
| 18 Exchanges | 7,220 | 6,666 | 5,215 | 0 | 0 | 2,720 | 0 | 0 | 1,364 | 0 |
| More than ten years | | | | | | | | | | |
| 19 Gross purchases | 2,529 | 1,655 | 5,897 | 743 | 0 | 0 | 0 | 0 | 1,769 | 0 |
| 20 Gross sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 Maturity shifts | −2,253 | −20 | −1,775 | 0 | 0 | 0 | 0 | 0 | −789 | 0 |
| 22 Exchanges | 1,800 | 3,270 | 2,360 | 0 | 400 | 0 | 0 | 400 | 1,772 | 0 |
| All maturities | | | | | | | | | | |
| 23 Gross purchases | 20,649 | 17,094 | 44,122 | 4.789 | 8,407 | 0 | 0 | 0 | 3,593 | 5,377 |
| 24 Gross sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 Redemptions | 2,676 | 2,015 | 1,996 | 0 | 286 | 0 | 0 | 1,311 | 0 | 0 |
| *Matched transactions* | | | | | | | | | | |
| 26 Gross purchases | 2,197,736 | 3,092,399 | 3,577,954 | 364,307 | 354,756 | 367,934 | 369,358 | 373,285 | 346,245 | 380,594 |
| 27 Gross sales | 2,202,030 | 3,094,769 | 3,580,274 | 364,537 | 354,741 | 368,281 | 370,569 | 371,142 | 348,318 | 382,063 |
| *Repurchase agreements* | | | | | | | | | | |
| 28 Gross purchases | 331,694 | 457,568 | 810,485 | 40,211 | 59,548 | 7,722 | 57,098 | 52,116 | 39,078 | 63,924 |
| 29 Gross sales | 328,497 | 450,359 | 809,268 | 37,010 | 50,663 | 20,456 | 41,414 | 63,531 | 38,402 | 59,731 |
| 30 Net change in U.S. Treasury securities | 16,875 | 19,919 | 41,022 | 7,760 | 17,021 | −13,081 | 14,473 | −10,584 | 2,196 | 8,101 |
| FEDERAL AGENCY OBLIGATIONS | | | | | | | | | | |
| *Outright transactions* | | | | | | | | | | |
| 31 Gross purchases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 Gross sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 |
| 33 Redemptions | 1,003 | 409 | 1,540 | 50 | 74 | 0 | 25 | 0 | 50 | 48 |
| *Repurchase agreements* | | | | | | | | | | |
| 34 Gross purchases | 36,851 | 75,354 | 160,409 | 17,685 | 13,547 | 1,575 | 14,548 | 11,236 | 33,431 | 18,486 |
| 35 Gross sales | 36,776 | 74,842 | 159,369 | 18,342 | 13,042 | 3,300 | 12,913 | 12,341 | 30,625 | 19,953 |
| 36 Net change in federal agency obligations | −928 | 103 | −500 | −707 | 431 | −1,725 | 1,610 | −1,105 | 2,731 | −1.515 |
| **37 Total net change in System Open Market Account** | **15,948** | **20,021** | **40,522** | **7,053** | **17,452** | **−14,806** | **16,083** | **−11,689** | **4,927** | **6,586** |

1. Sales, redemptions, and negative figures reduce holdings of the System Open Market Account; all other figures increase such holdings.

2. Transactions exclude changes in compensation for the effects of inflation on the principal of inflation-indexed securities.

## 1.18 FEDERAL RESERVE BANKS Condition and Federal Reserve Note Statements[1]

Millions of dollars

| Account | Wednesday 1998 | | | | | End of month 1998 | | |
|---|---|---|---|---|---|---|---|---|
| | Sept. 30 | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 | Aug. 31 | Sept. 30 | Oct. 31 |
| | Consolidated condition statement | | | | | | | |
| ASSETS | | | | | | | | |
| 1 Gold certificate account | 11,044 | 11,044 | 11,044 | 11,044 | 11,041 | 11,046 | 11,044 | 11,041 |
| 2 Special drawing rights certificate account | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 |
| 3 Coin | 417 | 409 | 411 | 413 | 458 | 423 | 417 | 426 |
| *Loans* | | | | | | | | |
| 4 To depository institutions | 1,055 | 130 | 210 | 95 | 84 | 293 | 1,055 | 69 |
| 5 Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 Acceptances held under repurchase agreements | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Federal agency obligations* | | | | | | | | |
| 7 Bought outright | 403 | 403 | 388 | 388 | 388 | 451 | 403 | 388 |
| 8 Held under repurchase agreements | 2,099 | 2,840 | 4,570 | 5,488 | 3,440 | 3,566 | 2,099 | 3,538 |
| 9 **Total U.S. Treasury securities** | **458,182** | **451,995** | **449,732** | **452,147** | **450,245** | **450,077** | **458,182** | **454,465** |
| 10 Bought outright[2] | 446,047 | 447,457 | 447,687 | 448,032 | 447,966 | 442,135 | 446,047 | 450,179 |
| 11 Bills | 195,864 | 196,216 | 196,445 | 197,387 | 196,578 | 197,334 | 195,864 | 197,450 |
| 12 Notes | 184,186 | 184,187 | 184,188 | 183,591 | 184,333 | 178,826 | 184,186 | 185,033 |
| 13 Bonds | 65,996 | 67,054 | 67,054 | 67,055 | 67,055 | 65,975 | 65,996 | 67,696 |
| 14 Held under repurchase agreements | 12,135 | 4,538 | 2,045 | 4,115 | 2,279 | 7,942 | 12,135 | 4,286 |
| 15 **Total loans and securities** | **461,738** | **455,368** | **454,899** | **458,117** | **454,157** | **454,386** | **461,738** | **458,460** |
| 16 Items in process of collection | 6,454 | 8,040 | 11,600 | 6,965 | 6,398 | 2,465 | 6,454 | 4,702 |
| 17 Bank premises | 1,295 | 1,296 | 1,296 | 1,296 | 1,295 | 1,293 | 1,295 | 1,293 |
| *Other assets* | | | | | | | | |
| 18 Denominated in foreign currencies[3] | 18,448 | 18,458 | 18,467 | 18,477 | 18,486 | 17,601 | 18,448 | 19,573 |
| 19 All other[4] | 15,880 | 14,451 | 14,532 | 14,701 | 15,114 | 13,671 | 15,880 | 15,976 |
| 20 **Total assets** | **524,476** | **518,266** | **521,449** | **520,213** | **516,148** | **510,087** | **524,476** | **520,672** |
| LIABILITIES | | | | | | | | |
| 21 Federal Reserve notes | 468,759 | 470,380 | 472,955 | 472,061 | 472,533 | 463,179 | 468,759 | 471,851 |
| 22 **Total deposits** | **31,353** | **23,865** | **21,861** | **24,190** | **20,448** | **27,520** | **31,353** | **25,568** |
| 23 Depository institutions | 25,706 | 17,950 | 16,380 | 18,773 | 13,385 | 20,321 | 25,706 | 20,592 |
| 24 U.S. Treasury—General account | 4,952 | 5,291 | 4,895 | 4,842 | 6,382 | 6,704 | 4,952 | 4,440 |
| 25 Foreign—Official accounts | 347 | 196 | 189 | 177 | 213 | 162 | 347 | 154 |
| 26 Other | 349 | 427 | 397 | 398 | 467 | 332 | 349 | 380 |
| 27 Deferred credit items | 6,711 | 7,123 | 9,755 | 6,937 | 6,240 | 1,968 | 6,711 | 5,012 |
| 28 Other liabilities and accrued dividends[5] | 4,637 | 4,506 | 4,451 | 4,588 | 4,477 | 4,750 | 4,637 | 4,518 |
| 29 **Total liabilities** | **511,460** | **505,874** | **509,022** | **507,776** | **503,697** | **497,417** | **511,460** | **506,948** |
| CAPITAL ACCOUNTS | | | | | | | | |
| 30 Capital paid in | 5,910 | 5,914 | 5,915 | 5,916 | 5,919 | 5,866 | 5,910 | 5,920 |
| 31 Surplus | 5,220 | 5,220 | 5,220 | 5,220 | 5,220 | 5,220 | 5,220 | 5,220 |
| 32 Other capital accounts | 1,886 | 1,257 | 1,292 | 1,300 | 1,311 | 1,583 | 1,886 | 2,583 |
| 33 **Total liabilities and capital accounts** | **524,476** | **518,266** | **521,449** | **520,213** | **516,148** | **510,087** | **524,476** | **520,672** |
| MEMO | | | | | | | | |
| 34 Marketable U.S. Treasury securities held in custody for foreign and international accounts | 564,692 | 569,016 | 571,910 | 571,910 | 576,334 | 573,571 | 564,692 | 576,466 |
| | Federal Reserve note statement | | | | | | | |
| 35 Federal Reserve notes outstanding (issued to Banks) | 580,575 | 583,371 | 585,227 | 586,916 | 587,780 | 574,813 | 580,575 | 588,229 |
| 36 LESS: Held by Federal Reserve Banks | 111,817 | 112,991 | 112,272 | 114,855 | 115,247 | 111,635 | 111,817 | 116,378 |
| 37 Federal Reserve notes, net | 468,759 | 470,380 | 472,955 | 472,061 | 472,533 | 463,179 | 468,759 | 471,851 |
| *Collateral held against notes, net* | | | | | | | | |
| 38 Gold certificate account | 11,044 | 11,044 | 11,044 | 11,044 | 11,041 | 11,046 | 11,044 | 11,041 |
| 39 Special drawing rights certificate account | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 |
| 40 Other eligible assets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 U.S. Treasury and agency securities | 448,515 | 450,137 | 452,711 | 451,817 | 452,292 | 442,932 | 448,515 | 451,610 |
| 42 **Total collateral** | **468,759** | **470,380** | **472,955** | **472,061** | **472,533** | **463,179** | **468,759** | **471,851** |

1. Some of the data in this table also appear in the Board's H.4.1 (503) weekly statistical release. For ordering address, see inside front cover.
2. Includes securities loaned—fully guaranteed by U.S. Treasury securities pledged with Federal Reserve Banks—and includes compensation that adjusts for the effects of inflation on the principal of inflation-indexed securities. Excludes securities sold and scheduled to be bought back under matched sale–purchase transactions.
3. Valued monthly at market exchange rates.
4. Includes special investment account at the Federal Reserve Bank of Chicago in Treasury bills maturing within ninety days.
5. Includes exchange-translation account reflecting the monthly revaluation at market exchange rates of foreign exchange commitments.

## 1.19 FEDERAL RESERVE BANKS Maturity Distribution of Loan and Security Holding

Millions of dollars

| Type of holding and maturity | Wednesday | | | | | End of month | | |
|---|---|---|---|---|---|---|---|---|
| | 1998 | | | | | 1998 | | |
| | Sept. 30 | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 | Aug. 31 | Sept. 30 | Oct. 30 |
| 1 **Total loans** | **1,055** | **130** | **210** | **95** | **84** | **293** | **233** | **69** |
| 2 Within fifteen days[1] | 973 | 26 | 113 | 88 | 76 | 176 | 155 | 51 |
| 3 Sixteen days to ninety days | 82 | 104 | 97 | 7 | 8 | 117 | 78 | 18 |
| 4 **Total U.S. Treasury securities**[2] | **458,182** | **451,995** | **449,732** | **452,147** | **450,245** | **442,135** | **458,182** | **454,465** |
| 5 Within fifteen days[1] | 20,310 | 13,238 | 17,052 | 13,874 | 12,666 | 15,104 | 20,310 | 8,752 |
| 6 Sixteen days to ninety days | 90,644 | 93,791 | 93,953 | 94,188 | 92,901 | 92,231 | 90,644 | 100,244 |
| 7 Ninety-one days to one year | 145,875 | 142,555 | 136,315 | 141,674 | 142,266 | 145,997 | 145,875 | 141,715 |
| 8 One year to five years | 105,789 | 105,789 | 105,789 | 105,383 | 105,384 | 101,535 | 105,789 | 106,109 |
| 9 Five years to ten years | 41,628 | 41,628 | 41,629 | 42,033 | 42,033 | 41,276 | 41,628 | 42,034 |
| 10 More than ten years | 53,936 | 54,994 | 54,994 | 54,994 | 54,994 | 53,935 | 53,936 | 55,611 |
| 11 **Total federal agency obligations** | **2,502** | **3,243** | **4,958** | **5,876** | **3,828** | **4,017** | **2,502** | **3,926** |
| 12 Within fifteen days[1] | 2,099 | 2,840 | 4,570 | 5,488 | 3,440 | 3,614 | 2,099 | 3,538 |
| 13 Sixteen days to ninety days | 50 | 50 | 50 | 50 | 50 | 5 | 50 | 52 |
| 14 Ninety-one days to one year | 75 | 85 | 85 | 85 | 85 | 120 | 75 | 93 |
| 15 One year to five years | 93 | 83 | 68 | 68 | 58 | 93 | 93 | 58 |
| 16 Five years to ten years | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 |
| 17 More than ten years | n.a. | 0 | 0 | 0 | 0 | n.a. | n.a. | 0 |

1. Holdings under repurchase agreements are classified as maturing within fifteen days in accordance with maximum maturity of the agreements.

2. Includes compensation that adjusts for the effects of inflation on the principal of inflation-indexed securities.

## 1.20 AGGREGATE RESERVES OF DEPOSITORY INSTITUTIONS AND MONETARY BASE[1]

Billions of dollars, averages of daily figures

| Item | 1994 Dec. | 1995 Dec. | 1996 Dec. | 1997 Dec. | 1998 Mar. | 1998 Apr. | 1998 May | 1998 June | 1998 July | 1998 Aug. | 1998 Sept. | 1998 Oct. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ADJUSTED FOR CHANGES IN RESERVE REQUIREMENTS[2] | Seasonally adjusted | | | | | | | | | | | |
| 1 Total reserves[3] | 59.41 | 56.40 | 50.08 | 46.67 | 46.05 | 45.96 | 45.59 | 45.39 | 44.81 | 45.00 | 44.59 | 44.39 |
| 2 Nonborrowed reserves[4] | 59.20 | 56.14 | 49.93 | 46.35 | 46.00 | 45.89 | 45.44 | 45.14 | 44.56 | 44.73 | 44.33[r] | 44.22 |
| 3 Nonborrowed reserves plus extended credit[5] | 59.20 | 56.14 | 49.93 | 46.35 | 46.00 | 45.89 | 45.44 | 45.14 | 44.56 | 44.73 | 44.33[r] | 44.22 |
| 4 Required reserves | 58.24 | 55.12 | 48.66 | 44.99 | 44.73 | 44.61 | 44.44 | 43.77 | 43.45 | 43.48 | 42.90 | 42.81 |
| 5 Monetary base[6] | 418.12 | 434.17 | 452.38 | 480.15 | 485.86 | 487.20 | 489.10 | 491.63 | 493.70[r] | 497.37[r] | 502.16[r] | 506.06 |
| | Not seasonally adjusted | | | | | | | | | | | |
| 6 Total reserves[7] | 61.13 | 58.02 | 51.52 | 47.97 | 45.54 | 46.53 | 44.87 | 45.17 | 44.69 | 44.81 | 44.31 | 44.25 |
| 7 Nonborrowed reserves | 60.92 | 57.76 | 51.37 | 47.65 | 45.50 | 46.45 | 44.71 | 44.92 | 44.43 | 44.54 | 44.06 | 44.08 |
| 8 Nonborrowed reserves plus extended credit[5] | 60.92 | 57.76 | 51.37 | 47.65 | 45.50 | 46.45 | 44.71 | 44.92 | 44.43 | 44.54 | 44.06 | 44.08 |
| 9 Required reserves[8] | 59.96 | 56.74 | 50.10 | 46.29 | 44.23 | 45.18 | 43.72 | 43.55 | 43.32 | 43.30 | 42.63 | 42.67 |
| 10 Monetary base[9] | 422.51 | 439.03 | 456.72 | 485.11 | 484.00 | 487.36 | 488.28 | 491.18 | 495.35[r] | 497.56[r] | 501.04[r] | 504.55 |
| NOT ADJUSTED FOR CHANGES IN RESERVE REQUIREMENTS[10] | | | | | | | | | | | | |
| 11 Total reserves[11] | 61.34 | 57.90 | 51.24 | 47.88 | 45.51 | 46.48 | 44.81 | 45.10 | 44.60 | 44.71 | 44.19[r] | 44.12 |
| 12 Nonborrowed reserves | 61.13 | 57.64 | 51.09 | 47.56 | 45.47 | 46.40 | 44.65 | 44.84 | 44.34 | 44.44 | 43.94 | 43.95 |
| 13 Nonborrowed reserves plus extended credit[5] | 61.13 | 57.64 | 51.09 | 47.56 | 45.47 | 46.40 | 44.65 | 44.84 | 44.34 | 44.44 | 43.94 | 43.95 |
| 14 Required reserves | 60.17 | 56.62 | 49.82 | 46.20 | 44.19 | 45.13 | 43.66 | 43.48 | 43.24 | 43.19 | 42.51 | 42.54 |
| 15 Monetary base[12] | 427.25 | 444.45 | 463.49 | 491.92 | 490.96 | 494.11 | 494.95 | 497.93 | 502.20[r] | 504.46[r] | 507.85[r] | 511.40 |
| 16 Excess reserves[13] | 1.17 | 1.28 | 1.42 | 1.68 | 1.31 | 1.35 | 1.15 | 1.62 | 1.37 | 1.51 | 1.68[r] | 1.58 |
| 17 Borrowings from the Federal Reserve | .21 | .26 | .16 | .32 | .04 | .07 | .15 | .25 | .26 | .27 | .25 | .17 |

1. Latest monthly and biweekly figures are available from the Board's H.3 (502) weekly statistical release. Historical data starting in 1959 and estimates of the effect on required reserves of changes in reserve requirements are available from the Money and Reserves Projections Section, Division of Monetary Affairs, Board of Governors of the Federal Reserve System, Washington, DC 20551.

2. Figures reflect adjustments for discontinuities, or "breaks," associated with regulatory changes in reserve requirements. (See also table 1.10.)

3. Seasonally adjusted, break-adjusted total reserves equal seasonally adjusted, break-adjusted required reserves (line 4) plus excess reserves (line 16).

4. Seasonally adjusted, break-adjusted nonborrowed reserves equal seasonally adjusted, break-adjusted total reserves (line 1) less total borrowings of depository institutions from the Federal Reserve (line 17).

5. Extended credit consists of borrowing at the discount window under the terms and conditions established for the extended credit program to help depository institutions deal with sustained liquidity pressures. Because there is not the same need to repay such borrowing promptly as with traditional short-term adjustment credit, the money market effect of extended credit is similar to that of nonborrowed reserves.

6. The seasonally adjusted, break-adjusted monetary base consists of (1) seasonally adjusted, break-adjusted total reserves (line 1), plus (2) the seasonally adjusted currency component of the money stock, plus (3) (for all quarterly reporters on the "Report of Transaction Accounts, Other Deposits and Vault Cash" and for all those weekly reporters whose vault cash exceeds their required reserves) the seasonally adjusted, break-adjusted difference between current vault cash and the amount applied to satisfy current reserve requirements.

7. Break-adjusted total reserves equal break-adjusted required reserves (line 9) plus excess reserves (line 16).

8. To adjust required reserves for discontinuities that are due to regulatory changes in reserve requirements, a multiplicative procedure is used to estimate what required reserves would have been in past periods had current reserve requirements been in effect. Break-adjusted required reserves include required reserves against transactions deposits and nonpersonal time and savings deposits (but not reservable nondeposit liabilities).

9. The break-adjusted monetary base equals (1) break-adjusted total reserves (line 6), plus (2) the (unadjusted) currency component of the money stock, plus (3) (for all quarterly reporters on the "Report of Transaction Accounts, Other Deposits and Vault Cash" and for all those weekly reporters whose vault cash exceeds their required reserves) the break-adjusted difference between current vault cash and the amount applied to satisfy current reserve requirements.

10. Reflects actual reserve requirements, including those on nondeposit liabilities, with no adjustments to eliminate the effects of discontinuities associated with regulatory changes in reserve requirements.

11. Reserve balances with Federal Reserve Banks plus vault cash used to satisfy reserve requirements.

12. The monetary base, not break-adjusted and not seasonally adjusted, consists of (1) total reserves (line 11), plus (2) required clearing balances and adjustments to compensate for float at Federal Reserve Banks, plus (3) the currency component of the money stock, plus (4) (for all quarterly reporters on the "Report of Transaction Accounts, Other Deposits and Vault Cash" and for all those weekly reporters whose vault cash exceeds their required reserves) the difference between current vault cash and the amount applied to satisfy current reserve requirements. Since the introduction of contemporaneous reserve requirements in February 1984, currency and vault cash figures have been measured over the computation periods ending on Mondays.

13. Unadjusted total reserves (line 11) less unadjusted required reserves (line 14).

## 1.21 MONEY STOCK, LIQUID ASSETS, AND DEBT MEASURES[1]

Billions of dollars, averages of daily figures

| Item | 1994 Dec. | 1995 Dec. | 1996 Dec. | 1997 Dec. | 1998[r] July | 1998[r] Aug. | 1998[r] Sept. | 1998[r] Oct. |
|---|---|---|---|---|---|---|---|---|
| | Seasonally adjusted | | | | | | | |
| *Measures*[2] | | | | | | | | |
| 1 M1 | 1,150.7 | 1,128.7 | 1,082.8 | 1,076.0 | 1,071.8 | 1,069.0 | 1,072.2 | 1,078.5 |
| 2 M2 | 3,503.0 | 3,651.2 | 3,826.1 | 4,046.4 | 4,213.2 | 4,243.2 | 4,295.6 | 4,339.6 |
| 3 M3 | 4,333.6 | 4,595.6 | 4,931.1 | 5,376.8 | 5,653.0 | 5,708.7 | 5,777.7 | 5,843.2 |
| 4 L | 5,315.8 | 5,702.3 | 6,083.6 | 6,611.3 | 6,926.3 | 6,981.5 | 6,588.6 | n.a. |
| 5 Debt | 12,999.5 | 13,697.6 | 14,425.2 | 15,167.4[r] | 15,714.3 | 15,790.9 | 15,864.3 | n.a. |
| *M1 components* | | | | | | | | |
| 6 Currency[3] | 354.3 | 372.4 | 394.9 | 425.5 | 441.3 | 443.8 | 449.6 | 453.4 |
| 7 Travelers checks[4] | 8.5 | 8.9 | 8.6 | 8.2 | 7.7 | 7.8 | 7.9 | 8.0 |
| 8 Demand deposits[5] | 384.0 | 391.0 | 403.6 | 397.1 | 378.0 | 374.2 | 373.6 | 374.1 |
| 9 Other checkable deposits[6] | 403.9 | 356.4 | 275.9 | 245.2 | 244.8 | 243.2 | 241.2 | 243.1 |
| *Nontransaction components* | | | | | | | | |
| 10 In M2[7] | 2,352.3 | 2,522.6 | 2,743.2 | 2,970.4 | 3,141.4 | 3,174.2 | 3,223.4 | 3,261.1 |
| 11 In M3 only[8] | 830.6 | 944.4 | 1,105.0 | 1,330.4 | 1,439.8 | 1,465.5 | 1,482.2 | 1,503.6 |
| *Commercial banks* | | | | | | | | |
| 12 Savings deposits, including MMDAs | 752.6 | 775.0 | 904.8 | 1,020.9 | 1,103.8 | 1,117.8 | 1,135.2 | 1,148.9 |
| 13 Small time deposits[9] | 503.2 | 575.8 | 594.5 | 625.7 | 623.6 | 626.5 | 627.4 | 628.3 |
| 14 Large time deposits[10, 11] | 298.7 | 345.4 | 413.2 | 487.5 | 522.7 | 527.8 | 526.6 | 527.4 |
| *Thrift institutions* | | | | | | | | |
| 15 Savings deposits, including MMDAs | 397.3 | 359.7 | 366.9 | 376.6 | 399.2 | 400.1 | 402.6 | 406.5 |
| 16 Small time deposits[9] | 314.2 | 357.2 | 354.3 | 343.9 | 337.4 | 333.9 | 334.2 | 334.4 |
| 17 Large time deposits[10] | 64.7 | 74.2 | 78.0 | 85.4 | 86.8 | 86.2 | 86.4 | 86.9 |
| *Money market mutual funds* | | | | | | | | |
| 18 Retail | 385.0 | 454.9 | 522.8 | 603.2 | 677.4 | 696.1 | 724.1 | 743.1 |
| 19 Institution-only | 203.1 | 253.9 | 310.3 | 376.2 | 430.2 | 443.3 | 457.5 | 480.7 |
| *Repurchase agreements and Eurodollars* | | | | | | | | |
| 20 Repurchase agreements[12] | 183.3 | 182.4 | 194.2 | 236.1 | 258.1 | 265.1 | 272.2 | 267.6 |
| 21 Eurodollars[12] | 80.8 | 88.6 | 109.2 | 145.3 | 142.1 | 143.1 | 139.4 | 140.9 |
| *Debt components* | | | | | | | | |
| 22 Federal debt | 3,492.4 | 3,638.9 | 3,780.6 | 3,798.4 | 3,772.9 | 3,770.3 | 3,760.0 | n.a. |
| 23 Nonfederal debt | 9,507.0 | 10,058.7 | 10,644.7 | 11,369.0[r] | 11,941.4 | 12,020.6 | 12,104.3 | n.a. |
| | Not seasonally adjusted | | | | | | | |
| *Measures*[2] | | | | | | | | |
| 24 M1 | 1,174.4 | 1,152.4 | 1,104.9 | 1,097.6 | 1,072.8 | 1,067.7 | 1,068.9 | 1,074.7 |
| 25 M2 | 3,523.4 | 3,672.0 | 3,845.4 | 4,065.3 | 4,213.7 | 4,247.6 | 4,286.9 | 4,325.5 |
| 26 M3 | 4,353.2 | 4,615.2 | 4,948.9 | 5,394.0 | 5,644.9 | 5,709.8 | 5,762.1 | 5,834.2 |
| 27 L | 5,344.6 | 5,732.8 | 6,111.6 | 6,636.7 | 6,911.6 | 6,983.1 | 6,574.0 | n.a. |
| 28 Debt | 13,002.0 | 13,699.1 | 14,425.5 | 15,166.9[r] | 15,666.0 | 15,746.0 | 15,828.1 | n.a. |
| *M1 components* | | | | | | | | |
| 29 Currency[3] | 357.5 | 376.2 | 397.9 | 429.0 | 442.7 | 444.3 | 448.3 | 452.5 |
| 30 Travelers checks[4] | 8.1 | 8.5 | 8.3 | 7.9 | 8.2 | 8.2 | 8.1 | 8.1 |
| 31 Demand deposits[5] | 400.3 | 407.2 | 419.9 | 413.0 | 378.8 | 374.2 | 372.6 | 372.8 |
| 32 Other checkable deposits[6] | 408.6 | 360.5 | 278.8 | 247.7 | 243.1 | 241.0 | 239.9 | 241.3 |
| *Nontransaction components* | | | | | | | | |
| 33 In M2[7] | 2,349.0 | 2,519.6 | 2,740.5 | 2,967.8 | 3,141.0 | 3,179.9 | 3,217.9 | 3,250.8 |
| 34 In M3 only[8] | 829.7 | 943.2 | 1,103.5 | 1,328.6 | 1,431.2 | 1,462.2 | 1,475.3 | 1,508.7 |
| *Commercial banks* | | | | | | | | |
| 35 Savings deposits, including MMDAs | 751.7 | 774.1 | 903.3 | 1,019.0 | 1,106.3 | 1,120.1 | 1,133.5 | 1,144.7 |
| 36 Small time deposits[9] | 501.5 | 573.8 | 592.7 | 624.1 | 624.3 | 626.6 | 627.0 | 628.3 |
| 37 Large time deposits[10, 11] | 298.9 | 345.8 | 413.6 | 488.0 | 521.8 | 528.0 | 529.0 | 535.5 |
| *Thrift institutions* | | | | | | | | |
| 38 Savings deposits, including MMDAs | 396.8 | 359.2 | 366.4 | 375.9 | 400.1 | 400.9 | 402.0 | 405.0 |
| 39 Small time deposits[9] | 313.2 | 355.9 | 353.2 | 343.0 | 337.8 | 333.9 | 333.9 | 334.4 |
| 40 Large time deposits[10] | 64.8 | 74.3 | 78.1 | 85.4 | 86.7 | 86.2 | 86.8 | 88.3 |
| *Money market mutual funds* | | | | | | | | |
| 41 Retail | 385.9 | 456.4 | 524.8 | 605.8 | 672.6 | 698.4 | 721.6 | 738.4 |
| 42 Institution-only | 204.6 | 255.8 | 312.7 | 378.9 | 425.3 | 441.1 | 451.3 | 475.4 |
| *Repurchase agreements and Eurodollars* | | | | | | | | |
| 43 Repurchase agreements[12] | 179.6 | 178.0 | 188.8 | 229.4 | 258.4 | 265.6 | 270.2 | 270.1 |
| 44 Eurodollars[12] | 81.8 | 89.4 | 110.3 | 146.9 | 139.0 | 141.4 | 137.9 | 139.5 |
| *Debt components* | | | | | | | | |
| 45 Federal debt | 3,499.0 | 3,645.9 | 3,787.9 | 3,805.8 | 3,740.8 | 3,749.6 | 3,743.4 | n.a. |
| 46 Nonfederal debt | 9,503.1 | 10,053.1 | 10,637.6 | 11,361.1[r] | 11,925.2 | 11,996.4 | 12,084.7 | n.a. |

Footnotes appear on following page.

NOTES TO TABLE 1.21

1. Latest monthly and weekly figures are available from the Board's H.6 (508) weekly statistical release. Historical data starting in 1959 are available from the Money and Reserves Projections Section, Division of Monetary Affairs, Board of Governors of the Federal Reserve System, Washington, DC 20551.

2. Composition of the money stock measures and debt is as follows:

M1: (1) currency outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions, (2) travelers checks of nonbank issuers, (3) demand deposits at all commercial banks other than those owed to depository institutions, the U.S. government, and foreign banks and official institutions, less cash items in the process of collection and Federal Reserve float, and (4) other checkable deposits (OCDs), consisting of negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts at depository institutions, credit union share draft accounts, and demand deposits at thrift institutions. Seasonally adjusted M1 is computed by summing currency, travelers checks, demand deposits, and OCDs, each seasonally adjusted separately.

M2: M1 plus (1) savings deposits (including MMDAs), (2) small-denomination time deposits (time deposits—including retail RPs—in amounts of less than $100,000), and (3) balances in retail money market mutual funds (money funds with minimum initial investments of less than $50,000). Excludes individual retirement accounts (IRAs) and Keogh balances at depository institutions and money market funds. Seasonally adjusted M2 is calculated by summing savings deposits, small-denomination time deposits, and retail money fund balances, each seasonally adjusted separately, and adding this result to seasonally adjusted M1.

M3: M2 plus (1) large-denomination time deposits (in amounts of $100,000 or more) issued by all depository institutions, (2) balances in institutional money funds (money funds with minimum initial investments of $50,000 or more), (3) RP liabilities (overnight and term) issued by all depository institutions, and (4) Eurodollars (overnight and term) held by U.S. residents at foreign branches of U.S. banks worldwide and at all banking offices in the United Kingdom and Canada. Excludes amounts held by depository institutions, the U.S. government, money market funds, and foreign banks and official institutions. Seasonally adjusted M3 is calculated by summing large time deposits, institutional money fund balances, RP liabilities, and Eurodollars, each seasonally adjusted separately, and adding this result to seasonally adjusted M2.

L: M3 plus the nonbank public holdings of U.S. savings bonds, short-term Treasury securities, commercial paper, and bankers acceptances, net of money market fund holdings of these assets. Seasonally adjusted L is computed by summing U.S. savings bonds, short-term Treasury securities, commercial paper, and bankers acceptances, each seasonally adjusted separately, and then adding this result to M3.

Debt: The debt aggregate is the outstanding credit market debt of the domestic nonfinancial sectors—the federal sector (U.S. government, not including government-sponsored enterprises or federally related mortgage pools) and the nonfederal sectors (state and local governments, households and nonprofit organizations, nonfinancial corporate and nonfarm noncorporate businesses, and farms). Nonfederal debt consists of mortgages, tax-exempt and corporate bonds, consumer credit, bank loans, commercial paper, and other loans. The data, which are derived from the Federal Reserve Board's flow of funds accounts, are break-adjusted (that is, discontinuities in the data have been smoothed into the series) and month-averaged (that is, the data have been derived by averaging adjacent month-end levels).

3. Currency outside the U.S. Treasury, Federal Reserve Banks, and vaults of depository institutions.

4. Outstanding amount of U.S. dollar-denominated travelers checks of nonbank issuers. Travelers checks issued by depository institutions are included in demand deposits.

5. Demand deposits at commercial banks and foreign-related institutions other than those owed to depository institutions, the U.S. government, and foreign banks and official institutions, less cash items in the process of collection and Federal Reserve float.

6. Consists of NOW and ATS account balances at all depository institutions, credit union share draft account balances, and demand deposits at thrift institutions.

7. Sum of (1) savings deposits (including MMDAs), (2) small time deposits, and (3) retail money fund balances.

8. Sum of (1) large time deposits, (2) institutional money fund balances, (3) RP liabilities (overnight and term) issued by depository institutions, and (4) Eurodollars (overnight and term) of U.S. addressees.

9. Small time deposits—including retail RPs—are those issued in amounts of less than $100,000. All IRAs and Keogh accounts at commercial banks and thrift institutions are subtracted from small time deposits.

10. Large time deposits are those issued in amounts of $100,000 or more, excluding those booked at international banking facilities.

11. Large time deposits at commercial banks less those held by money market funds, depository institutions, the U.S. government, and foreign banks and official institutions.

12. Includes both overnight and term.

## 1.26 COMMERCIAL BANKS IN THE UNITED STATES Assets and Liabilities[1]

### A. All commercial banks

Billions of dollars

| Account | Monthly averages | | | | | | | | Wednesday figures | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 1998[r] | | | | | | | 1998 | | | |
| | Oct.[r] | Apr. | May | June | July | Aug. | Sept. | Oct. | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| | Seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 1 Bank credit | 4,031.3 | 4,222.1 | 4,250.2 | 4,260.9 | 4,276.7 | 4,338.5 | 4,394.4 | 4,490.5 | 4,463.0 | 4,473.0 | 4,503.5 | 4,513.6 |
| 2 Securities in bank credit | 1,043.7 | 1,109.9 | 1,126.1 | 1,120.4 | 1,128.6 | 1,154.0 | 1,173.7 | 1,218.3 | 1,204.7 | 1,203.8 | 1,232.5 | 1,230.0 |
| 3 U.S. government securities | 731.5 | 764.9 | 772.0 | 755.7 | 759.7 | 769.9 | 765.6 | 773.0 | 758.8 | 766.9 | 777.7 | 783.6 |
| 4 Other securities | 312.2 | 345.0 | 354.0 | 364.7 | 368.9 | 384.1 | 408.0 | 445.3 | 445.8 | 436.9 | 454.9 | 446.5 |
| 5 Loans and leases in bank credit[2] | 2,987.5 | 3,112.2 | 3,124.1 | 3,140.5 | 3,148.1 | 3,184.5 | 3,220.7 | 3,272.2 | 3,258.3 | 3,269.2 | 3,271.0 | 3,283.6 |
| 6 Commercial and industrial | 841.4 | 869.8 | 883.2 | 896.7 | 901.5 | 910.0 | 921.8 | 943.1 | 931.5 | 939.9 | 948.0 | 950.3 |
| 7 Real estate | 1,219.5 | 1,273.5 | 1,271.4 | 1,267.8 | 1,269.6 | 1,278.8 | 1,280.1 | 1,285.9 | 1,284.1 | 1,281.7 | 1,281.3 | 1,290.1 |
| 8 Revolving home equity | 95.9 | 98.4 | 97.8 | 97.5 | 97.2 | 97.1 | 97.5 | 96.9 | 95.9 | 96.9 | 97.2 | 97.2 |
| 9 Other | 1,123.6 | 1,175.1 | 1,173.6 | 1,170.4 | 1,172.4 | 1,181.7 | 1,182.6 | 1,189.0 | 1,188.2 | 1,184.8 | 1,184.1 | 1,192.9 |
| 10 Consumer | 507.9 | 506.1 | 506.0 | 502.0 | 494.3 | 493.3 | 496.5 | 495.9 | 496.0 | 494.0 | 496.5 | 496.4 |
| 11 Security[3] | 104.3 | 117.8 | 123.0 | 130.1 | 132.3 | 139.0 | 144.4 | 159.5 | 161.6 | 160.5 | 159.5 | 157.3 |
| 12 Other loans and leases | 314.4 | 345.0 | 340.5 | 343.8 | 350.4 | 363.3 | 377.9 | 387.9 | 385.1 | 393.2 | 385.7 | 389.5 |
| 13 Interbank loans | 195.2 | 214.6 | 202.7 | 218.1 | 214.4 | 209.0 | 222.8 | 226.2 | 223.2 | 216.7 | 230.7 | 234.9 |
| 14 Cash assets[4] | 261.5 | 268.8 | 251.0 | 251.3 | 244.2 | 252.5 | 253.4 | 243.8 | 241.2 | 249.2 | 247.5 | 238.7 |
| 15 Other assets[5] | 290.3 | 308.5 | 312.5 | 312.4 | 308.4 | 310.7 | 315.2 | 310.5 | 310.9 | 310.3 | 311.4 | 307.8 |
| 16 **Total assets**[6] | **4,721.7** | **4,956.5** | **4,958.8** | **4,985.3** | **4,986.4** | **5,053.7** | **5,128.5** | **5,213.4** | **5,180.6** | **5,191.5** | **5,235.4** | **5,237.1** |
| *Liabilities* | | | | | | | | | | | | |
| 17 Deposits | 3,065.7 | 3,211.9 | 3,205.4 | 3,223.0 | 3,197.1 | 3,228.8 | 3,250.1 | 3,274.1 | 3,253.8 | 3,283.9 | 3,269.6 | 3,278.9 |
| 18 Transaction | 685.5 | 696.5 | 687.4 | 682.7 | 666.8 | 667.6 | 677.1 | 668.2 | 648.9 | 674.1 | 670.1 | 683.8 |
| 19 Nontransaction | 2,380.2 | 2,515.4 | 2,518.1 | 2,540.3 | 2,530.3 | 2,561.2 | 2,573.0 | 2,605.9 | 2,604.9 | 2,609.9 | 2,599.6 | 2,595.1 |
| 20 Large time | 620.2 | 674.5 | 674.9 | 685.1 | 667.3 | 679.2 | 684.3 | 697.0 | 692.0 | 695.0 | 699.7 | 699.6 |
| 21 Other | 1,760.0 | 1,840.8 | 1,843.2 | 1,855.2 | 1,863.0 | 1,882.0 | 1,888.7 | 1,908.9 | 1,912.9 | 1,914.8 | 1,899.8 | 1,895.5 |
| 22 Borrowings | 799.9 | 870.8 | 861.9 | 857.8 | 857.4 | 861.4 | 889.7 | 939.6 | 920.5 | 921.4 | 949.4 | 957.4 |
| 23 From banks in the U.S. | 293.2 | 305.8 | 282.1 | 287.9 | 289.6 | 293.5 | 303.2 | 318.5 | 314.5 | 317.5 | 321.4 | 320.8 |
| 24 From others | 506.7 | 565.0 | 579.8 | 569.9 | 567.8 | 567.9 | 586.5 | 621.1 | 606.0 | 603.9 | 628.1 | 636.6 |
| 25 Net due to related foreign offices | 189.4 | 179.8 | 174.4 | 170.6 | 186.1 | 201.2 | 200.1 | 223.1 | 211.2 | 211.0 | 231.0 | 235.6 |
| 26 Other liabilities | 269.6 | 295.4 | 299.3 | 308.3 | 317.1 | 325.4 | 335.0 | 355.5 | 362.4 | 360.3 | 362.1 | 344.5 |
| 27 **Total liabilities** | **4,324.6** | **4,557.9** | **4,541.0** | **4,559.7** | **4,557.7** | **4,616.7** | **4,675.0** | **4,792.3** | **4,747.9** | **4,776.7** | **4,812.2** | **4,816.3** |
| 28 Residual (assets less liabilities)[7] | 397.1 | 398.6 | 417.8 | 425.7 | 428.7 | 436.9 | 453.5 | 421.1 | 432.7 | 414.7 | 423.2 | 420.8 |
| | Not seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 29 Bank credit | 4,036.1 | 4,227.1 | 4,245.2 | 4,262.4 | 4,270.6 | 4,324.9 | 4,381.3 | 4,494.1 | 4,460.6 | 4,477.9 | 4,501.3 | 4,517.4 |
| 30 Securities in bank credit | 1,041.9 | 1,121.1 | 1,130.8 | 1,123.4 | 1,123.0 | 1,145.5 | 1,161.6 | 1,214.6 | 1,197.5 | 1,199.3 | 1,225.1 | 1,229.2 |
| 31 U.S. government securities | 730.1 | 773.3 | 776.7 | 758.2 | 755.8 | 765.1 | 760.5 | 770.4 | 754.2 | 762.4 | 775.0 | 782.6 |
| 32 Other securities | 311.8 | 347.8 | 354.1 | 365.2 | 367.2 | 380.4 | 401.1 | 444.2 | 443.3 | 436.8 | 450.1 | 446.7 |
| 33 Loans and leases in bank credit[2] | 2,994.2 | 3,106.0 | 3,114.4 | 3,139.0 | 3,147.7 | 3,179.4 | 3,219.7 | 3,279.4 | 3,263.1 | 3,278.6 | 3,276.2 | 3,288.1 |
| 34 Commercial and industrial | 839.3 | 877.4 | 888.7 | 899.4 | 901.1 | 904.0 | 916.3 | 941.1 | 930.1 | 936.9 | 945.0 | 947.8 |
| 35 Real estate | 1,225.7 | 1,267.0 | 1,265.1 | 1,265.4 | 1,271.7 | 1,282.4 | 1,285.1 | 1,292.6 | 1,291.0 | 1,289.2 | 1,287.3 | 1,295.9 |
| 36 Revolving home equity | 96.7 | 97.5 | 97.5 | 97.2 | 97.2 | 97.3 | 98.2 | 97.7 | 96.7 | 97.7 | 97.9 | 98.0 |
| 37 Other | 1,129.0 | 1,169.5 | 1,167.7 | 1,168.3 | 1,174.5 | 1,185.1 | 1,186.9 | 1,194.9 | 1,194.3 | 1,191.5 | 1,189.4 | 1,197.8 |
| 38 Consumer | 509.8 | 501.1 | 500.7 | 499.2 | 492.4 | 495.0 | 499.3 | 497.7 | 496.9 | 495.3 | 498.6 | 499.1 |
| 39 Security[3] | 104.4 | 119.2 | 122.5 | 130.0 | 130.1 | 134.4 | 141.0 | 160.0 | 159.4 | 162.1 | 160.3 | 157.4 |
| 40 Other loans and leases | 315.0 | 341.4 | 337.3 | 344.9 | 352.4 | 363.7 | 378.1 | 388.1 | 385.6 | 395.1 | 385.0 | 387.9 |
| 41 Interbank loans | 191.2 | 217.3 | 198.3 | 214.8 | 208.0 | 201.9 | 217.2 | 222.3 | 221.8 | 214.1 | 222.0 | 227.0 |
| 42 Cash assets[4] | 265.5 | 264.2 | 246.6 | 246.3 | 239.8 | 240.1 | 251.3 | 247.6 | 239.6 | 272.2 | 242.1 | 238.2 |
| 43 Other assets[5] | 289.5 | 306.9 | 311.9 | 310.9 | 309.7 | 312.7 | 316.4 | 309.7 | 311.4 | 311.0 | 307.9 | 305.7 |
| 44 **Total assets**[6] | **4,725.9** | **4,958.2** | **4,944.6** | **4,976.9** | **4,970.7** | **5,022.3** | **5,108.6** | **5,215.9** | **5,175.4** | **5,217.5** | **5,215.6** | **5,230.5** |
| *Liabilities* | | | | | | | | | | | | |
| 45 Deposits | 3,068.6 | 3,211.3 | 3,188.9 | 3,215.0 | 3,189.6 | 3,218.6 | 3,254.3 | 3,277.8 | 3,270.7 | 3,308.2 | 3,253.3 | 3,261.3 |
| 46 Transaction | 681.8 | 701.6 | 675.5 | 677.7 | 661.9 | 654.2 | 672.4 | 664.1 | 647.7 | 688.8 | 650.6 | 668.3 |
| 47 Nontransaction | 2,386.8 | 2,509.7 | 2,513.4 | 2,537.3 | 2,527.7 | 2,564.4 | 2,581.9 | 2,613.7 | 2,623.0 | 2,619.4 | 2,602.7 | 2,593.0 |
| 48 Large time | 624.0 | 669.0 | 675.2 | 682.8 | 664.0 | 678.2 | 686.0 | 701.0 | 696.2 | 697.3 | 702.8 | 705.2 |
| 49 Other | 1,762.8 | 1,840.6 | 1,838.3 | 1,854.6 | 1,863.6 | 1,886.2 | 1,895.9 | 1,912.7 | 1,926.7 | 1,922.1 | 1,899.9 | 1,887.8 |
| 50 Borrowings | 796.0 | 870.3 | 867.5 | 867.5 | 861.9 | 854.4 | 893.2 | 935.8 | 910.8 | 917.0 | 946.3 | 958.4 |
| 51 From banks in the U.S. | 289.7 | 305.0 | 283.3 | 290.8 | 289.8 | 289.5 | 302.0 | 314.5 | 309.0 | 313.1 | 317.2 | 317.8 |
| 52 From others | 506.3 | 565.3 | 584.2 | 576.7 | 572.1 | 564.9 | 591.1 | 621.4 | 601.8 | 603.8 | 629.1 | 640.7 |
| 53 Net due to related foreign offices | 187.0 | 178.9 | 183.0 | 176.5 | 188.2 | 201.6 | 200.2 | 220.0 | 203.9 | 208.6 | 228.4 | 237.5 |
| 54 Other liabilities | 269.4 | 294.6 | 298.8 | 307.5 | 316.4 | 325.4 | 334.8 | 355.2 | 361.5 | 359.8 | 361.7 | 344.9 |
| 55 **Total liabilities** | **4,321.0** | **4,555.1** | **4,538.2** | **4,566.6** | **4,556.1** | **4,600.0** | **4,682.4** | **4,788.8** | **4,746.9** | **4,793.6** | **4,789.7** | **4,802.1** |
| 56 Residual (assets less liabilities)[7] | 404.9 | 403.1 | 406.4 | 410.3 | 414.6 | 422.2 | 426.2 | 427.1 | 428.5 | 423.9 | 425.9 | 428.4 |
| MEMO | | | | | | | | | | | | |
| 57 Revaluation gains on off-balance-sheet items[8] | 79.7 | 83.9 | 85.9 | 92.8 | 92.8 | 95.7 | 109.5 | 133.0 | 143.2 | 135.4 | 134.8 | 125.2 |
| 58 Revaluation losses on off-balance-sheet items[8] | 81.3 | 84.5 | 85.0 | 90.8 | 90.6 | 96.5 | 110.3 | 131.0 | 140.6 | 133.6 | 132.6 | 123.4 |

Footnotes appear on p. A21.

## 1.26 COMMERCIAL BANKS IN THE UNITED STATES Assets and Liabilities[1]—Continued

### B. Domestically chartered commercial banks

Billions of dollars

| Account | Monthly averages | | | | | | | | Wednesday figures | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 1998[r] | | | | | | | 1998 | | | |
| | Oct. | Apr. | May | June | July | Aug. | Sept. | Oct. | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| | Seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 1 Bank credit | 3,493.2[r] | 3,664.1 | 3,686.1 | 3,693.7 | 3,704.3 | 3,748.4 | 3,788.2 | 3,858.6 | 3,826.0 | 3,847.4 | 3,868.2 | 3,881.3 |
| 2 Securities in bank credit | 868.6 | 915.6 | 928.9 | 921.2 | 928.6 | 943.1 | 960.2 | 994.8 | 978.3 | 986.6 | 1,005.5 | 1,007.3 |
| 3 U.S. government securities | 650.7 | 675.8 | 682.9 | 668.3 | 669.5 | 677.0 | 684.8 | 694.5 | 679.9 | 690.8 | 700.0 | 703.3 |
| 4 Other securities | 217.9 | 239.9 | 246.0 | 252.9 | 259.1 | 266.1 | 275.4 | 300.4 | 298.4 | 295.8 | 305.5 | 304.0 |
| 5 Loans and leases in bank credit[2] | 2,624.6[r] | 2,748.5 | 2,757.2 | 2,772.5 | 2,775.7 | 2,805.3 | 2,828.0 | 2,863.8 | 2,847.7 | 2,860.7 | 2,862.6 | 2,874.1 |
| 6 Commercial and industrial | 618.9[r] | 656.8 | 671.5 | 683.9 | 685.6 | 693.1 | 700.5 | 714.7 | 705.6 | 712.7 | 717.5 | 720.7 |
| 7 Real estate | 1,192.1[r] | 1,248.5 | 1,247.0 | 1,243.7 | 1,245.7 | 1,255.1 | 1,256.8 | 1,262.9 | 1,260.3 | 1,259.0 | 1,258.7 | 1,267.0 |
| 8 Revolving home equity | 95.9 | 98.4 | 97.8 | 97.5 | 97.2 | 97.1 | 97.5 | 96.9 | 95.9 | 96.9 | 97.2 | 97.2 |
| 9 Other | 1,096.2[r] | 1,150.1 | 1,149.2 | 1,146.2 | 1,148.5 | 1,158.0 | 1,159.3 | 1,166.0 | 1,164.4 | 1,162.1 | 1,161.5 | 1,169.8 |
| 10 Consumer | 507.9 | 506.1 | 506.0 | 502.0 | 494.3 | 493.3 | 496.5 | 495.9 | 496.0 | 494.0 | 496.5 | 496.4 |
| 11 Security[3] | 57.3 | 63.6 | 61.8 | 67.5 | 69.8 | 73.5 | 75.3 | 87.9 | 86.7 | 88.1 | 89.3 | 86.8 |
| 12 Other loans and leases | 248.4[r] | 273.5 | 270.8 | 275.4 | 280.3 | 290.2 | 298.8 | 302.4 | 299.1 | 307.0 | 300.7 | 303.2 |
| 13 Interbank loans | 174.7 | 192.0 | 180.9 | 194.2 | 192.4 | 186.5 | 191.7 | 196.8 | 192.9 | 188.2 | 199.5 | 206.4 |
| 14 Cash assets[4] | 227.1 | 233.2 | 216.3 | 216.0 | 209.0 | 218.5 | 219.1 | 208.0 | 205.1 | 212.8 | 210.4 | 204.4 |
| 15 Other assets[5] | 246.6 | 272.3 | 278.4 | 278.3 | 274.2 | 275.0 | 277.3 | 271.0 | 270.4 | 269.4 | 272.5 | 269.4 |
| 16 **Total assets**[6] | **4,085.4**[r] | **4,304.5** | **4,304.3** | **4,325.0** | **4,322.8** | **4,371.7** | **4,419.3** | **4,477.0** | **4,437.0** | **4,460.2** | **4,493.0** | **4,504.1** |
| *Liabilities* | | | | | | | | | | | | |
| 17 Deposits | 2,798.0[r] | 2,917.8 | 2,910.2 | 2,920.3 | 2,899.8 | 2,922.6 | 2,935.3 | 2,953.7 | 2,927.5 | 2,962.2 | 2,949.2 | 2,963.0 |
| 18 Transaction | 675.0[r] | 684.2 | 675.8 | 671.6 | 653.4 | 655.8 | 662.3 | 653.6 | 634.6 | 658.2 | 655.2 | 670.0 |
| 19 Nontransaction | 2,123.0 | 2,233.6 | 2,234.3 | 2,248.8 | 2,246.4 | 2,266.8 | 2,273.0 | 2,300.1 | 2,292.9 | 2,304.0 | 2,294.0 | 2,293.0 |
| 20 Large time | 366.1 | 394.5 | 391.7 | 393.2 | 384.5 | 384.0 | 382.9 | 395.1 | 386.9 | 391.6 | 396.9 | 401.3 |
| 21 Other | 1,756.8 | 1,839.1 | 1,842.7 | 1,855.6 | 1,861.9 | 1,882.8 | 1,890.1 | 1,905.0 | 1,906.0 | 1,912.3 | 1,897.0 | 1,891.7 |
| 22 Borrowings | 644.1[r] | 704.8 | 698.5 | 690.7 | 687.5 | 691.4 | 705.4 | 745.4 | 730.7 | 725.8 | 754.1 | 761.2 |
| 23 From banks in the U.S. | 259.4[r] | 279.2 | 259.7 | 258.3 | 262.8 | 269.5 | 270.7 | 282.6 | 282.4 | 282.7 | 282.0 | 282.7 |
| 24 From others | 384.7 | 425.6 | 438.8 | 432.4 | 424.7 | 422.0 | 434.8 | 462.8 | 448.2 | 443.1 | 472.1 | 478.5 |
| 25 Net due to related foreign offices | 70.9 | 77.4 | 73.3 | 73.4 | 79.3 | 92.8 | 105.0 | 117.7 | 101.6 | 113.7 | 124.6 | 130.0 |
| 26 Other liabilities | 177.9 | 210.2 | 211.9 | 218.1 | 224.0 | 226.6 | 230.5 | 241.7 | 246.2 | 242.6 | 242.1 | 239.7 |
| 27 **Total liabilities** | **3,691.0**[r] | **3,910.2** | **3,893.8** | **3,902.5** | **3,890.6** | **3,933.5** | **3,976.3** | **4,058.4** | **4,005.9** | **4,044.3** | **4,070.0** | **4,093.8** |
| 28 Residual (assets less liabilities)[7] | 394.4 | 394.3 | 410.6 | 422.6 | 432.2 | 438.2 | 443.0 | 418.5 | 431.1 | 416.0 | 423.0 | 410.2 |
| | Not seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 29 Bank credit | 3,498.3[r] | 3,668.9 | 3,679.5 | 3,692.1 | 3,695.4 | 3,732.4 | 3,780.3 | 3,862.8 | 3,827.5 | 3,851.0 | 3,867.2 | 3,885.2 |
| 30 Securities in bank credit | 866.0 | 924.8 | 929.7 | 921.0 | 920.2 | 930.4 | 951.5 | 990.8 | 974.1 | 979.8 | 997.9 | 1,005.1 |
| 31 U.S. government securities | 648.8 | 685.5 | 687.0 | 670.7 | 666.0 | 671.4 | 679.8 | 691.4 | 676.0 | 686.1 | 696.5 | 701.3 |
| 32 Other securities | 217.3 | 239.3 | 242.7 | 250.3 | 254.3 | 259.0 | 271.7 | 299.5 | 298.1 | 293.7 | 301.4 | 303.8 |
| 33 Loans and leases in bank credit[2] | 2,632.3[r] | 2,744.1 | 2,749.8 | 2,771.1 | 2,775.2 | 2,802.0 | 2,828.8 | 2,872.0 | 2,853.4 | 2,871.1 | 2,869.3 | 2,880.1 |
| 34 Commercial and industrial | 617.1[r] | 664.3 | 677.6 | 686.7 | 685.5 | 688.2 | 696.1 | 712.8 | 704.3 | 710.3 | 715.1 | 718.0 |
| 35 Real estate | 1,198.0[r] | 1,242.2 | 1,240.9 | 1,241.5 | 1,248.0 | 1,258.8 | 1,261.7 | 1,269.3 | 1,266.9 | 1,266.3 | 1,264.5 | 1,272.5 |
| 36 Revolving home equity | 96.7 | 97.5 | 97.5 | 97.2 | 97.2 | 97.3 | 98.2 | 97.7 | 96.7 | 97.7 | 97.9 | 98.0 |
| 37 Other | 1,101.3[r] | 1,144.7 | 1,143.4 | 1,144.3 | 1,150.8 | 1,161.5 | 1,163.5 | 1,171.6 | 1,170.2 | 1,168.6 | 1,166.5 | 1,174.5 |
| 38 Consumer | 509.8 | 501.1 | 500.7 | 499.2 | 492.4 | 495.0 | 499.3 | 497.7 | 496.9 | 495.3 | 498.6 | 499.1 |
| 39 Security[3] | 57.4 | 65.7 | 61.9 | 67.7 | 68.2 | 69.8 | 72.2 | 88.3 | 84.3 | 89.1 | 90.2 | 87.2 |
| 40 Other loans and leases | 250.0[r] | 270.8 | 268.7 | 276.1 | 281.1 | 290.3 | 299.5 | 303.9 | 301.1 | 310.1 | 301.0 | 303.3 |
| 41 Interbank loans | 170.7 | 194.7 | 176.5 | 190.9 | 186.0 | 179.4 | 186.0 | 192.9 | 191.5 | 185.6 | 190.8 | 198.5 |
| 42 Cash assets[4] | 230.8 | 230.3 | 212.2 | 210.0 | 204.7 | 206.1 | 216.9 | 211.6 | 203.9 | 235.7 | 204.7 | 203.1 |
| 43 Other assets[5] | 246.8 | 272.7 | 277.4 | 277.5 | 275.9 | 276.1 | 278.5 | 271.2 | 271.8 | 271.1 | 270.1 | 268.4 |
| 44 **Total assets**[6] | **4,090.5**[r] | **4,309.7** | **4,288.4** | **4,313.4** | **4,304.8** | **4,336.9** | **4,404.4** | **4,480.9** | **4,437.0** | **4,485.8** | **4,475.3** | **4,497.8** |
| *Liabilities* | | | | | | | | | | | | |
| 45 Deposits | 2,801.2[r] | 2,918.9 | 2,890.9 | 2,910.6 | 2,894.1 | 2,913.7 | 2,937.9 | 2,958.0 | 2,943.6 | 2,988.0 | 2,934.2 | 2,945.1 |
| 46 Transaction | 671.3[r] | 689.8 | 664.3 | 666.6 | 648.4 | 642.4 | 656.9 | 649.6 | 633.6 | 672.8 | 635.8 | 654.4 |
| 47 Nontransaction | 2,129.8 | 2,229.2 | 2,226.7 | 2,244.0 | 2,245.7 | 2,271.2 | 2,280.9 | 2,308.4 | 2,309.9 | 2,315.2 | 2,298.4 | 2,290.8 |
| 48 Large time | 369.1 | 390.3 | 389.9 | 390.8 | 383.4 | 386.4 | 386.4 | 398.5 | 390.4 | 394.4 | 400.0 | 404.8 |
| 49 Other | 1,760.7[r] | 1,838.9 | 1,836.7 | 1,853.2 | 1,862.3 | 1,884.9 | 1,894.6 | 1,909.9 | 1,919.5 | 1,920.8 | 1,898.4 | 1,886.0 |
| 50 Borrowings | 640.2[r] | 704.2 | 704.1 | 700.4 | 692.0 | 684.5 | 708.9 | 741.7 | 721.0 | 721.4 | 751.0 | 762.2 |
| 51 From banks in the U.S. | 255.9[r] | 278.4 | 260.9 | 261.2 | 263.0 | 265.5 | 269.5 | 278.6 | 276.9 | 278.3 | 277.9 | 279.6 |
| 52 From others | 384.3 | 425.9 | 443.2 | 439.2 | 429.0 | 419.0 | 439.4 | 463.1 | 444.1 | 443.1 | 473.1 | 482.6 |
| 53 Net due to related foreign offices | 69.3 | 78.0 | 80.9 | 80.1 | 84.9 | 96.7 | 106.7 | 115.5 | 98.6 | 111.4 | 123.6 | 128.7 |
| 54 Other liabilities | 177.9 | 210.2 | 211.9 | 218.1 | 224.0 | 226.6 | 230.5 | 241.7 | 246.2 | 242.6 | 242.1 | 239.7 |
| 55 **Total liabilities** | **3,688.6**[r] | **3,911.3** | **3,887.8** | **3,909.2** | **3,895.0** | **3,921.5** | **3,984.0** | **4,056.8** | **4,009.3** | **4,063.3** | **4,050.8** | **4,075.7** |
| 56 Residual (assets less liabilities)[7] | 401.8 | 398.4 | 400.6 | 404.2 | 409.8 | 415.5 | 420.3 | 424.1 | 427.7 | 422.5 | 424.5 | 422.1 |
| MEMO | | | | | | | | | | | | |
| 57 Revaluation gains on off-balance-sheet items[8] | 37.9 | 43.9 | 45.6 | 50.5 | 51.0 | 51.9 | 61.5 | 78.2 | 84.1 | 80.6 | 77.2 | 74.8 |
| 58 Revaluation losses on off-balance-sheet items[8] | 41.0 | 45.3 | 46.3 | 50.1 | 50.4 | 54.2 | 65.0 | 79.9 | 85.0 | 81.7 | 79.0 | 77.3 |
| 59 Mortgage-backed securities[9] | 265.6 | 295.6 | 298.0 | 291.2 | 294.4 | 301.9 | 314.0 | 336.9 | 322.6 | 334.1 | 340.9 | 345.2 |

Footnotes appear on p. A21.

## 1.26 COMMERCIAL BANKS IN THE UNITED STATES Assets and Liabilities[1]—Continued

### C. Large domestically chartered commercial banks

Billions of dollars

| Account | Monthly averages | | | | | | | | Wednesday figures | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 1998[r] | | | | | | | 1998 | | | |
| | Oct.[r] | Apr. | May | June | July | Aug. | Sept. | Oct. | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| | Seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 1 Bank credit | 2,114.2 | 2,236.3 | 2,248.6 | 2,246.3 | 2,246.1 | 2,276.8 | 2,307.6 | 2,362.1 | 2,332.8 | 2,355.2 | 2,371.7 | 2,381.5 |
| 2 Securities in bank credit | 469.0 | 513.4 | 522.3 | 514.2 | 516.3 | 527.0 | 541.8 | 567.0 | 552.2 | 560.2 | 577.1 | 578.3 |
| 3 U.S. government securities | 333.9 | 361.9 | 365.3 | 351.6 | 350.1 | 356.1 | 362.7 | 366.9 | 353.4 | 364.2 | 372.6 | 374.3 |
| 4 Trading account | 25.0 | 22.5 | 23.3 | 23.4 | 20.4 | 21.3 | 22.0 | 20.9 | 20.5 | 19.1 | 21.9 | 20.5 |
| 5 Investment account | 308.9 | 339.4 | 342.1 | 328.2 | 329.7 | 334.8 | 340.7 | 345.9 | 332.9 | 345.1 | 350.7 | 353.8 |
| 6 Other securities | 135.1 | 151.5 | 157.0 | 162.7 | 166.1 | 170.9 | 179.1 | 200.1 | 198.8 | 196.0 | 204.5 | 204.0 |
| 7 Trading account | 63.3 | 70.6 | 75.6 | 79.5 | 81.1 | 83.1 | 89.3 | 108.6 | 109.1 | 105.8 | 113.5 | 110.4 |
| 8 Investment account | 71.8 | 80.9 | 81.4 | 83.2 | 85.0 | 87.7 | 89.8 | 91.6 | 89.7 | 90.2 | 91.0 | 93.6 |
| 9 State and local government | 22.3 | 23.0 | 22.8 | 22.2 | 22.4 | 22.6 | 23.2 | 23.9 | 23.3 | 23.8 | 24.0 | 24.3 |
| 10 Other | 49.5 | 58.0 | 58.6 | 60.9 | 62.6 | 65.1 | 66.6 | 67.7 | 66.4 | 66.4 | 67.0 | 69.4 |
| 11 Loans and leases in bank credit[2] | 1,645.2 | 1,722.8 | 1,726.3 | 1,732.1 | 1,729.8 | 1,749.7 | 1,765.9 | 1,795.1 | 1,780.6 | 1,794.9 | 1,794.7 | 1,803.3 |
| 12 Commercial and industrial | 441.8 | 471.7 | 484.0 | 494.3 | 494.5 | 498.9 | 504.0 | 516.3 | 507.3 | 514.6 | 519.7 | 521.7 |
| 13 Bankers acceptances | 1.3 | 1.2 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 |
| 14 Other | 440.5 | 470.4 | 482.7 | 493.1 | 493.2 | 497.6 | 502.7 | 515.1 | 507.9 | 515.1 | 520.2 | 522.2 |
| 15 Real estate | 665.3 | 689.6 | 685.5 | 675.9 | 672.3 | 674.5 | 672.5 | 673.7 | 672.4 | 672.0 | 669.8 | 676.0 |
| 16 Revolving home equity | 67.6 | 69.4 | 68.7 | 68.1 | 67.6 | 67.5 | 67.8 | 67.2 | 66.4 | 67.4 | 67.5 | 67.5 |
| 17 Other | 597.7 | 620.2 | 616.8 | 607.8 | 604.7 | 607.0 | 604.7 | 606.5 | 606.0 | 604.6 | 602.4 | 608.5 |
| 18 Consumer | 303.5 | 302.2 | 301.3 | 297.7 | 292.2 | 293.0 | 296.0 | 296.0 | 296.2 | 295.0 | 295.9 | 296.2 |
| 19 Security[3] | 52.3 | 57.4 | 55.9 | 61.4 | 63.6 | 67.1 | 68.7 | 81.1 | 79.8 | 81.3 | 82.7 | 80.2 |
| 20 Federal funds sold to and repurchase agreements with broker–dealers | 35.4 | 39.8 | 37.6 | 42.8 | 44.8 | 47.9 | 50.1 | 63.2 | 61.8 | 62.8 | 64.8 | 62.9 |
| 21 Other | 16.9 | 17.6 | 18.3 | 18.6 | 18.7 | 19.2 | 18.6 | 17.9 | 18.0 | 18.4 | 17.9 | 17.3 |
| 22 State and local government | 12.0 | 11.2 | 11.2 | 11.0 | 10.9 | 11.0 | 11.1 | 11.2 | 11.2 | 11.2 | 11.0 | 11.0 |
| 23 Agricultural | 9.5 | 9.9 | 9.8 | 9.8 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.8 | 9.7 | 9.7 |
| 24 Federal funds sold to and repurchase agreements with others | 9.2 | 7.3 | 5.7 | 5.5 | 8.7 | 9.8 | 12.1 | 12.6 | 12.5 | 13.1 | 11.7 | 13.4 |
| 25 All other loans | 72.5 | 82.8 | 80.0 | 82.9 | 82.9 | 88.0 | 92.5 | 93.4 | 91.0 | 97.3 | 93.2 | 93.4 |
| 26 Lease-financing receivables | 79.1 | 90.8 | 92.8 | 93.6 | 95.0 | 97.6 | 99.2 | 101.0 | 100.4 | 100.7 | 101.1 | 101.6 |
| 27 Interbank loans | 120.6 | 128.3 | 116.4 | 126.2 | 121.7 | 113.8 | 115.5 | 120.6 | 118.2 | 111.9 | 123.3 | 129.7 |
| 28 Federal funds sold to and repurchase agreements with commercial banks | 80.0 | 76.7 | 65.6 | 75.0 | 68.2 | 60.8 | 62.4 | 71.6 | 65.1 | 65.0 | 75.4 | 81.4 |
| 29 Other | 40.6 | 51.7 | 50.8 | 51.2 | 53.6 | 52.9 | 53.1 | 49.0 | 53.0 | 46.8 | 47.9 | 48.3 |
| 30 Cash assets[4] | 158.9 | 166.6 | 149.3 | 148.2 | 142.8 | 150.1 | 150.1 | 139.6 | 138.0 | 143.8 | 141.7 | 135.6 |
| 31 Other assets[5] | 188.1 | 210.0 | 214.8 | 211.6 | 208.9 | 208.0 | 207.6 | 199.4 | 198.5 | 199.3 | 199.6 | 197.7 |
| 32 **Total assets**[6] | **2,544.7** | **2,703.6** | **2,691.3** | **2,694.8** | **2,682.0** | **2,711.7** | **2,743.7** | **2,784.1** | **2,749.9** | **2,772.5** | **2,798.8** | **2,807.0** |
| *Liabilities* | | | | | | | | | | | | |
| 33 Deposits | 1,562.5 | 1,637.8 | 1,621.7 | 1,618.6 | 1,594.6 | 1,602.2 | 1,602.5 | 1,613.4 | 1,594.1 | 1,623.8 | 1,608.7 | 1,618.8 |
| 34 Transaction | 384.4 | 393.3 | 385.1 | 379.0 | 363.9 | 365.6 | 369.2 | 362.9 | 350.9 | 370.1 | 361.9 | 372.1 |
| 35 Nontransaction | 1,178.1 | 1,244.5 | 1,236.6 | 1,239.6 | 1,230.7 | 1,236.6 | 1,233.3 | 1,250.5 | 1,243.1 | 1,253.7 | 1,246.8 | 1,246.7 |
| 36 Large time | 204.6 | 222.8 | 218.1 | 219.5 | 213.2 | 212.0 | 206.9 | 217.8 | 209.9 | 215.5 | 219.8 | 222.9 |
| 37 Other | 973.5 | 1,021.7 | 1,018.5 | 1,020.1 | 1,017.5 | 1,024.6 | 1,026.4 | 1,032.7 | 1,033.2 | 1,038.2 | 1,027.0 | 1,023.8 |
| 38 Borrowings | 494.2 | 547.1 | 538.4 | 529.0 | 522.8 | 527.7 | 540.3 | 573.6 | 559.9 | 554.4 | 582.2 | 588.9 |
| 39 From banks in the U.S. | 189.6 | 210.0 | 190.0 | 187.6 | 189.2 | 196.1 | 196.9 | 205.8 | 205.7 | 204.6 | 205.5 | 206.6 |
| 40 From others | 304.6 | 337.1 | 348.4 | 341.5 | 333.5 | 331.6 | 343.4 | 367.9 | 354.2 | 349.8 | 376.8 | 382.3 |
| 41 Net due to related foreign offices | 65.8 | 73.9 | 69.4 | 69.5 | 75.6 | 89.1 | 101.3 | 113.0 | 96.7 | 109.0 | 119.8 | 125.6 |
| 42 Other liabilities | 150.9 | 179.8 | 181.7 | 188.2 | 194.2 | 196.2 | 199.8 | 210.0 | 214.4 | 211.2 | 210.4 | 208.1 |
| 43 **Total liabilities** | **2,273.4** | **2,438.7** | **2,411.2** | **2,405.3** | **2,387.2** | **2,415.2** | **2,444.0** | **2,510.1** | **2,465.1** | **2,498.3** | **2,521.1** | **2,541.4** |
| 44 Residual (assets less liabilities)[7] | 271.3 | 264.9 | 280.0 | 289.5 | 294.8 | 296.6 | 299.8 | 274.0 | 284.9 | 274.2 | 277.7 | 265.6 |

Footnotes appear on p. A21.

## 1.26 COMMERCIAL BANKS IN THE UNITED STATES Assets and Liabilities[1]—Continued

C. Large domestically chartered commercial banks—Continued

| Account | Monthly averages | | | | | | | | Wednesday figures | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 1998[r] | | | | | | | 1998 | | | |
| | Oct.[r] | Apr. | May | June | July | Aug. | Sept. | Oct. | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| | Not seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 45 Bank credit | 2,119.2 | 2,235.4 | 2,234.8 | 2,240.0 | 2,239.1 | 2,261.3 | 2,297.6 | 2,366.5 | 2,337.3 | 2,358.2 | 2,370.2 | 2,384.2 |
| 46 Securities in bank credit | 469.2 | 517.1 | 518.9 | 510.9 | 509.2 | 515.4 | 533.7 | 566.0 | 551.4 | 556.1 | 572.5 | 578.8 |
| 47 U.S. government securities | 334.1 | 366.6 | 366.1 | 351.3 | 347.9 | 351.3 | 358.0 | 366.0 | 352.0 | 361.4 | 371.2 | 374.5 |
| 48 Trading account | 26.1 | 22.7 | 22.5 | 22.5 | 19.9 | 21.2 | 21.9 | 21.9 | 21.2 | 20.0 | 23.1 | 21.3 |
| 49 Investment account | 308.0 | 343.9 | 343.6 | 328.8 | 328.0 | 330.2 | 336.1 | 344.1 | 330.8 | 341.5 | 348.0 | 353.1 |
| 50 Mortgage-backed securities | 202.0 | 224.9 | 224.7 | 216.1 | 217.5 | 224.2 | 234.8 | 253.4 | 240.8 | 252.1 | 257.2 | 261.0 |
| 51 Other | 106.1 | 119.0 | 118.9 | 112.7 | 110.5 | 105.9 | 101.3 | 90.7 | 90.0 | 89.4 | 90.9 | 92.1 |
| 52 One year or less | 27.6 | 32.0 | 30.5 | 30.6 | 29.4 | 28.0 | 26.8 | 25.2 | 24.8 | 25.7 | 25.0 | 25.4 |
| 53 One to five years | 54.4 | 52.1 | 50.7 | 47.5 | 50.3 | 47.2 | 42.7 | 35.9 | 36.8 | 35.9 | 35.6 | 35.9 |
| 54 More than five years | 24.0 | 34.9 | 37.7 | 34.7 | 30.8 | 30.7 | 31.9 | 29.5 | 28.5 | 27.8 | 30.3 | 30.9 |
| 55 Other securities | 135.1 | 150.5 | 152.8 | 159.6 | 161.3 | 164.0 | 175.7 | 200.0 | 199.4 | 194.6 | 201.3 | 204.3 |
| 56 Trading account | 63.0 | 70.2 | 72.1 | 76.7 | 77.0 | 76.8 | 86.3 | 108.2 | 109.1 | 104.4 | 110.2 | 110.7 |
| 57 Investment account | 72.0 | 80.3 | 80.7 | 82.9 | 84.3 | 87.2 | 89.4 | 91.8 | 90.3 | 90.2 | 91.1 | 93.6 |
| 58 State and local government | 22.4 | 22.9 | 22.7 | 22.4 | 22.3 | 22.7 | 23.2 | 24.0 | 23.4 | 23.8 | 24.2 | 24.4 |
| 59 Other | 49.7 | 57.3 | 58.0 | 60.6 | 62.1 | 64.6 | 66.2 | 67.8 | 66.8 | 66.4 | 66.9 | 69.2 |
| 60 Loans and leases in bank credit[2] | 1,650.0 | 1,718.3 | 1,715.9 | 1,729.1 | 1,729.9 | 1,745.9 | 1,763.8 | 1,800.5 | 1,785.8 | 1,802.1 | 1,797.7 | 1,805.4 |
| 61 Commercial and industrial | 441.4 | 476.7 | 487.6 | 495.4 | 494.6 | 495.5 | 501.1 | 516.1 | 508.0 | 513.9 | 518.7 | 520.6 |
| 62 Bankers acceptances | 1.4 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 63 Other | 440.0 | 475.6 | 486.4 | 494.2 | 493.3 | 494.2 | 499.8 | 514.8 | 506.7 | 512.6 | 517.4 | 519.3 |
| 64 Real estate | 668.9 | 683.7 | 677.7 | 673.0 | 674.6 | 677.8 | 675.8 | 677.7 | 678.0 | 676.5 | 672.9 | 678.5 |
| 65 Revolving home equity | 68.2 | 68.4 | 68.2 | 67.8 | 67.8 | 67.8 | 68.4 | 67.8 | 67.1 | 68.0 | 68.1 | 68.1 |
| 66 Other | 367.8 | 380.6 | 376.0 | 374.1 | 375.5 | 377.8 | 374.0 | 376.1 | 376.8 | 376.6 | 371.1 | 375.5 |
| 67 Commercial | 232.9 | 234.7 | 233.4 | 231.1 | 231.3 | 232.2 | 233.5 | 233.8 | 234.1 | 231.9 | 233.7 | 234.9 |
| 68 Consumer | 304.5 | 298.2 | 297.3 | 296.4 | 292.0 | 294.6 | 298.0 | 296.9 | 297.2 | 295.7 | 296.8 | 297.3 |
| 69 Security[3] | 52.4 | 59.5 | 56.0 | 61.5 | 62.0 | 63.4 | 65.6 | 81.5 | 77.5 | 82.3 | 83.5 | 80.6 |
| 70 Federal funds sold to and repurchase agreements with broker–dealers | 35.6 | 41.7 | 37.6 | 42.5 | 43.8 | 45.0 | 47.5 | 63.6 | 60.5 | 64.0 | 65.5 | 62.7 |
| 71 Other | 16.8 | 17.8 | 18.4 | 19.0 | 18.2 | 18.4 | 18.1 | 17.8 | 17.0 | 18.3 | 18.0 | 17.9 |
| 72 State and local government | 12.1 | 11.1 | 11.1 | 11.0 | 10.9 | 11.1 | 11.2 | 11.3 | 11.3 | 11.3 | 11.1 | 11.1 |
| 73 Agricultural | 9.7 | 9.5 | 9.7 | 9.9 | 10.1 | 10.1 | 10.0 | 9.9 | 10.0 | 10.0 | 9.8 | 9.8 |
| 74 Federal funds sold to and repurchase agreements with others | 9.2 | 7.3 | 5.7 | 5.5 | 8.7 | 9.8 | 12.1 | 12.6 | 12.5 | 13.1 | 11.7 | 13.4 |
| 75 All other loans | 73.0 | 81.8 | 78.8 | 83.1 | 82.6 | 87.3 | 92.0 | 93.9 | 91.3 | 99.1 | 92.8 | 93.2 |
| 76 Lease-financing receivables | 78.8 | 90.5 | 92.2 | 93.2 | 94.6 | 96.4 | 98.1 | 100.6 | 100.2 | 100.2 | 100.4 | 100.9 |
| 77 Interbank loans | 117.4 | 129.0 | 115.7 | 126.7 | 120.7 | 111.2 | 114.3 | 117.7 | 114.9 | 110.2 | 118.0 | 126.7 |
| 78 Federal funds sold to and repurchase agreements with commercial banks | 77.0 | 77.8 | 65.2 | 75.4 | 67.4 | 59.0 | 61.9 | 68.9 | 62.4 | 62.9 | 70.2 | 78.9 |
| 79 Other | 40.4 | 51.2 | 50.5 | 51.3 | 53.2 | 52.2 | 52.4 | 48.8 | 52.5 | 47.2 | 47.8 | 47.8 |
| 80 Cash assets[4] | 162.7 | 164.2 | 145.3 | 143.1 | 139.1 | 140.0 | 148.6 | 143.2 | 137.0 | 162.3 | 138.5 | 136.4 |
| 81 Other assets[5] | 188.1 | 210.0 | 214.8 | 211.6 | 208.9 | 208.0 | 207.6 | 199.4 | 198.5 | 199.3 | 199.6 | 197.7 |
| 82 **Total assets**[6] | **2,550.3** | **2,701.3** | **2,673.1** | **2,683.7** | **2,670.3** | **2,683.2** | **2,730.6** | **2,789.2** | **2,750.0** | **2,792.3** | **2,788.8** | **2,807.5** |
| *Liabilities* | | | | | | | | | | | | |
| 83 Deposits | 1,567.6 | 1,630.6 | 1,602.0 | 1,612.2 | 1,594.6 | 1,599.8 | 1,608.6 | 1,619.7 | 1,608.4 | 1,645.5 | 1,601.9 | 1,610.6 |
| 84 Transaction | 382.3 | 395.3 | 375.7 | 375.6 | 361.7 | 356.4 | 366.1 | 360.7 | 348.8 | 381.5 | 349.6 | 363.5 |
| 85 Nontransaction | 1,185.2 | 1,235.3 | 1,226.3 | 1,236.7 | 1,232.9 | 1,243.4 | 1,242.5 | 1,259.0 | 1,259.5 | 1,264.0 | 1,252.3 | 1,247.1 |
| 86 Large time | 207.6 | 218.6 | 216.4 | 217.1 | 212.1 | 214.4 | 210.4 | 221.2 | 213.4 | 218.2 | 222.9 | 226.4 |
| 87 Other | 977.6 | 1,016.8 | 1,010.0 | 1,019.5 | 1,020.8 | 1,029.0 | 1,032.1 | 1,037.8 | 1,046.1 | 1,045.7 | 1,029.5 | 1,020.8 |
| 88 Borrowings | 489.9 | 548.4 | 543.6 | 538.3 | 527.3 | 519.5 | 540.5 | 569.4 | 551.5 | 550.1 | 577.9 | 587.0 |
| 89 From banks in the U.S. | 186.5 | 209.5 | 190.5 | 190.0 | 189.3 | 191.4 | 194.7 | 202.2 | 201.6 | 201.0 | 201.5 | 202.9 |
| 90 From nonbanks in the U.S. | 303.4 | 338.9 | 353.1 | 348.4 | 338.0 | 328.0 | 345.7 | 367.1 | 349.9 | 349.0 | 376.4 | 384.2 |
| 91 Net due to related foreign offices | 64.1 | 74.5 | 77.1 | 76.2 | 81.2 | 92.9 | 103.0 | 110.9 | 93.8 | 106.7 | 118.8 | 124.3 |
| 92 Other liabilities | 150.9 | 179.8 | 181.7 | 188.2 | 194.2 | 196.2 | 199.8 | 210.0 | 214.4 | 211.2 | 210.4 | 208.1 |
| 93 **Total liabilities** | **2,272.5** | **2,433.3** | **2,404.4** | **2,415.0** | **2,397.3** | **2,408.4** | **2,451.8** | **2,509.9** | **2,468.0** | **2,513.4** | **2,509.0** | **2,530.1** |
| 94 Residual (assets less liabilities)[7] | 277.8 | 267.9 | 268.7 | 268.7 | 273.0 | 274.8 | 278.8 | 279.3 | 281.9 | 278.9 | 279.8 | 277.4 |
| MEMO | | | | | | | | | | | | |
| 95 Revaluation gains on off-balance-sheet items[8] | 37.9 | 43.9 | 45.6 | 50.5 | 51.0 | 51.9 | 61.5 | 78.2 | 84.1 | 80.6 | 77.2 | 74.8 |
| 96 Revaluation losses on off-balance-sheet items[8] | 41.0 | 45.3 | 46.3 | 50.1 | 50.4 | 54.2 | 65.0 | 79.9 | 85.0 | 81.7 | 79.0 | 77.3 |
| 97 Mortgage-backed securities[9] | 220.2 | 245.1 | 245.9 | 238.0 | 240.6 | 247.3 | 258.0 | 277.9 | 264.9 | 275.9 | 281.2 | 285.5 |
| 98 Pass-through securities | 150.0 | 165.4 | 164.8 | 156.9 | 157.0 | 160.3 | 166.3 | 188.4 | 174.7 | 186.4 | 192.0 | 197.2 |
| 99 CMOs, REMICs, and other mortgage-backed securities | 70.2 | 79.7 | 81.1 | 81.0 | 83.6 | 86.9 | 91.7 | 89.5 | 90.3 | 89.5 | 89.2 | 88.3 |
| 100 Net unrealized gains (losses) on available-for-sale securities[10] | 2.4 | 3.0 | 2.8 | 3.2 | 3.5 | 3.1 | 3.8 | 4.5 | 4.9 | 4.6 | 4.5 | 4.5 |
| 101 Offshore credit to U.S. residents[11] | 34.2 | 35.5 | 36.0 | 36.1 | 35.3 | 35.6 | 36.8 | 38.5 | 37.8 | 38.1 | 38.9 | 38.8 |

Footnotes appear on p. A21.

## 1.26 COMMERCIAL BANKS IN THE UNITED STATES Assets and Liabilities[1]—Continued

### D. Small domestically chartered commercial banks

Billions of dollars

| Account | Monthly averages | | | | | | | | Wednesday figures | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 1998[r] | | | | | | | 1998 | | | |
| | Oct.[r] | Apr. | May | June | July | Aug. | Sept. | Oct. | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| | Seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 1 Bank credit | 1,379.0 | 1,427.9 | 1,437.6 | 1,447.4 | 1,458.2 | 1,471.7 | 1,480.6 | 1,496.6 | 1,493.2 | 1,492.2 | 1,496.4 | 1,499.8 |
| 2 Securities in bank credit | 399.6 | 402.2 | 406.6 | 407.0 | 412.4 | 416.1 | 418.5 | 427.8 | 426.1 | 426.4 | 428.5 | 429.0 |
| 3 U.S. government securities | 316.8 | 313.8 | 317.6 | 316.8 | 319.4 | 320.9 | 322.1 | 327.6 | 326.5 | 326.6 | 327.5 | 329.0 |
| 4 Other securities | 82.7 | 88.4 | 89.0 | 90.2 | 93.0 | 95.2 | 96.4 | 100.2 | 99.6 | 99.8 | 101.0 | 100.0 |
| 5 Loans and leases in bank credit[2] | 979.5 | 1,025.7 | 1,031.0 | 1,040.4 | 1,045.8 | 1,055.5 | 1,062.1 | 1,068.7 | 1,067.1 | 1,065.8 | 1,067.9 | 1,070.8 |
| 6 Commercial and industrial | 177.1 | 185.2 | 187.5 | 189.6 | 191.1 | 194.2 | 196.5 | 198.4 | 198.3 | 198.2 | 197.8 | 199.0 |
| 7 Real estate | 526.8 | 558.9 | 561.6 | 567.8 | 573.4 | 580.6 | 584.3 | 589.2 | 587.8 | 587.0 | 588.8 | 591.0 |
| 8 Revolving home equity | 28.3 | 29.0 | 29.1 | 29.4 | 29.6 | 29.6 | 29.7 | 29.7 | 29.5 | 29.5 | 29.7 | 29.7 |
| 9 Other | 498.5 | 529.9 | 532.5 | 538.4 | 543.8 | 551.0 | 554.6 | 559.4 | 558.4 | 557.6 | 559.1 | 561.2 |
| 10 Consumer | 204.4 | 203.9 | 204.7 | 204.4 | 202.1 | 200.3 | 200.5 | 199.9 | 199.8 | 199.0 | 200.6 | 200.2 |
| 11 Security[3] | 5.0 | 6.2 | 5.9 | 6.1 | 6.2 | 6.4 | 6.6 | 6.8 | 6.9 | 6.8 | 6.6 | 6.6 |
| 12 Other loans and leases | 66.1 | 71.5 | 71.3 | 72.5 | 73.0 | 74.0 | 74.2 | 74.5 | 74.3 | 74.8 | 74.1 | 74.1 |
| 13 Interbank loans | 54.1 | 63.6 | 64.5 | 68.0 | 70.7 | 72.7 | 76.1 | 76.2 | 74.7 | 76.4 | 76.2 | 76.7 |
| 14 Cash assets[4] | 68.2 | 66.6 | 67.0 | 67.8 | 66.3 | 68.3 | 69.0 | 68.5 | 67.2 | 69.0 | 68.8 | 68.8 |
| 15 Other assets[5] | 58.5 | 62.4 | 63.6 | 66.6 | 65.3 | 67.0 | 69.7 | 71.6 | 71.8 | 70.1 | 72.8 | 71.7 |
| 16 **Total assets**[6] | **1,540.7** | **1,600.9** | **1,613.1** | **1,630.2** | **1,640.7** | **1,659.9** | **1,675.5** | **1,692.9** | **1,687.1** | **1,687.8** | **1,694.3** | **1,697.0** |
| *Liabilities* | | | | | | | | | | | | |
| 17 Deposits | 1,235.5 | 1,280.0 | 1,288.5 | 1,301.7 | 1,305.2 | 1,320.4 | 1,332.8 | 1,340.3 | 1,333.4 | 1,338.4 | 1,340.5 | 1,344.1 |
| 18 Transaction | 290.6 | 290.9 | 290.7 | 292.6 | 289.5 | 290.2 | 293.1 | 290.7 | 283.7 | 288.1 | 293.3 | 297.9 |
| 19 Nontransaction | 944.9 | 989.1 | 997.7 | 1,009.2 | 1,015.7 | 1,030.2 | 1,039.7 | 1,049.6 | 1,049.7 | 1,050.3 | 1,047.2 | 1,046.3 |
| 20 Large time | 161.5 | 171.7 | 173.6 | 173.7 | 171.3 | 172.0 | 176.0 | 177.3 | 177.0 | 176.1 | 177.1 | 178.4 |
| 21 Other | 783.4 | 817.4 | 824.2 | 835.5 | 844.4 | 858.2 | 863.7 | 872.3 | 872.7 | 874.2 | 870.1 | 867.8 |
| 22 Borrowings | 149.9 | 157.7 | 160.1 | 161.6 | 164.7 | 163.7 | 165.1 | 171.7 | 170.8 | 171.4 | 171.9 | 172.3 |
| 23 From banks in the U.S. | 69.8 | 69.2 | 69.7 | 70.7 | 73.6 | 73.3 | 73.7 | 76.9 | 76.7 | 78.1 | 76.5 | 76.1 |
| 24 From others | 80.1 | 88.5 | 90.4 | 90.9 | 91.2 | 90.4 | 91.4 | 94.9 | 94.1 | 93.4 | 95.3 | 96.2 |
| 25 Net due to related foreign offices | 5.2 | 3.5 | 3.8 | 3.9 | 3.7 | 3.7 | 3.7 | 4.7 | 4.9 | 4.7 | 4.8 | 4.4 |
| 26 Other liabilities | 27.0 | 30.3 | 30.2 | 29.9 | 29.8 | 30.5 | 30.7 | 31.7 | 31.8 | 31.4 | 31.7 | 31.6 |
| 27 **Total liabilities** | **1,417.6** | **1,471.5** | **1,482.5** | **1,497.1** | **1,503.4** | **1,518.3** | **1,532.3** | **1,548.4** | **1,540.8** | **1,545.9** | **1,548.9** | **1,552.4** |
| 28 Residual (assets less liabilities)[7] | 123.1 | 129.4 | 130.5 | 133.1 | 137.4 | 141.6 | 143.2 | 144.5 | 146.2 | 141.8 | 145.4 | 144.6 |
| | Not seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 29 Bank credit | 1,379.1 | 1,433.6 | 1,444.6 | 1,452.2 | 1,456.3 | 1,471.2 | 1,482.7 | 1,496.4 | 1,490.2 | 1,492.7 | 1,497.0 | 1,501.0 |
| 30 Securities in bank credit | 396.8 | 407.7 | 410.8 | 410.1 | 411.0 | 415.1 | 417.7 | 424.9 | 422.6 | 423.7 | 425.5 | 426.3 |
| 31 U.S. government securities | 314.7 | 318.9 | 320.9 | 319.5 | 318.1 | 320.1 | 321.7 | 325.4 | 323.9 | 324.7 | 325.3 | 326.9 |
| 32 Other securities | 82.2 | 88.8 | 89.9 | 90.7 | 92.9 | 95.0 | 96.0 | 99.5 | 98.7 | 99.1 | 100.2 | 99.4 |
| 33 Loans and leases in bank credit[2] | 982.3 | 1,025.8 | 1,033.9 | 1,042.1 | 1,045.2 | 1,056.1 | 1,065.0 | 1,071.5 | 1,067.6 | 1,069.0 | 1,071.5 | 1,074.6 |
| 34 Commercial and industrial | 175.6 | 187.6 | 190.1 | 191.3 | 190.9 | 192.7 | 195.1 | 196.8 | 196.3 | 196.4 | 196.3 | 197.4 |
| 35 Real estate | 529.1 | 558.5 | 563.2 | 568.4 | 573.5 | 581.0 | 586.0 | 591.6 | 588.9 | 589.8 | 591.6 | 594.0 |
| 36 Revolving home equity | 28.5 | 29.1 | 29.2 | 29.3 | 29.4 | 29.5 | 29.8 | 29.9 | 29.6 | 29.6 | 29.9 | 29.9 |
| 37 Other | 500.6 | 529.4 | 534.0 | 539.1 | 544.0 | 551.5 | 556.1 | 561.7 | 559.3 | 560.1 | 561.7 | 564.1 |
| 38 Consumer | 205.3 | 202.9 | 203.4 | 202.8 | 200.4 | 200.4 | 201.4 | 200.8 | 199.6 | 199.6 | 201.9 | 201.8 |
| 39 Security[3] | 5.0 | 6.2 | 5.9 | 6.1 | 6.2 | 6.4 | 6.6 | 6.8 | 6.9 | 6.8 | 6.6 | 6.6 |
| 40 Other loans and leases | 67.2 | 70.6 | 71.3 | 73.4 | 74.3 | 75.6 | 76.0 | 75.6 | 75.9 | 76.3 | 75.1 | 74.8 |
| 41 Interbank loans | 53.3 | 65.7 | 60.8 | 64.2 | 65.3 | 68.2 | 71.7 | 75.1 | 76.6 | 75.4 | 72.9 | 71.9 |
| 42 Cash assets[4] | 68.2 | 66.0 | 66.9 | 66.9 | 65.6 | 66.1 | 68.3 | 68.4 | 66.8 | 73.4 | 66.2 | 66.8 |
| 43 Other assets[5] | 58.7 | 62.7 | 62.7 | 65.9 | 67.0 | 68.1 | 70.9 | 71.7 | 73.3 | 71.8 | 70.4 | 70.7 |
| 44 **Total assets**[6] | **1,540.1** | **1,608.4** | **1,615.4** | **1,629.6** | **1,634.5** | **1,653.8** | **1,673.8** | **1,691.7** | **1,687.0** | **1,693.5** | **1,686.5** | **1,690.3** |
| *Liabilities* | | | | | | | | | | | | |
| 45 Deposits | 1,233.6 | 1,288.3 | 1,288.9 | 1,298.4 | 1,299.5 | 1,313.9 | 1,329.3 | 1,338.3 | 1,335.2 | 1,342.5 | 1,332.2 | 1,334.5 |
| 46 Transaction | 289.0 | 294.5 | 288.6 | 291.0 | 286.7 | 286.0 | 290.8 | 288.9 | 284.8 | 291.3 | 286.1 | 290.9 |
| 47 Nontransaction | 944.6 | 993.8 | 1,000.3 | 1,007.4 | 1,012.8 | 1,027.9 | 1,038.5 | 1,049.4 | 1,050.4 | 1,051.2 | 1,046.1 | 1,043.6 |
| 48 Large time | 161.5 | 171.7 | 173.6 | 173.7 | 171.3 | 172.0 | 176.0 | 177.3 | 177.0 | 176.1 | 177.1 | 178.4 |
| 49 Other | 783.1 | 822.1 | 826.8 | 833.7 | 841.5 | 855.9 | 862.4 | 872.1 | 873.4 | 875.1 | 869.0 | 865.2 |
| 50 Borrowings | 150.3 | 155.9 | 160.5 | 162.0 | 164.8 | 165.0 | 168.5 | 172.3 | 169.5 | 171.3 | 173.1 | 175.1 |
| 51 From banks in the U.S. | 69.4 | 68.9 | 70.4 | 71.2 | 73.7 | 74.1 | 74.8 | 76.3 | 75.3 | 77.2 | 76.4 | 76.7 |
| 52 From others | 80.9 | 87.0 | 90.0 | 90.8 | 91.0 | 90.9 | 93.7 | 95.9 | 94.2 | 94.1 | 96.7 | 98.4 |
| 53 Net due to related foreign offices | 5.2 | 3.5 | 3.8 | 3.9 | 3.7 | 3.7 | 3.7 | 4.7 | 4.9 | 4.7 | 4.8 | 4.4 |
| 54 Other liabilities | 27.0 | 30.3 | 30.2 | 29.9 | 29.8 | 30.5 | 30.7 | 31.7 | 31.8 | 31.4 | 31.7 | 31.6 |
| 55 **Total liabilities** | **1,416.1** | **1,478.0** | **1,483.4** | **1,494.2** | **1,497.8** | **1,513.1** | **1,532.2** | **1,546.9** | **1,541.3** | **1,549.9** | **1,541.8** | **1,545.7** |
| 56 Residual (assets less liabilities)[7] | 124.0 | 130.5 | 132.0 | 135.5 | 136.7 | 140.7 | 141.6 | 144.8 | 145.7 | 143.6 | 144.6 | 144.6 |
| MEMO | | | | | | | | | | | | |
| 57 Mortgage-backed securities[9] | 45.4 | 50.4 | 52.1 | 53.2 | 53.8 | 54.7 | 56.0 | 59.0 | 57.7 | 58.2 | 59.7 | 59.7 |

Footnotes appear on p. A21.

## 1.26 COMMERCIAL BANKS IN THE UNITED STATES Assets and Liabilities[1]—Continued

### E. Foreign-related institutions

Billions of dollars

| Account | Monthly averages | | | | | | | | Wednesday figures | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 1998 | | | | | | | 1998 | | | |
| | Oct. | Apr. | May[r] | June[r] | July | Aug. | Sept.[r] | Oct. | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| | Seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 1 Bank credit | 538.1[r] | 557.9[r] | 564.0 | 567.2 | 572.5[r] | 590.0[r] | 606.2 | 631.9 | 637.0 | 625.7 | 635.4 | 632.3 |
| 2 Securities in bank credit | 175.2[r] | 194.2[r] | 197.1 | 199.1 | 200.0[r] | 210.9[r] | 213.4 | 223.5 | 226.4 | 217.2 | 227.0 | 222.8 |
| 3 U.S. government securities | 80.9 | 89.2 | 89.1 | 87.4 | 90.2 | 92.9 | 80.8 | 78.6 | 78.9 | 76.1 | 77.6 | 80.2 |
| 4 Other securities | 94.3[r] | 105.1[r] | 108.0 | 111.8 | 109.8[r] | 117.9[r] | 132.6 | 144.9 | 147.5 | 141.1 | 149.4 | 142.5 |
| 5 Loans and leases in bank credit[2] | 362.9[r] | 363.7[r] | 366.9 | 368.0 | 372.5[r] | 379.2[r] | 392.8 | 408.4 | 410.6 | 408.5 | 408.3 | 409.5 |
| 6 Commercial and industrial | 222.5 | 213.0[r] | 211.7 | 212.9 | 215.9[r] | 216.9[r] | 221.2 | 228.4 | 225.9 | 227.2 | 230.6 | 229.6 |
| 7 Real estate | 27.5 | 25.0 | 24.4 | 24.2 | 23.9 | 23.7 | 23.4 | 23.0 | 23.9 | 22.7 | 22.6 | 23.1 |
| 8 Security[3] | 47.0[r] | 54.2[r] | 61.2 | 62.5 | 62.6[r] | 65.5[r] | 69.1 | 71.6 | 74.9 | 72.4 | 70.1 | 70.5 |
| 9 Other loans and leases | 66.0 | 71.5[r] | 69.7 | 68.5 | 70.1[r] | 73.1[r] | 79.1 | 85.5 | 86.0 | 86.2 | 85.0 | 86.3 |
| 10 Interbank loans | 20.5 | 22.6 | 21.8 | 23.9 | 22.0 | 22.5 | 31.2 | 29.5 | 30.3 | 28.5 | 31.2 | 28.5 |
| 11 Cash assets[4] | 34.4 | 35.6 | 34.8 | 35.3 | 35.2 | 34.0 | 34.3 | 35.8 | 36.1 | 36.4 | 37.1 | 34.2 |
| 12 Other assets[5] | 43.7 | 36.2 | 34.1 | 34.1 | 34.2 | 35.8 | 37.9 | 39.5 | 40.5 | 40.9 | 39.0 | 38.3 |
| 13 **Total assets**[6] | **636.4**[r] | **652.1**[r] | **654.5** | **660.3** | **663.6**[r] | **682.0**[r] | **709.3** | **736.4** | **743.6** | **731.2** | **742.4** | **733.1** |
| *Liabilities* | | | | | | | | | | | | |
| 14 Deposits | 267.7 | 294.0 | 295.3 | 302.6 | 297.2 | 306.2 | 314.8 | 320.4 | 326.3 | 321.7 | 320.4 | 315.9 |
| 15 Transaction | 10.4 | 12.3 | 11.5 | 11.1 | 13.4 | 11.8 | 14.8 | 14.6 | 14.3 | 15.8 | 14.8 | 13.9 |
| 16 Nontransaction | 257.2 | 281.8 | 283.7 | 291.6 | 283.9 | 294.4 | 300.0 | 305.8 | 312.0 | 305.9 | 305.6 | 302.1 |
| 17 Borrowings | 155.8 | 166.0 | 163.4 | 167.1 | 169.9 | 169.9 | 184.3 | 194.2 | 189.8 | 195.6 | 195.3 | 196.3 |
| 18 From banks in the U.S. | 33.8 | 26.6 | 22.4 | 29.6 | 26.8 | 24.0 | 32.6 | 35.9 | 32.1 | 34.9 | 39.3 | 38.2 |
| 19 From others | 122.0 | 139.4 | 141.0 | 137.5 | 143.1 | 145.9 | 151.7 | 158.3 | 157.7 | 160.7 | 156.0 | 158.1 |
| 20 Net due to related foreign offices | 118.5 | 102.4[r] | 101.1 | 97.2 | 106.8 | 108.3 | 95.1 | 105.5 | 109.6 | 97.3 | 106.4 | 105.6 |
| 21 Other liabilities | 91.7[r] | 85.2[r] | 87.4 | 90.2 | 93.1[r] | 98.8[r] | 104.5 | 113.8 | 116.3 | 117.8 | 120.0 | 104.7 |
| 22 **Total liabilities** | **633.7**[r] | **647.7**[r] | **647.2** | **657.2** | **667.1**[r] | **683.2** | **698.7** | **733.9** | **741.9** | **732.4** | **742.2** | **722.5** |
| 23 Residual (assets less liabilities)[7] | 2.7 | 4.3[r] | 7.3 | 3.1 | −3.5[r] | −1.2[r] | 10.5 | 2.5 | 1.7 | −1.2 | 0.2 | 10.6 |
| | Not seasonally adjusted | | | | | | | | | | | |
| *Assets* | | | | | | | | | | | | |
| 24 Bank credit | 537.8[r] | 558.1[r] | 565.7 | 570.2 | 575.2[r] | 592.4[r] | 601.1 | 631.2 | 633.1 | 627.0 | 634.2 | 632.2 |
| 25 Securities in bank credit | 175.9[r] | 196.2[r] | 201.1 | 202.3 | 202.7[r] | 215.1[r] | 210.2 | 223.8 | 223.4 | 219.5 | 227.2 | 224.1 |
| 26 U.S. government securities | 81.3 | 87.8 | 89.7 | 87.4 | 89.8 | 93.7 | 80.8 | 79.1 | 78.2 | 76.3 | 78.5 | 81.2 |
| 27 Trading account | 14.3 | 18.5 | 20.8 | 18.9 | 24.9 | 30.7 | 20.2 | 16.2 | 15.6 | 15.7 | 16.3 | 16.3 |
| 28 Investment account | 67.0 | 69.3 | 68.9 | 68.5 | 64.9 | 63.1 | 60.6 | 62.9 | 62.6 | 60.6 | 62.2 | 64.9 |
| 29 Other securities | 94.5[r] | 108.5[r] | 111.4 | 114.9 | 112.9[r] | 121.4[r] | 129.4 | 144.7 | 145.2 | 143.2 | 148.7 | 142.9 |
| 30 Trading account | 57.2[r] | 64.9[r] | 66.7 | 70.3 | 70.2[r] | 75.3[r] | 83.2 | 92.9 | 95.5 | 93.1 | 96.6 | 88.8 |
| 31 Investment account | 37.3 | 43.6 | 44.7 | 44.6 | 42.7 | 46.1[r] | 46.1 | 51.8 | 49.7 | 50.0 | 52.1 | 54.1 |
| 32 Loans and leases in bank credit[2] | 361.9 | 361.9[r] | 364.6 | 367.9 | 372.5[r] | 377.4[r] | 390.9 | 407.4 | 409.6 | 407.5 | 406.9 | 408.1 |
| 33 Commercial and industrial | 222.2 | 213.1 | 211.1 | 212.8 | 215.7[r] | 215.8[r] | 220.1 | 228.3 | 225.8 | 226.6 | 229.9 | 229.9 |
| 34 Real estate | 27.7 | 24.7 | 24.3 | 24.0 | 23.6 | 23.6 | 23.3 | 23.3 | 24.1 | 22.9 | 22.9 | 23.4 |
| 35 Security[3] | 47.0[r] | 53.5[r] | 60.6 | 62.4 | 61.9[r] | 64.6[r] | 68.8 | 71.7 | 75.1 | 72.9 | 70.1 | 70.2 |
| 36 Other loans and leases | 65.0[r] | 70.6[r] | 68.6 | 68.8 | 71.3[r] | 73.4[r] | 78.6 | 84.2 | 84.6 | 85.0 | 84.0 | 84.6 |
| 37 Interbank loans | 20.5 | 22.6 | 21.8 | 23.9 | 22.0 | 22.5 | 31.2 | 29.5 | 30.3 | 28.5 | 31.2 | 28.5 |
| 38 Cash assets[4] | 34.6 | 33.9 | 34.4 | 36.3 | 35.1 | 34.0[r] | 34.4 | 36.1 | 35.7 | 36.6 | 37.4 | 35.0 |
| 39 Other assets[5] | 42.7 | 34.2 | 34.5 | 33.4 | 33.8 | 36.6 | 37.9 | 38.6 | 39.5 | 39.9 | 37.8 | 37.3 |
| 40 **Total assets**[6] | **635.4**[r] | **648.6**[r] | **656.2** | **663.5** | **665.8**[r] | **685.3**[r] | **704.2** | **735.0** | **738.4** | **731.6** | **740.3** | **732.8** |
| *Liabilities* | | | | | | | | | | | | |
| 41 Deposits | 267.5 | 292.3 | 298.0 | 304.4 | 295.4 | 304.9 | 316.4 | 319.9 | 327.1 | 320.2 | 319.2 | 316.2 |
| 42 Transaction | 10.5 | 11.8 | 11.2 | 11.1 | 13.5 | 11.8 | 15.4 | 14.6 | 14.1 | 16.0 | 14.9 | 14.0 |
| 43 Nontransaction | 257.0 | 280.5 | 286.8 | 293.3 | 282.0 | 293.2 | 300.9 | 305.3 | 313.0 | 304.2 | 304.3 | 302.2 |
| 44 Borrowings | 155.8 | 166.0 | 163.4 | 167.1 | 169.9 | 169.9 | 184.3 | 194.2 | 189.8 | 195.6 | 195.3 | 196.3 |
| 45 From banks in the U.S. | 33.8 | 26.6 | 22.4 | 29.6 | 26.8 | 24.0 | 32.6 | 35.9 | 32.1 | 34.9 | 39.3 | 38.2 |
| 46 From others | 122.0 | 139.4 | 141.0 | 137.5 | 143.1 | 145.9 | 151.7 | 158.3 | 157.7 | 160.7 | 156.0 | 158.1 |
| 47 Net due to related foreign offices | 117.7 | 101.0 | 102.1 | 96.4 | 103.3 | 105.0 | 93.5 | 104.5 | 105.3 | 97.2 | 104.8 | 108.8 |
| 48 Other liabilities | 91.4[r] | 84.5[r] | 86.9 | 89.4 | 92.4[r] | 98.7 | 104.2 | 113.5 | 115.3 | 117.2 | 119.6 | 105.2 |
| 49 **Total liabilities** | **632.4**[r] | **643.8**[r] | **650.4** | **657.4** | **661.0**[r] | **678.6**[r] | **698.4** | **732.0** | **737.6** | **730.3** | **738.9** | **726.4** |
| 50 Residual (assets less liabilities)[7] | 3.0 | 4.7[r] | 5.7 | 6.1 | 4.8[r] | 6.8[r] | 5.9 | 3.0 | 0.8 | 1.4 | 1.4 | 6.4 |
| MEMO | | | | | | | | | | | | |
| 51 Revaluation gains on off-balance-sheet items[8] | 41.8[r] | 40.0[r] | 40.3 | 42.3 | 41.8[r] | 43.8 | 48.0 | 54.8 | 59.1 | 54.7 | 57.6 | 50.4 |
| 52 Revaluation losses on off-balance-sheet items[8] | 40.3[r] | 39.1[r] | 38.7 | 40.7 | 40.3[r] | 42.3[r] | 45.3 | 51.1 | 55.6 | 51.9 | 53.6 | 46.0 |

Footnotes appear on p. A21.

NOTES TO TABLE 1.26

NOTE. Tables 1.26, 1.27, and 1.28 have been revised to reflect changes in the Board's H.8 statistical release, "Assets and Liabilities of Commercial Banks in the United States." Table 1.27, "Assets and Liabilities of Large Weekly Reporting Commercial Banks," and table 1.28, "Large Weekly Reporting U.S. Branches and Agencies of Foreign Banks," are no longer being published in the *Bulletin*. Instead, abbreviated balance sheets for both large and small domestically chartered banks have been included in table 1.26, parts C and D. Data are both merger-adjusted and break-adjusted. In addition, data from large weekly reporting U.S. branches and agencies of foreign banks have been replaced by balance sheet estimates of all foreign-related institutions and are included in table 1.26, part E. These data are break-adjusted.

The not-seasonally-adjusted data for all tables now contain additional balance sheet items, which were available as of October 2, 1996.

1. Covers the following types of institutions in the fifty states and the District of Columbia: domestically chartered commercial banks that submit a weekly report of condition (large domestic); other domestically chartered commercial banks (small domestic); branches and agencies of foreign banks, and Edge Act and agreement corporations (foreign-related institutions). Excludes International Banking Facilities. Data are Wednesday values or *pro rata* averages of Wednesday values. Large domestic banks constitute a universe; data for small domestic banks and foreign-related institutions are estimates based on weekly samples and on quarter-end condition reports. Data are adjusted for breaks caused by reclassifications of assets and liabilities.

The data for large and small domestic banks presented on pp. A17–19 are adjusted to remove the estimated effects of mergers between these two groups. The adjustment for mergers changes past levels to make them comparable with current levels. Estimated quantities of balance sheet items acquired in mergers are removed from past data for the bank group that contained the acquired bank and put into past data for the group containing the acquiring bank. Balance sheet data for acquired banks are obtained from Call Reports, and a ratio procedure is used to adjust past levels.

2. Excludes federal funds sold to, reverse RPs with, and loans made to commercial banks in the United States, all of which are included in "Interbank loans."

3. Consists of reverse RPs with brokers and dealers and loans to purchase and carry securities.

4. Includes vault cash, cash items in process of collection, balances due from depository institutions, and balances due from Federal Reserve Banks.

5. Excludes the due-from position with related foreign offices, which is included in "Net due to related foreign offices."

6. Excludes unearned income, reserves for losses on loans and leases, and reserves for transfer risk. Loans are reported gross of these items.

7. This balancing item is not intended as a measure of equity capital for use in capital adequacy analysis. On a seasonally adjusted basis this item reflects any differences in the seasonal patterns estimated for total assets and total liabilities.

8. Fair value of derivative contracts (interest rate, foreign exchange rate, other commodity and equity contracts) in a gain/loss position, as determined under FASB Interpretation No. 39.

9. Includes mortgage-backed securities issued by U.S. government agencies, U.S. government-sponsored enterprises, and private entities.

10. Difference between fair value and historical cost for securities classified as available-for-sale under FASB Statement No. 115. Data are reported net of tax effects. Data shown are restated to include an estimate of these tax effects.

11. Mainly commercial and industrial loans but also includes an unknown amount of credit extended to other than nonfinancial businesses.

## 1.32 COMMERCIAL PAPER AND BANKERS DOLLAR ACCEPTANCES OUTSTANDING

### A. Commercial Paper

Millions of dollars, seasonally adjusted, end of period

| Item | Year ending December | | | | | 1998 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1993 Dec. | 1994 Dec. | 1995 Dec. | 1996 Dec. | 1997 Dec. | Apr. | May | June | July | Aug. | Sept. |
| 1 **All issuers** | **555,075** | **595,382** | **674,904** | **775,371** | **966,699** | **1,041,681** | **1,053,995** | **1,091,554** | **1,102,307** | **1,119,816** | **1,152,337** |
| Financial companies[1] | | | | | | | | | | | |
| 2 Dealer-placed paper[2], total | 218,947 | 223,038 | 275,815 | 361,147 | 513,307 | 558,817 | 569,065 | 597,193 | 616,382 | 606,355 | 639,571 |
| 3 Directly placed paper[3], total | 180,389 | 207,701 | 210,829 | 229,662 | 252,536 | 275,415 | 274,469 | 276,476 | 266,022 | 281,927 | 271,526 |
| 4 Nonfinancial companies[4] | 155,739 | 164,643 | 188,260 | 184,563 | 200,857 | 207,449 | 210,460 | 217,885 | 219,904 | 231,534 | 241,239 |

1. Institutions engaged primarily in commercial, savings, and mortgage banking; sales, personal, and mortgage financing; factoring, finance leasing, and other business lending; insurance underwriting; and other investment activities.
2. Includes all financial-company paper sold by dealers in the open market.
3. As reported by financial companies that place their paper directly with investors.
4. Includes public utilities and firms engaged primarily in such activities as communications, construction, manufacturing, mining, wholesale and retail trade, transportation, and services.

### B. Bankers Dollar Acceptances[1]

Millions of dollars, not seasonally adjusted, year ending September[2]

| Item | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|
| 1 **Total amount of reporting banks' acceptances in existence** | **29,242** | **25,832** | **25,774** | **14,363** |
| 2 Amount of other banks' eligible acceptances held by reporting banks | 1,249 | 709 | 736 | 523 |
| 3 Amount of own eligible acceptances held by reporting banks (included in item 1) | 10,516 | 7,770 | 6,862 | 4,884 |
| 4 Amount of eligible acceptances representing goods stored in, or shipped between, foreign countries (included in item 1) | 11,373 | 9,361 | 10,467 | 5,414 |

1. Includes eligible, dollar-denominated bankers acceptances legally payable in the United States. Eligible acceptances are those that are eligible for discount by Federal Reserve Banks; that is, those acceptances that meet the criteria of Paragraph 7 of Section 13 of the Federal Reserve Act (12 U.S.C. §372).
2. Data on bankers dollar acceptances are gathered from approximately 65 institutions; includes U.S. chartered commerical banks (domestic and foreign offices), U.S. branches and agencies of foreign banks, and Edge and agreement corporations. The reporting group is revised every year.

## 1.33 PRIME RATE CHARGED BY BANKS Short-Term Business Loans[1]

Percent per year

| Date of change | Rate | Period | Average rate | Period | Average rate | Period | Average rate |
|---|---|---|---|---|---|---|---|
| 1995—Jan. 1 | 8.50 | 1995 | 8.83 | 1996—Jan. | 8.50 | 1997—Jan. | 8.25 |
| Feb. 1 | 9.00 | 1996 | 8.27 | Feb. | 8.25 | Feb. | 8.25 |
| July 7 | 8.75 | 1997 | 8.44 | Mar. | 8.25 | Mar. | 8.30 |
| Dec. 20 | 8.50 | | | Apr. | 8.25 | Apr. | 8.50 |
| | | 1995—Jan. | 8.50 | May | 8.25 | May | 8.50 |
| 1996—Feb. 1 | 8.25 | Feb. | 9.00 | June | 8.25 | June | 8.50 |
| | | Mar. | 9.00 | July | 8.25 | July | 8.50 |
| 1997—Mar. 26 | 8.50 | Apr. | 9.00 | Aug. | 8.25 | Aug. | 8.50 |
| | | May | 9.00 | Sept. | 8.25 | Sept. | 8.50 |
| 1998—Sept. 30 | 8.25 | June | 9.00 | Oct. | 8.25 | Oct. | 8.50 |
| Oct. 16 | 8.00 | July | 8.80 | Nov. | 8.25 | Nov. | 8.50 |
| Nov. 18 | 7.75 | Aug. | 8.75 | Dec. | 8.25 | Dec. | 8.50 |
| | | Sept. | 8.75 | | | | |
| | | Oct. | 8.75 | | | 1998—Jan. | 8.50 |
| | | Nov. | 8.75 | | | Feb. | 8.50 |
| | | Dec. | 8.65 | | | Mar. | 8.50 |
| | | | | | | Apr. | 8.50 |
| | | | | | | May | 8.50 |
| | | | | | | June | 8.50 |
| | | | | | | July | 8.50 |
| | | | | | | Aug. | 8.50 |
| | | | | | | Sept. | 8.49 |
| | | | | | | Oct. | 8.12 |
| | | | | | | Nov. | 7.89 |

1. The prime rate is one of several base rates that banks use to price short-term business loans. The table shows the date on which a new rate came to be the predominant one quoted by a majority of the twenty-five largest banks by asset size, based on the most recent Call Report. Data in this table also appear in the Board's H.15 (519) weekly and G.13 (415) monthly statistical releases. For ordering address, see inside front cover.

## 1.35 INTEREST RATES Money and Capital Markets

Percent per year; figures are averages of business day data unless otherwise noted

| Item | 1995 | 1996 | 1997 | 1998 | | | | 1998, week ending | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | July | Aug. | Sept. | Oct. | Oct. 2 | Oct. 9 | Oct. 16 | Oct. 23 | Oct. 30 |
| MONEY MARKET INSTRUMENTS | | | | | | | | | | | | |
| 1 Federal funds[1,2,3] | 5.83 | 5.30 | 5.46 | 5.54 | 5.55 | 5.51 | 5.07 | 5.58 | 5.22 | 5.14 | 4.87 | 4.95 |
| 2 Discount window borrowing[2,4] | 5.21 | 5.02 | 5.00 | 5.00 | 5.00 | 5.00 | 4.86 | 5.00 | 5.00 | 5.00 | 4.75 | 4.75 |
| *Commercial paper*[3,5,6] | | | | | | | | | | | | |
| Nonfinancial | | | | | | | | | | | | |
| 3 1-month | n.a. | n.a. | 5.57 | 5.51 | 5.50 | 5.44 | 5.14 | 5.23 | 5.25 | 5.22 | 5.03 | 5.05 |
| 4 2-month | n.a. | n.a. | 5.57 | 5.50 | 5.50 | 5.37 | 5.08 | 5.16 | 5.17 | 5.12 | 5.02 | 4.99 |
| 5 3-month | n.a. | n.a. | 5.56 | 5.48 | 5.48 | 5.31 | 5.04 | 5.11 | 5.11 | 5.09 | 4.98 | 4.98 |
| Financial | | | | | | | | | | | | |
| 6 1-month | n.a. | n.a. | 5.59 | 5.52 | 5.51 | 5.45 | 5.18 | 5.23 | 5.28 | 5.25 | 5.09 | 5.09 |
| 7 2-month | n.a. | n.a. | 5.59 | 5.51 | 5.51 | 5.38 | 5.12 | 5.16 | 5.19 | 5.17 | 5.06 | 5.03 |
| 8 3-month | n.a. | n.a. | 5.60 | 5.50 | 5.50 | 5.32 | 5.09 | 5.11 | 5.18 | 5.12 | 5.03 | 5.04 |
| *Commercial paper (historical)*[3,5,7] | | | | | | | | | | | | |
| 9 1-month | 5.93 | 5.43 | 5.54 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 10 3-month | 5.93 | 5.41 | 5.58 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 11 6-month | 5.93 | 5.42 | 5.62 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| *Finance paper, directly placed (historical)*[3,5,8] | | | | | | | | | | | | |
| 12 1-month | 5.81 | 5.31 | 5.44 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 13 3-month | 5.78 | 5.29 | 5.48 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 14 6-month | 5.68 | 5.21 | 5.48 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| *Bankers acceptances*[3,5,9] | | | | | | | | | | | | |
| 15 3-month | 5.81 | 5.31 | 5.54 | 5.50 | 5.49 | 5.38 | 5.12 | 5.19 | 5.20 | 5.17 | 5.03 | 5.07 |
| 16 6-month | 5.80 | 5.31 | 5.57 | 5.46 | 5.46 | 5.27 | 4.88 | 5.02 | 5.03 | 4.94 | 4.73 | 4.79 |
| *Certificates of deposit, secondary market*[3,10] | | | | | | | | | | | | |
| 17 1-month | 5.87 | 5.35 | 5.54 | 5.57 | 5.56 | 5.49 | 5.24 | 5.29 | 5.34 | 5.30 | 5.15 | 5.17 |
| 18 3-month | 5.92 | 5.39 | 5.62 | 5.59 | 5.58 | 5.41 | 5.21 | 5.22 | 5.29 | 5.26 | 5.14 | 5.16 |
| 19 6-month | 5.98 | 5.47 | 5.73 | 5.65 | 5.61 | 5.33 | 4.99 | 5.09 | 5.08 | 5.04 | 4.89 | 4.91 |
| 20 Eurodollar deposits, 3-month[3,11] | 5.93 | 5.38 | 5.61 | 5.57 | 5.56 | 5.39 | 5.17 | 5.20 | 5.23 | 5.23 | 5.09 | 5.13 |
| *U.S. Treasury bills* | | | | | | | | | | | | |
| Secondary market[3,5] | | | | | | | | | | | | |
| 21 3-month | 5.49 | 5.01 | 5.06 | 4.96 | 4.90 | 4.61 | 3.96 | 4.26 | 3.96 | 3.84 | 3.85 | 4.12 |
| 22 6-month | 5.56 | 5.08 | 5.18 | 5.03 | 4.95 | 4.63 | 4.05 | 4.33 | 4.10 | 3.99 | 3.94 | 4.11 |
| 23 1-year | 5.60 | 5.22 | 5.32 | 5.08 | 4.94 | 4.50 | 3.95 | 4.22 | 4.01 | 3.96 | 3.84 | 3.93 |
| Auction high[3,5,12] | | | | | | | | | | | | |
| 24 3-month | 5.51 | 5.02 | 5.07 | 4.96 | 4.94 | 4.74 | 4.08 | 4.43 | 4.16 | 3.91 | 3.85 | 4.07 |
| 25 6-month | 5.59 | 5.09 | 5.18 | 5.03 | 4.97 | 4.75 | 4.15 | 4.46 | 4.19 | 4.09 | 3.87 | 4.16 |
| 26 1-year | 5.69 | 5.23 | 5.36 | 5.10 | 5.00 | 4.51 | 4.06 | n.a. | n.a. | 4.06 | n.a. | n.a. |
| U.S. TREASURY NOTES AND BONDS | | | | | | | | | | | | |
| *Constant maturities*[13] | | | | | | | | | | | | |
| 27 1-year | 5.94 | 5.52 | 5.63 | 5.36 | 5.21 | 4.71 | 4.12 | 4.41 | 4.18 | 4.14 | 4.01 | 4.10 |
| 28 2-year | 6.15 | 5.84 | 5.99 | 5.46 | 5.27 | 4.67 | 4.09 | 4.31 | 4.11 | 4.05 | 4.07 | 4.10 |
| 29 3-year | 6.25 | 5.99 | 6.10 | 5.47 | 5.24 | 4.62 | 4.18 | 4.26 | 4.18 | 4.22 | 4.15 | 4.20 |
| 30 5-year | 6.38 | 6.18 | 6.22 | 5.46 | 5.27 | 4.62 | 4.18 | 4.24 | 4.18 | 4.22 | 4.17 | 4.22 |
| 31 7-year | 6.50 | 6.34 | 6.33 | 5.52 | 5.36 | 4.76 | 4.46 | 4.38 | 4.41 | 4.57 | 4.49 | 4.47 |
| 32 10-year | 6.57 | 6.44 | 6.35 | 5.46 | 5.34 | 4.81 | 4.53 | 4.46 | 4.41 | 4.58 | 4.59 | 4.63 |
| 33 20-year | 6.95 | 6.83 | 6.69 | 5.78 | 5.66 | 5.38 | 5.30 | 5.19 | 5.16 | 5.39 | 5.42 | 5.35 |
| 34 30-year | 6.88 | 6.71 | 6.61 | 5.68 | 5.54 | 5.20 | 5.01 | 5.00 | 4.88 | 5.02 | 5.08 | 5.12 |
| *Composite* | | | | | | | | | | | | |
| 35 More than 10 years (long-term) | 6.93 | 6.80 | 6.67 | 5.76 | 5.64 | 5.34 | 5.24 | 5.15 | 5.10 | 5.32 | 5.34 | 5.29 |
| STATE AND LOCAL NOTES AND BONDS | | | | | | | | | | | | |
| *Moody's series*[14] | | | | | | | | | | | | |
| 36 Aaa | 5.80 | 5.52 | 5.32 | 5.01 | 5.01 | 4.84 | 4.76 | 4.70 | 4.60 | 4.82 | 4.84 | 4.85 |
| 37 Baa | 6.10 | 5.79 | 5.50 | 5.12 | 5.15 | 5.11 | 5.10 | 5.05 | 5.05 | 5.10 | 5.15 | 5.17 |
| 38 *Bond Buyer* series[15] | 5.95 | 5.76 | 5.52 | 5.14 | 5.10 | 4.99 | 4.93 | 4.82 | 4.88 | 4.96 | 4.99 | 5.00 |
| CORPORATE BONDS | | | | | | | | | | | | |
| 39 Seasoned issues, all industries[16] | 7.83 | 7.66 | 7.54 | 6.84 | 6.83 | 6.75 | 6.77 | 6.62 | 6.65 | 6.85 | 6.87 | 6.85 |
| *Rating group* | | | | | | | | | | | | |
| 40 Aaa | 7.59 | 7.37 | 7.27 | 6.55 | 6.52 | 6.40 | 6.37 | 6.25 | 6.25 | 6.45 | 6.47 | 6.44 |
| 41 Aa | 7.72 | 7.55 | 7.48 | 6.78 | 6.77 | 6.68 | 6.70 | 6.54 | 6.58 | 6.78 | 6.79 | 6.76 |
| 42 A | 7.83 | 7.69 | 7.54 | 6.89 | 6.89 | 6.82 | 6.85 | 6.70 | 6.73 | 6.92 | 6.94 | 6.93 |
| 43 Baa | 8.20 | 8.05 | 7.87 | 7.15 | 7.14 | 7.09 | 7.18 | 7.01 | 7.05 | 7.25 | 7.28 | 7.26 |
| MEMO | | | | | | | | | | | | |
| *Dividend-price ratio*[17] | | | | | | | | | | | | |
| 44 Common stocks | 2.56 | 2.19 | 1.77 | 1.39 | 1.48 | 1.59 | 1.59 | 1.60 | 1.68 | 1.64 | 1.52 | 1.53 |

1. The daily effective federal funds rate is a weighted average of rates on trades through New York brokers.
2. Weekly figures are averages of seven calendar days ending on Wednesday of the current week; monthly figures include each calendar day in the month.
3. Annualized using a 360-day year or bank interest.
4. Rate for the Federal Reserve Bank of New York.
5. Quoted on a discount basis.
6. Interest rates interpolated from data on certain commercial paper trades settled by the Depository Trust Company. The trades represent sales of commercial paper by dealers or direct issuers to investors (that is, the offer side). See Board's Commercial Paper Web pages (http://www.federalreserve.gov/releases/cp) for more information.
7. An average of offering rates on commercial paper for firms whose bond rating is AA or the equivalent. Series ended August 29, 1997.
8. An average of offering rates on paper directly placed by finance companies. Series ended August 29, 1997.
9. Representative closing yields for acceptances of the highest-rated money center banks.
10. An average of dealer offering rates on nationally traded certificates of deposit.
11. Bid rates for Eurodollar deposits collected around 9:30 a.m. Eastern time. Data are for indication purposes only.
12. Auction date for daily data; weekly and monthly averages computed on an issue-date basis. On or after October 28, 1998, data are stop yields from uniform-price auctions. Before that, they are weighted average yields from multiple-price auctions.
13. Yields on actively traded issues adjusted to constant maturities. Source: U.S. Department of the Treasury.
14. General obligation bonds based on Thursday figures; Moody's Investors Service.
15. State and local government general obligation bonds maturing in twenty years are used in compiling this index. The twenty-bond index has a rating roughly equivalent to Moodys' A1 rating. Based on Thursday figures.
16. Daily figures from Moody's Investors Service. Based on yields to maturity on selected long-term bonds.
17. Standard & Poor's corporate series. Common stock ratio is based on the 500 stocks in the price index.

NOTE. Some of the data in this table also appear in the Board's H.15 (519) weekly and G.13 (415) monthly statistical releases. For ordering address, see inside front cover.

## 1.36 STOCK MARKET Selected Statistics

| Indicator | 1995 | 1996 | 1997 | 1998 Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Prices and trading volume (averages of daily figures)[1] | | | | | | | | | | | |
| *Common stock prices (indexes)* | | | | | | | | | | | | |
| 1 New York Stock Exchange (Dec. 31, 1965 = 50) | 291.18 | 357.98 | 456.99 | 532.15 | 560.70 | 578.05 | 574.46 | 569.76 | 586.39 | 539.16 | 506.56 | 511.49 |
| 2 Industrial | 367.40 | 453.57 | 574.97 | 660.91 | 693.13 | 711.89 | 712.39 | 731.01 | 718.54 | 665.66 | 629.51 | 636.62 |
| 3 Transportation | 270.14 | 327.30 | 415.08 | 485.73 | 508.06 | 523.73 | 505.02 | 492.98 | 503.89 | 441.36 | 408.75 | 396.61 |
| 4 Utility | 110.64 | 126.36 | 143.87 | 170.96 | 191.67 | 207.32 | 198.25 | 188.26 | 189.95 | 186.24 | 186.17 | 195.09 |
| 5 Finance | 238.48 | 303.94 | 424.84 | 508.97 | 539.47 | 563.07 | 551.28 | 548.57 | 579.67 | 511.22 | 454.28 | 448.12 |
| 6 Standard & Poor's Corporation (1941–43 = 10)[2] | 541.72 | 670.49 | 873.43 | 1,023.74 | 1,076.83 | 1,112.20 | 1,108.42 | 1,108.39 | 1,156.58 | 1,074.62 | 1,020.64 | 1,032.47 |
| 7 American Stock Exchange (Aug. 31, 1973 = 50)[3] | 498.13 | 570.86 | 628.34 | 685.73 | 722.37 | 742.33 | 735.02 | 704.59 | 724.83 | 655.67 | 621.48 | 607.16 |
| *Volume of trading (thousands of shares)* | | | | | | | | | | | | |
| 8 New York Stock Exchange | 345,729 | 409,740 | 523,254 | 610,958 | 619,366 | 647,110 | 569,239 | 605,576 | 639,744 | 712,710 | 790,238 | 808,816 |
| 9 American Stock Exchange | 20,387 | 22,567 | n.a. | 26,808 | 28,943 | 29,544 | 27,004 | 25,447 | 26,473 | 32,721 | 33,331 | 31,946 |
| | Customer financing (millions of dollars, end-of-period balances) | | | | | | | | | | | |
| **10 Margin credit at broker–dealers[4]** | **76,680** | **97,400** | **126,090** | **135,590** | **140,340** | **140,240** | **143,600** | **147,700** | **154,370** | **147,800** | **137,540** | **130,160** |
| *Free credit balances at brokers[5]* | | | | | | | | | | | | |
| 11 Margin accounts[6] | 16,250 | 22,540 | 31,410 | 27,450 | 27,430 | 28,160 | 26,200 | 29,840 | 31,820 | 38,460 | 41,970 | 43,500 |
| 12 Cash accounts | 34,340 | 40,430 | 52,160 | 48,640 | 51,340 | 51,050 | 47,770 | 51,205 | 53,780 | 53,850 | 54,240 | 54,610 |

Margin requirements (percent of market value and effective date)[7]

| Indicator | Mar. 11, 1968 | June 8, 1968 | May 6, 1970 | Dec. 6, 1971 | Nov. 24, 1972 | Jan. 3, 1974 |
|---|---|---|---|---|---|---|
| 13 Margin stocks | 70 | 80 | 65 | 55 | 65 | 50 |
| 14 Convertible bonds | 50 | 60 | 50 | 50 | 50 | 50 |
| 15 Short sales | 70 | 80 | 65 | 55 | 65 | 50 |

1. Daily data on prices are available upon request to the Board of Governors. For ordering address, see inside front cover.
2. In July 1976 a financial group, composed of banks and insurance companies, was added to the group of stocks on which the index is based. The index is now based on 400 industrial stocks (formerly 425), 20 transportation (formerly 15 rail), 40 public utility (formerly 60), and 40 financial.
3. On July 5, 1983, the American Stock Exchange rebased its index, effectively cutting previous readings in half.
4. Since July 1983, under the revised Regulation T, margin credit at broker–dealers has included credit extended against stocks, convertible bonds, stocks acquired through the exercise of subscription rights, corporate bonds, and government securities. Separate reporting of data for margin stocks, convertible bonds, and subscription issues was discontinued in April 1984.
5. Free credit balances are amounts in accounts with no unfulfilled commitments to brokers and are subject to withdrawal by customers on demand.
6. Series initiated in June 1984.
7. Margin requirements, stated in regulations adopted by the Board of Governors pursuant to the Securities Exchange Act of 1934, limit the amount of credit that can be used to purchase and carry "margin securities" (as defined in the regulations) when such credit is collateralized by securities. Margin requirements on securities are the difference between the market value (100 percent) and the maximum loan value of collateral as prescribed by the Board. Regulation T was adopted effective Oct. 15, 1934; Regulation U, effective May 1, 1936; Regulation G, effective Mar. 11, 1968; and Regulation X, effective Nov. 1, 1971.

On Jan. 1, 1977, the Board of Governors for the first time established in Regulation T the initial margin required for writing options on securities, setting it at 30 percent of the current market value of the stock underlying the option. On Sept. 30, 1985, the Board changed the required initial margin, allowing it to be the same as the option maintenance margin required by the appropriate exchange or self-regulatory organization; such maintenance margin rules must be approved by the Securities and Exchange Commission.

## 1.38 FEDERAL FISCAL AND FINANCING OPERATIONS

Millions of dollars

| Type of account or operation | Fiscal year | | | Calendar year | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 1998 | | | | | |
| | 1995 | 1996 | 1997 | May | June | July | Aug. | Sept. | Oct. |
| *U.S. budget*[1] | | | | | | | | | |
| 1 Receipts, total | 1,351,830 | 1,453,062 | 1,579,292 | 95,278 | 187,860 | 119,723 | 111,741 | 180,936 | 119,974 |
| 2 On-budget | 1,000,751 | 1,085,570 | 1,187,302 | 61,790 | 144,973 | 87,820 | 79,135 | 149,726 | 90,064 |
| 3 Off-budget | 351,079 | 367,492 | 391,990 | 33,488 | 42,887 | 31,903 | 32,606 | 31,210 | 29,910 |
| 4 Outlays, total | 1,515,729 | 1,560,512 | 1,601,235 | 134,057 | 136,754 | 143,807 | 122,907 | 142,725 | 152,436 |
| 5 On-budget | 1,227,065 | 1,259,608 | 1,290,609 | 102,381 | 125,606 | 115,714 | 92,555 | 107,900 | 123,687 |
| 6 Off-budget | 288,664 | 300,904 | 310,626 | 31,676 | 11,148 | 28,094 | 30,352 | 34,814 | 28,749 |
| 7 Surplus or deficit (−), total | −163,899 | −107,450 | −21,943 | −38,779 | 51,106 | −24,084 | −11,166 | 38,222 | −32,462 |
| 8 On-budget | −226,314 | −174,038 | −103,307 | −40,591 | 19,367 | −27,894 | −13,420 | 41,826 | −33,623 |
| 9 Off-budget | 62,415 | 66,588 | 81,364 | 1,812 | 31,739 | 3,809 | 2,254 | −3,604 | 1,161 |
| *Source of financing (total)* | | | | | | | | | |
| 10 Borrowing from the public | 171,288 | 129,712 | 38,171 | −8,597 | −12,618 | −16,370 | 33,989 | −46,413 | 15,330 |
| 11 Operating cash (decrease, or increase (−)) | −2,007 | −6,276 | 604 | 51,899 | −36,144 | 36,210 | −362 | −2,451 | 2,661 |
| 12 Other[2] | −5,382 | −15,986 | −16,832 | −4,523 | −2,344 | 4,244 | −22,461 | 10,642 | 14,471 |
| MEMO | | | | | | | | | |
| 13 Treasury operating balance (level, end of period) | 37,949 | 44,225 | 43,621 | 36,131 | 72,275 | 36,065 | 36,427 | 38,878 | 36,217 |
| 14 Federal Reserve Banks | 8,620 | 7,700 | 7,692 | 5,693 | 18,140 | 4,648 | 6,704 | 4,952 | 4,440 |
| 15 Tax and loan accounts | 29,329 | 36,525 | 35,930 | 30,438 | 54,135 | 31,417 | 29,722 | 33,926 | 31,776 |

1. Since 1990, off-budget items have been the social security trust funds (federal old-age survivors insurance and federal disability insurance) and the U.S. Postal Service.

2. Includes special drawing rights (SDRs); reserve position on the U.S. quota in the International Monetary Fund (IMF); loans to the IMF; other cash and monetary assets, accrued interest payable to the public; allocations of SDRs; deposit funds; miscellaneous liability (including checks outstanding) and asset accounts; seigniorage; increment on gold; net gain or loss for U.S. currency valuation adjustment; net gain or loss for IMF loan-valuation adjustment; and profit on sale of gold.

SOURCE. Monthly totals: U.S. Department of the Treasury, *Monthly Treasury Statement of Receipts and Outlays of the U.S. Government*; fiscal year totals: U.S. Office of Management and Budget, *Budget of the U.S. Government*.

## 1.39 U.S. BUDGET RECEIPTS AND OUTLAYS[1]

Millions of dollars

| Source or type | Fiscal year 1997 | Fiscal year 1998 | Calendar year 1996 H2 | Calendar year 1997 H1 | Calendar year 1997 H2 | Calendar year 1998 H1 | Calendar year 1998 Aug. | Calendar year 1998 Sept. | Calendar year 1998 Oct. |
|---|---|---|---|---|---|---|---|---|---|
| RECEIPTS | | | | | | | | | |
| 1 **All sources** | **1,579,292** | **1,721,421** | **707,552** | **845,527** | **773,812** | **922,632** | **111,741** | **180,936[r]** | **119,974** |
| 2 Individual income taxes, net | 737,466 | 828,597 | 323,884 | 400,436 | 354,072 | 447,514 | 55,300 | 90,479 | 60,255 |
| 3 Withheld | 580,207 | 646,483 | 279,988 | 292,252 | 306,865 | 316,309 | 51,881 | 53,342[r] | 54,277 |
| 4 Nonwithheld | 250,753 | 281,527 | 53,491 | 191,050 | 58,069 | 219,136 | 4,944 | 39,853 | 7,098 |
| 5 Refunds | 93,560 | 99,476 | 9,604 | 82,926 | 10,869 | 87,989 | 1,525 | 2,729 | 1,120 |
| Corporation income taxes | | | | | | | | | |
| 6 Gross receipts | 204,493 | 213,270 | 95,364 | 106,451 | 104,659 | 109,353 | 2,952 | 38,928 | 6,547 |
| 7 Refunds | 22,198 | 24,593 | 10,053 | 9,635 | 10,135 | 14,220 | 1,484 | 2,128 | 4,789 |
| 8 Social insurance taxes and contributions, net | 539,371 | 571,835 | 240,326 | 288,251 | 260,795 | 312,713 | 45,806 | 43,079 | 41,237 |
| 9 Employment taxes and contributions[2] | 506,751 | 540,016 | 227,777 | 268,357 | 247,794 | 293,520 | 41,973 | 42,540 | 39,690 |
| 10 Unemployment insurance | 28,202 | 27,484 | 10,302 | 17,709 | 10,724 | 17,080 | 3,502 | 206 | 1,142 |
| 11 Other net receipts[3] | 4,418 | 4,335 | 2,245 | 2,184 | 2,280 | 2,112 | 331 | 333 | 405 |
| 12 Excise taxes | 56,924 | 57,669 | 27,016 | 28,084 | 31,133 | 29,922 | 3,181 | 2,961 | 9,630 |
| 13 Customs deposits | 17,928 | 18,297 | 9,294 | 8,619 | 9,679 | 8,546 | 1,732 | 1,701 | 1,776 |
| 14 Estate and gift taxes | 19,845 | 24,076 | 8,835 | 10,477 | 10,262 | 12,971 | 1,718 | 2,356 | 2,089 |
| 15 Miscellaneous receipts[4] | 25,465 | 32,270 | 12,889 | 12,866 | 13,348 | 15,837 | 2,535 | 3,572 | 3,228 |
| OUTLAYS | | | | | | | | | |
| 16 **All types** | **1,601,235** | **1,651,383** | **800,177** | **797,418** | **824,370** | **815,886** | **122,907** | **142,725** | **152,436** |
| 17 National defense | 270,473 | 270,407 | 139,402 | 132,698 | 140,873 | 129,351 | 18,502 | 24,748 | 25,730 |
| 18 International affairs | 15,228 | 13,144 | 8,532 | 5,740 | 9,420 | 4,610 | 443 | 1,123 | 169 |
| 19 General science, space, and technology | 17,174 | 19,632 | 8,260 | 8,938 | 10,040 | 9,426 | 1,581 | 1,824 | 1,550 |
| 20 Energy | 1,483 | 1,359 | 695 | 803 | 411 | 957 | −113 | 892 | −135 |
| 21 Natural resources and environment | 21,369 | 21,897 | 10,307 | 9,628 | 11,106 | 10,051 | 1,855 | 2,115 | 1,859 |
| 22 Agriculture | 9,032 | 14,306 | 11,037 | 1,465 | 10,590 | 2,387 | 1,656 | 2,780 | 3,287 |
| 23 Commerce and housing credit | −14,624 | 907 | −5,899 | −7,575 | −3,526 | −2,483 | −1,423 | 8,136[r] | 1,078 |
| 24 Transportation | 40,767 | 36,610 | 21,512 | 16,847 | 20,414 | 16,196 | 3,218 | 3,997 | 3,445 |
| 25 Community and regional development | 11,005 | 10,437 | 5,498 | 5,678 | 5,749 | 4,863 | 770 | 1,115 | 1,260 |
| 26 Education, training, employment, and social services | 53,008 | 52,214 | 27,524 | 25,080 | 26,851 | 25,928 | 4,708 | 4,455 | 4,861 |
| 27 Health | 123,843 | 131,015 | 61,595 | 61,809 | 63,552 | 65,053 | 10,704 | 11,293 | 12,572 |
| 28 Social security and Medicare | 555,273 | 572,046 | 269,412 | 278,863 | 283,109 | 286,305 | 44,240 | 47,555 | 50,544 |
| 29 Income security | 230,886 | 232,949 | 107,631 | 124,034 | 106,353 | 125,196 | 14,281 | 17,309 | 20,104 |
| 30 Veterans benefits and services | 39,313 | 41,782 | 21,109 | 17,697 | 22,077 | 19,615 | 1,749 | 3,432 | 5,465 |
| 31 Administration of justice | 20,197 | 22,612 | 9,583 | 10,670 | 10,212 | 11,287 | 2,012 | 1,675 | 1,899 |
| 32 General government | 12,768 | 13,903 | 6,546 | 6,623 | 7,302 | 6,139 | 579 | 2,199 | 2,377 |
| 33 Net interest[5] | 244,013 | 243,353 | 122,573 | 122,655 | 122,620 | 122,345 | 21,366 | 15,976 | 19,442 |
| 34 Undistributed offsetting receipts[6] | −49,973 | −47,194 | −25,142 | −24,235 | −22,795 | −21,340 | −3,221 | −7,909 | −3,078 |

1. Functional details do not sum to total outlays for calendar year data because revisions to monthly totals have not been distributed among functions. Fiscal year total for receipts and outlays do not correspond to calendar year data because revisions from the *Budget* have not been fully distributed across months.

2. Old-age, disability, and hospital insurance, and railroad retirement accounts.

3. Federal employee retirement contributions and civil service retirement and disability fund.

4. Deposits of earnings by Federal Reserve Banks and other miscellaneous receipts.

5. Includes interest received by trust funds.

6. Rents and royalties for the outer continental shelf, U.S. government contributions for employee retirement, and certain asset sales.

SOURCE. Fiscal year totals: U.S. Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 1999*; monthly and half-year totals: U.S. Department of the Treasury, *Monthly Treasury Statement of Receipts and Outlays of the U.S. Government.*

## 1.40 FEDERAL DEBT SUBJECT TO STATUTORY LIMITATION

Billions of dollars, end of month

| Item | 1996 | | 1997 | | | | 1998 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sept. 30 | Dec. 31 | Mar. 31 | June 30 | Sept. 30 | Dec. 31 | Mar. 31 | June 30 | Sept. 30 |
| 1 **Federal debt outstanding** | **5,260** | **5,357** | **5,415** | **5,410** | **5,446** | **5,536** | **5,573** | **5,578** | **5,556** |
| 2 Public debt securities | 5,225 | 5,323 | 5,381 | 5,376 | 5,413 | 5,502 | 5,542 | 5,548 | 5,526 |
| 3 Held by public | 3,778 | 3,826 | 3,874 | 3,805 | 3,815 | 3,847 | 3,872 | 3,790 | n.a. |
| 4 Held by agencies | 1,447 | 1,497 | 1,507 | 1,572 | 1,599 | 1,656 | 1,670 | 1,758 | n.a. |
| 5 Agency securities | 35 | 34 | 34 | 34 | 33 | 34 | 31 | 30 | 29 |
| 6 Held by public | 27 | 27 | 26 | 26 | 26 | 27 | 26 | 26 | n.a. |
| 7 Held by agencies | 8 | 8 | 8 | 7 | 7 | 7 | 5 | 4 | n.a. |
| 8 **Debt subject to statutory limit** | **5,137** | **5,237** | **5,294** | **5,290** | **5,328** | **5,417** | **5,457** | **5,460** | **5,440** |
| 9 Public debt securities | 5,137 | 5,237 | 5,294 | 5,290 | 5,328 | 5,416 | 5,456 | 5,460 | 5,439 |
| 10 Other debt[1] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEMO | | | | | | | | | |
| 11 Statutory debt limit | 5,500 | 5,500 | 5,500 | 5,500 | 5,950 | 5,950 | 5,950 | 5,950 | 5,950 |

1. Consists of guaranteed debt of U.S. Treasury and other federal agencies, specified participation certificates, notes to international lending organizations, and District of Columbia stadium bonds.

SOURCE. U.S. Department of the Treasury, *Monthly Statement of the Public Debt of the United States* and *Treasury Bulletin*.

## 1.41 GROSS PUBLIC DEBT OF U.S. TREASURY Types and Ownership

Billions of dollars, end of period

| Type and holder | 1994 | 1995 | 1996 | 1997 | 1997 | 1998 | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Q4 | Q1 | Q2 | Q3 |
| 1 **Total gross public debt** | **4,800.2** | **4,988.7** | **5,323.2** | **5,502.4** | **5,502.4** | **5,542.4** | **5,547.9** | **5,526.2** |
| *By type* | | | | | | | | |
| 2 Interest-bearing | 4,769.2 | 4,964.4 | 5,317.2 | 5,494.9 | 5,494.9 | 5,535.3 | 5,540.2 | 5,518.7 |
| 3 Marketable | 3,126.0 | 3,307.2 | 3,459.7 | 3,456.8 | 3,456.8 | 3,467.1 | 3,369.5 | 3,331.0 |
| 4 Bills | 733.8 | 760.7 | 777.4 | 715.4 | 715.4 | 720.1 | 641.1 | 637.7 |
| 5 Notes | 1,867.0 | 2,010.3 | 2,112.3 | 2,106.1 | 2,106.1 | 2,091.9 | 2,064.6 | 2,009.1 |
| 6 Bonds | 510.3 | 521.2 | 555.0 | 587.3 | 587.3 | 598.7 | 598.7 | 610.4 |
| 7 Inflation-indexed notes and bonds[1] | n.a. | n.a. | n.a. | 33.0 | 33.0 | 41.5 | 50.1 | 41.9 |
| 8 Nonmarketable[2] | 1,643.1 | 1,657.2 | 1,857.5 | 2,038.1 | 2,038.1 | 2,068.2 | 2,170.7 | 2,187.7 |
| 9 State and local government series | 132.6 | 104.5 | 101.3 | 124.1 | 124.1 | 139.1 | 155.0 | 164.4 |
| 10 Foreign issues[3] | 42.5 | 40.8 | 37.4 | 36.2 | 36.2 | 35.4 | 36.0 | 35.1 |
| 11 Government | 42.5 | 40.8 | 47.4 | 36.2 | 36.2 | 36.4 | 36.0 | 35.1 |
| 12 Public | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13 Savings bonds and notes | 177.8 | 181.9 | 182.4 | 181.2 | 181.2 | 181.2 | 180.7 | 180.8 |
| 14 Government account series[4] | 1,259.8 | 1,299.6 | 1,505.9 | 1,666.7 | 1,666.7 | 1,681.5 | 1,769.1 | 1,777.3 |
| 15 Non-interest-bearing | 31.0 | 24.3 | 6.0 | 7.5 | 7.5 | 7.2 | 7.7 | 7.5 |
| *By holder*[5] | | | | | | | | |
| 16 U.S. Treasury and other federal agencies and trust funds | 1,257.1 | 1,304.5 | 1,497.2 | 1,655.7 | 1,655.7 | 1,670.4 | 1,757.6 | |
| 17 Federal Reserve Banks | 374.1 | 391.0 | 410.9 | 451.9 | 451.9 | 400.0 | 458.4 | |
| 18 Private investors | 3,168.0 | 3,294.9 | 3,411.2 | 3,393.4 | 3,393.4 | 3,430.7 | 3,330.6 | |
| 19 Commercial banks | 290.4 | 278.7 | 261.8 | 269.8 | 269.8 | 279.2 | 275.0 | |
| 20 Money market funds | 67.6 | 71.5 | 91.6 | 88.9 | 88.9 | 84.8 | 82.9 | |
| 21 Insurance companies | 240.1 | 241.5 | 214.1 | 224.9 | 224.9 | 225.5 | 228.0 | |
| 22 Other companies | 224.5 | 228.8 | 258.5 | 265.0 | 265.0 | 268.1 | 267.2 | n.a. |
| 23 State and local treasuries[6,7] | 541.0 | 469.6 | 482.5 | 493.0 | 493.0 | 442.4 | 441.0 | |
| Individuals | | | | | | | | |
| 24 Savings bonds | 180.5 | 185.0 | 187.0 | 186.5 | 186.5 | 186.3 | 186.0 | |
| 25 Other securities | 150.7 | 162.7 | 169.6 | 168.4 | 168.4 | 165.8 | 165.0 | |
| 26 Foreign and international[8] | 688.7 | 862.2 | 1,135.6 | 1,278.0 | 1,278.0 | 1,240.2 | 1,247.4 | |
| 27 Other miscellaneous investors[7,9] | 784.6 | 794.9 | 610.5 | 418.8 | 418.8 | 538.4 | 438.0 | |

1. The U.S. Treasury first issued inflation-indexed securities during the first quarter of 1997.
2. Includes (not shown separately) securities issued to the Rural Electrification Administration, depository bonds, retirement plan bonds, and individual retirement bonds.
3. Nonmarketable series denominated in dollars, and series denominated in foreign currency held by foreigners
4. Held almost entirely by U.S. Treasury and other federal agencies and trust funds.
5. Data for Federal Reserve Banks and U.S. government agencies and trust funds are actual holdings; data for other groups are Treasury estimates.
6. Includes state and local pension funds.
7. In March 1996, in a redefinition of series, fully defeased debt backed by nonmarketable federal securities was removed from "Other miscellaneous investors" and added to "State and local treasuries." The data shown here have been revised accordingly.
8. Consists of investments of foreign balances and international accounts in the United States.
9. Includes savings and loan associations, nonprofit institutions, credit unions, mutual savings banks, corporate pension trust funds, dealers and brokers, certain U.S. Treasury deposit accounts, and federally sponsored agencies.

SOURCE. U.S. Treasury Department, data by type of security, *Monthly Statement of the Public Debt of the United States;* data by holder, *Treasury Bulletin.*

## 1.42 U.S. GOVERNMENT SECURITIES DEALERS Transactions[1]

Millions of dollars, daily averages

| Item | 1998 | | | 1998, week ending | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | July | Aug. | Sept. | Sept. 2 | Sept. 9 | Sept. 16 | Sept. 23 | Sept. 30 | Oct. 7 | Oct. 14 | Oct. 21 | Oct. 28 |
| OUTRIGHT TRANSACTIONS[2] | | | | | | | | | | | | |
| *By type of security* | | | | | | | | | | | | |
| 1 U.S. Treasury bills | 25,889 | 32,286 | 35,694 | 51,929 | 35,909 | 40,148 | 31,762 | 28,504 | 32,697 | 35,896 | 28,238 | 23,097 |
| Coupon securities, by maturity | | | | | | | | | | | | |
| 2 Five years or less | 82,094 | 137,256[r] | 141,855[r] | 187,521[r] | 120,894[r] | 151,592 | 141,650 | 130,825 | 143,434 | 151,181 | 114,620 | 124,634 |
| 3 More than five years | 59,741 | 77,455[r] | 85,071[r] | 105,015[r] | 74,135[r] | 85,936 | 84,597 | 85,452 | 118,793 | 105,846 | 84,090 | 77,072 |
| 4 Inflation-indexed | 1,205 | 717[r] | 1,173[r] | 862[r] | 1,212[r] | 1,657 | 817 | 1,140 | 2,373 | 1,269 | 1,631 | 949 |
| Federal agency | | | | | | | | | | | | |
| 5 Discount notes | 35,439 | 37,530 | 46,151[r] | 42,747 | 39,628 | 45,984 | 48,277 | 50,771 | 53,568 | 52,068 | 44,117 | 35,723 |
| Coupon securities, by maturity | | | | | | | | | | | | |
| 6 One year or less | 1,325 | 1,095 | 1,127[r] | 905 | 517 | 1,544 | 1,378 | 1,036 | 551 | 484 | 521 | 1,260 |
| 7 More than one year, but less than or equal to five years | 2,892 | 4,118 | 4,853 | 4,908 | 6,093 | 5,078 | 4,466 | 4,003 | 4,308 | 3,584 | 6,699 | 5,164 |
| 8 More than five years | 2,700 | 3,583 | 2,911 | 5,058 | 2,561 | 2,569 | 2,817 | 2,769 | 5,025 | 6,617 | 3,610 | 3,304 |
| 9 Mortgage-backed | 61,434 | 72,609 | 89,908[r] | 77,327 | 111,619[r] | 103,767 | 82,526 | 71,093 | 108,039 | 128,064 | 79,636 | 73,179 |
| *By type of counterparty* | | | | | | | | | | | | |
| With interdealer broker | | | | | | | | | | | | |
| 10 U.S. Treasury | 92,782 | 135,577 | 146,046 | 185,792 | 130,450 | 156,360 | 143,203 | 135,153 | 168,025 | 162,670 | 132,907 | 129,516 |
| 11 Federal agency | 1,904 | 3,012 | 3,186 | 4,094 | 2,696 | 2,768 | 3,556 | 3,264 | 3,447 | 3,866 | 4,178 | 2,960 |
| 12 Mortgage-backed | 19,316 | 22,350 | 30,665 | 25,054 | 31,866 | 37,391 | 29,255 | 26,631 | 35,696 | 38,483 | 28,725 | 26,810 |
| With other | | | | | | | | | | | | |
| 13 U.S. Treasury | 76,148 | 112,136[r] | 117,747[r] | 159,536[r] | 101,700[r] | 122,973 | 115,623 | 110,769 | 129,272 | 131,521 | 95,673 | 96,236 |
| 14 Federal agency | 40,451 | 43,314 | 51,856 | 49,524 | 46,102 | 52,406 | 53,382 | 55,315 | 60,004 | 58,886 | 50,769 | 42,490 |
| 15 Mortgage-backed | 42,118 | 50,258 | 59,243[r] | 52,272 | 79,753[r] | 66,375 | 53,271 | 44,462 | 72,343 | 89,581 | 50,912 | 46,369 |
| FUTURES TRANSACTIONS[3] | | | | | | | | | | | | |
| *By type of deliverable security* | | | | | | | | | | | | |
| 16 U.S. Treasury bills | 65 | 95 | 180 | n.a. | 47 | 413 | 54 | n.a. | n.a. | 0 | n.a. | n.a. |
| Coupon securities, by maturity | | | | | | | | | | | | |
| 17 Five years or less | 1,764 | 5,907 | 4,378 | 10,680 | 3,498 | 5,087 | 3,506 | 2,724 | 3,238 | 4,181 | 2,969 | 2,932 |
| 18 More than five years | 11,813 | 18,177 | 20,105 | 30,063 | 16,714 | 22,287 | 20,808 | 15,948 | 25,518 | 23,107 | 16,867 | 15,132 |
| 19 Inflation-indexed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Federal agency | | | | | | | | | | | | |
| 20 Discount notes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Coupon securities, by maturity | | | | | | | | | | | | |
| 21 One year or less | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 More than one year, but less than or equal to five years | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 More than five years | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 Mortgage-backed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OPTIONS TRANSACTIONS[4] | | | | | | | | | | | | |
| *By type of underlying security* | | | | | | | | | | | | |
| 25 U.S. Treasury bills | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Coupon securities, by maturity | | | | | | | | | | | | |
| 26 Five years or less | 1,856 | 1,790 | 1,984[r] | 2,263 | 1,723 | 2,691 | 1,407 | 1,950 | 2,139 | 3,083 | 1,006 | 1,067 |
| 27 More than five years | 5,124 | 6,496 | 6,152[r] | 5,986 | 6,421 | 6,440 | 5,485 | 6,383 | 9,520 | 10,416 | 8,843 | 4,910 |
| 28 Inflation-indexed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Federal agency | | | | | | | | | | | | |
| 29 Discount notes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Coupon securities, by maturity | | | | | | | | | | | | |
| 30 One year or less | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 More than one year, but less than or equal to five years | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | n.a. | n.a. |
| 32 More than five years | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 Mortgage-backed | 623 | 793 | 745 | 1,050 | 815 | 786 | 348 | 925 | 1,531 | 1,005 | 387 | 533 |

1. Transactions are market purchases and sales of securities as reported to the Federal Reserve Bank of New York by the U.S. government securities dealers on its published list of primary dealers. Monthly averages are based on the number of trading days in the month. Transactions are assumed to be evenly distributed among the trading days of the report week. Immediate, forward, and futures transactions are reported at principal value, which does not include accrued interest; options transactions are reported at the face value of the underlying securities.

Dealers report cumulative transactions for each week ending Wednesday.

2. Outright transactions include immediate and forward transactions. Immediate delivery refers to purchases or sales of securities (other than mortgage-backed federal agency securities) for which delivery is scheduled in five business days or less and "when-issued" securities that settle on the issue date of offering. Transactions for immediate delivery of mortgage-backed agency securities include purchases and sales for which delivery is scheduled in thirty business days or less. Stripped securities are reported at market value by maturity of coupon or corpus.

Forward transactions are agreements made in the over-the-counter market that specify delayed delivery. Forward contracts for U.S. Treasury securities and federal agency debt securities are included when the time to delivery is more than five business days. Forward contracts for mortgage-backed agency securities are included when the time to delivery is more than thirty business days.

3. Futures transactions are standardized agreements arranged on an exchange. All futures transactions are included regardless of time to delivery.

4. Options transactions are purchases or sales of put and call options, whether arranged on an organized exchange or in the over-the-counter market, and include options on futures contracts on U.S. Treasury and federal agency securities.

NOTE. "n.a." indicates that data are not published because of insufficient activity.

## 1.43 U.S. GOVERNMENT SECURITIES DEALERS Positions and Financing[1]

Millions of dollars

| Item | 1998 | | | 1998, week ending | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | July | Aug. | Sept. | Sept. 2 | Sept. 9 | Sept. 16 | Sept. 23 | Sept. 30 | Oct. 7 | Oct. 14 | Oct. 21 |
| | Positions[2] | | | | | | | | | | |
| NET OUTRIGHT POSITIONS[3] | | | | | | | | | | | |
| *By type of security* | | | | | | | | | | | |
| 1 U.S. Treasury bills | 1,766 | 3,981 | 853 | 4,845 | 6,948 | −896 | −1,168 | −2,612 | −13,643 | −6,447 | −7,089 |
| Coupon securities, by maturity | | | | | | | | | | | |
| 2 Five years or less | −16,440 | −18,708 | −5,360 | −4,625 | −7,456 | −6,121 | −7,093 | −981 | 851 | −4,303 | 1,875 |
| 3 More than five years | −17,653 | −11,060 | −2,004 | −820 | 597 | −3,598 | −2,644 | −2,708 | 4,129 | 5,759 | 7,872 |
| 4 Inflation-indexed | 2,671 | 2,305 | 1,554 | 1,786 | 1,883 | 1,536 | 1,327 | 1,403 | 3,442 | 2,895 | 2,397 |
| Federal agency | | | | | | | | | | | |
| 5 Discount notes | 19,296 | 16,408 | 17,211 | 17,042 | 19,191 | 20,889 | 17,117 | 11,696 | 25,268 | 19,174 | 12,984 |
| Coupon securities, by maturity | | | | | | | | | | | |
| 6 One year or less | 2,782 | 2,756 | 2,668 | 3,355 | 3,211 | 2,961 | 2,653 | 1,649 | 1,692 | 1,923 | 1,872 |
| 7 More than one year, but less than or equal to five years | 7,435 | 5,821 | 4,801 | 3,378 | 5,033 | 5,992 | 4,906 | 3,678 | 4,140 | 4,447 | 6,601 |
| 8 More than five years | 10,759 | 8,784 | 6,913 | 7,280 | 6,512 | 6,371 | 7,344 | 7,320 | 7,996 | 7,630 | 6,904 |
| 9 Mortgage-backed | 64,705 | 61,657 | 58,415 | 58,637 | 62,539 | 66,404 | 55,797 | 48,856 | 57,363 | 49,939 | 52,229 |
| NET FUTURES POSITIONS[4] | | | | | | | | | | | |
| *By type of deliverable security* | | | | | | | | | | | |
| 10 U.S. Treasury bills | 596 | 1,144 | 606 | 1,474 | 1,617 | 287 | 151 | 119 | n.a. | n.a. | n.a. |
| Coupon securities, by maturity | | | | | | | | | | | |
| 11 Five years or less | −4,346 | −4,879 | −8,716 | −5,851 | −6,506 | −10,554 | −9,681 | −8,941 | −7,958 | −10,275 | −9,776 |
| 12 More than five years | −26,100 | −32,741 | −25,612 | −30,879 | −29,025 | −26,815 | −23,089 | −22,013 | −25,637 | −23,512 | −23,713 |
| 13 Inflation-indexed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Federal agency | | | | | | | | | | | |
| 14 Discount notes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Coupon securities, by maturity | | | | | | | | | | | |
| 15 One year or less | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 More than one year, but less than or equal to five years | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 More than five years | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 Mortgage-backed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NET OPTIONS POSITIONS | | | | | | | | | | | |
| *By type of deliverable security* | | | | | | | | | | | |
| 19 U.S. Treasury bills | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Coupon securities, by maturity | | | | | | | | | | | |
| 20 Five years or less | −1,050 | −827 | −1,153 | −957 | −1,878 | −911 | 267 | −2,147 | −1,125 | −1,377 | −1,560 |
| 21 More than five years | −3,065 | −2,842 | −2,553 | −2,815 | −3,497 | −1,015 | −2,398 | −3,227 | −6,126 | −3,371 | −3,080 |
| 22 Inflation-indexed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | n.a. | n.a. |
| Federal agency | | | | | | | | | | | |
| 23 Discount notes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Coupon securities, by maturity | | | | | | | | | | | |
| 24 One year or less | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 More than one year, but less than or equal to five years | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | 0 |
| 26 More than five years | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 27 Mortgage-backed | 2,332 | 1,954 | 1,629 | 1,222 | 1,692 | 1,706 | 2,517 | 718 | 1,477 | 4,126 | 3,670 |
| | Financing[5] | | | | | | | | | | |
| *Reverse repurchase agreements* | | | | | | | | | | | |
| 28 Overnight and continuing | 320,143 | 333,413 | 316,256 | 345,156 | 305,452 | 309,408 | 336,627 | 305,281 | 312,432 | 294,925 | 279,853 |
| 29 Term | 895,133 | 829,365 | 784,437 | 765,937 | 778,038 | 798,530 | 820,842 | 745,625 | 840,221 | 828,127 | 852,680 |
| *Securities borrowed* | | | | | | | | | | | |
| 30 Overnight and continuing | 218,172 | 221,150 | 229,685 | 226,495 | 223,820 | 231,670 | 232,824 | 231,337 | 244,842 | 241,930 | 234,178 |
| 31 Term | 95,894 | 95,383 | 99,774 | 95,375 | 99,144 | 103,598 | 101,204 | 96,405 | 112,224 | 109,744 | 108,871 |
| *Securities received as pledge* | | | | | | | | | | | |
| 32 Overnight and continuing | 3,140 | 2,770 | 3,152 | 2,641 | 3,120 | 3,413 | 3,470 | 2,752 | 2,805 | 2,772 | 2,886 |
| 33 Term | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| *Repurchase agreements* | | | | | | | | | | | |
| 34 Overnight and continuing | 720,678 | 735,478 | 718,744 | 758,591 | 726,556 | 747,092 | 735,625 | 654,319 | 715,752 | 694,273 | 669,662 |
| 35 Term | 799,633 | 728,531 | 704,430 | 664,056 | 675,410 | 718,248 | 746,038 | 689,560 | 764,886 | 762,433 | 785,555 |
| *Securities loaned* | | | | | | | | | | | |
| 36 Overnight and continuing | 10,999 | 12,518 | 11,057 | 10,495 | 10,932 | 10,016 | 10,007 | 13,432 | 8,473 | 8,511 | 6,495 |
| 37 Term | 3,623 | 3,830 | 4,119 | 3,803 | 3,808 | 3,936 | 3,897 | 4,925 | 4,121 | 4,186 | 3,673 |
| *Securities pledged* | | | | | | | | | | | |
| 38 Overnight and continuing | 54,477 | 49,094 | 52,222 | 47,376 | 46,482 | 52,344 | 55,635 | 55,811 | 57,482 | 52,978 | 49,743 |
| 39 Term | 6,425 | 5,612 | 5,624 | 5,732 | 5,794 | 5,560 | 5,878 | 5,231 | 5,063 | 4,797 | 5,412 |
| *Collateralized loans* | | | | | | | | | | | |
| 40 Total | 16,787 | 21,580 | 14,140 | 18,238 | 13,879 | 14,678 | 16,520 | 10,311 | 24,276 | 19,091 | 23,000 |

1. Data for positions and financing are obtained from reports submitted to the Federal Reserve Bank of New York by the U.S. government securities dealers on its published list of primary dealers. Weekly figures are close-of-business Wednesday data. Positions for calendar days of the report week are assumed to be constant. Monthly averages are based on the number of calendar days in the month.

2. Securities positions are reported at market value.

3. Net outright positions include immediate and forward positions. Net immediate positions include securities purchased or sold (other than mortgage-backed agency securities) that have been delivered or are scheduled to be delivered in five business days or less and "when-issued" securities that settle on the issue date of offering. Net immediate positions for mortgage-backed agency securities include securities purchased or sold that have been delivered or are scheduled to be delivered in thirty business days or less.

Forward positions reflect agreements made in the over-the-counter market that specify delayed delivery. Forward contracts for U.S. Treasury securities and federal agency debt securities are included when the time to delivery is more than five business days. Forward contracts for mortgage-backed agency securities are included when the time to delivery is more than thirty business days.

4. Futures positions reflect standardized agreements arranged on an exchange. All futures positions are included regardless of time to delivery.

5. Overnight financing refers to agreements made on one business day that mature on the next business day; continuing contracts are agreements that remain in effect for more than one business day but have no specific maturity and can be terminated without advance notice by either party; term agreements have a fixed maturity of more than one business day. Financing data are reported in terms of actual funds paid or received, including accrued interest.

NOTE. "n.a." indicates that data are not published because of insufficient activity.

## 1.44 FEDERAL AND FEDERALLY SPONSORED CREDIT AGENCIES Debt Outstanding

Millions of dollars, end of period

| Agency | 1994 | 1995 | 1996 | 1997 | 1998 Apr. | 1998 May | 1998 June | 1998 July | 1998 Aug. |
|---|---|---|---|---|---|---|---|---|---|
| 1 **Federal and federally sponsored agencies** | **738,928** | **844,611** | **925,823** | **1,022,609** | **1,048,661** | **1,044,575** | **1,061,253** | n.a. | n.a. |
| 2 Federal agencies | 39,186 | 37,347 | 29,380 | 27,792 | 27,104 | 26,995 | 26,817 | 26,990 | 26,668 |
| 3 Defense Department[1] | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 4 Export-Import Bank[2,3] | 3,455 | 2,050 | 1,447 | 552 | 542 | 542 | 1,295 | n.a. | n.a. |
| 5 Federal Housing Administration[4] | 116 | 97 | 84 | 102 | 102 | 108 | 144 | 156 | 155 |
| 6 Government National Mortgage Association certificates of participation[5] | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 7 Postal Service[6] | 8,073 | 5,765 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 8 Tennessee Valley Authority | 27,536 | 29,429 | 27,853 | 27,786 | 27,098 | 26,989 | 26,811 | 26,984 | 26,507 |
| 9 United States Railway Association[6] | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 10 Federally sponsored agencies[7] | 699,742 | 807,264 | 896,443 | 994,817 | 1,021,557 | 1,017,580 | 1,034,436 | 1,090,715 | 1,103,596 |
| 11 Federal Home Loan Banks | 205,817 | 243,194 | 263,404 | 313,919 | 323,208 | 322,155 | 328,514 | 328,009 | 334,494 |
| 12 Federal Home Loan Mortgage Corporation | 93,279 | 119,961 | 156,980 | 169,200 | 200,800 | 204,751 | 200,314 | 208,800 | 213,800 |
| 13 Federal National Mortgage Association | 257,230 | 299,174 | 331,270 | 369,774 | 395,977 | 399,489 | 406,162 | 415,229 | 423,188 |
| 14 Farm Credit Banks[8] | 53,175 | 57,379 | 60,053 | 63,517 | 62,799 | 63,744 | 64,717 | 64,528 | 57,910 |
| 15 Student Loan Marketing Association[9] | 50,335 | 47,529 | 44,763 | 37,717 | 36,256 | 35,952 | 33,231 | 33,270 | 33,350 |
| 16 Financing Corporation[10] | 8,170 | 8,170 | 8,170 | 8,170 | 8,170 | 8,170 | 8,170 | 8,170 | 8,170 |
| 17 Farm Credit Financial Assistance Corporation[11] | 1,261 | 1,261 | 1,261 | 1,261 | 1,261 | 1,261 | 1,261 | 1,261 | 1,261 |
| 18 Resolution Funding Corporation[12] | 29,996 | 29,996 | 29,996 | 29,996 | 29,996 | 29,996 | 29,996 | 29,996 | 29,996 |
| MEMO | | | | | | | | | |
| 19 **Federal Financing Bank debt**[13] | **103,817** | **78,681** | **58,172** | **49,090** | **44,893** | **44,223** | **136,892** | **42,610** | **42,396** |
| *Lending to federal and federally sponsored agencies* | | | | | | | | | |
| 20 Export-Import Bank[3] | 3,449 | 2,044 | 1,431 | 552 | 542 | 542 | 1,295 | ↑ | ↑ |
| 21 Postal Service[6] | 8,073 | 5,765 | n.a. | n.a. | n.a. | n.a. | n.a. | | |
| 22 Student Loan Marketing Association | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 23 Tennessee Valley Authority | 3,200 | 3,200 | n.a. | n.a. | n.a. | n.a. | n.a. | | |
| 24 United States Railway Association[6] | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ↓ | ↓ |
| *Other lending*[14] | | | | | | | | | |
| 25 Farmers Home Administration | 33,719 | 21,015 | 18,325 | 13,530 | 12,380 | 11,955 | 13,530 | 10,900 | 9,756 |
| 26 Rural Electrification Administration | 17,392 | 17,144 | 16,702 | 14,898 | 14,203 | 14,207 | 14,819 | 14,126 | 14,284 |
| 27 Other | 37,984 | 29,513 | 21,714 | 20,110 | 17,768 | 17,519 | 107,248 | 17,584 | 18,356 |

1. Consists of mortgages assumed by the Defense Department between 1957 and 1963 under family housing and homeowners assistance programs.
2. Includes participation certificates reclassified as debt beginning Oct. 1, 1976.
3. On-budget since Sept. 30, 1976.
4. Consists of debentures issued in payment of Federal Housing Administration insurance claims. Once issued, these securities may be sold privately on the securities market.
5. Certificates of participation issued before fiscal year 1969 by the Government National Mortgage Association acting as trustee for the Farmers Home Administration, the Department of Health, Education, and Welfare, the Department of Housing and Urban Development, the Small Business Administration, and the Veterans Administration.
6. Off-budget.
7. Includes outstanding noncontingent liabilities: notes, bonds, and debentures. Includes Federal Agricultural Mortgage Corporation, therefore details do not sum to total. Some data are estimated
8. Excludes borrowing by the Farm Credit Financial Assistance Corporation, which is shown on line 17.
9. Before late 1982, the association obtained financing through the Federal Financing Bank (FFB). Borrowing excludes that obtained from the FFB, which is shown on line 22.
10. The Financing Corporation, established in August 1987 to recapitalize the Federal Savings and Loan Insurance Corporation, undertook its first borrowing in October 1987.
11. The Farm Credit Financial Assistance Corporation, established in January 1988 to provide assistance to the Farm Credit System, undertook its first borrowing in July 1988.
12. The Resolution Funding Corporation, established by the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, undertook its first borrowing in October 1989.
13. The FFB, which began operations in 1974, is authorized to purchase or sell obligations issued, sold, or guaranteed by other federal agencies. Because FFB incurs debt solely for the purpose of lending to other agencies, its debt is not included in the main portion of the table to avoid double counting.
14. Includes FFB purchases of agency assets and guaranteed loans; the latter are loans guaranteed by numerous agencies, with the amounts guaranteed by any one agency generally being small. The Farmers Home Administration entry consists exclusively of agency assets, whereas the Rural Electrification Administration entry consists of both agency assets and guaranteed loans.

## 1.45 NEW SECURITY ISSUES Tax-Exempt State and Local Governments

Millions of dollars

| Type of issue or issuer, or use | 1995 | 1996 | 1997 | 1998 Mar. | 1998 Apr. | 1998 May | 1998 June | 1998 July | 1998 Aug. | 1998 Sept. | 1998 Oct. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 **All issues, new and refunding**[1] | **145,657** | **171,222** | **214,694** | **27,859** | **20,271** | **22,862** | **29,665** | **22,599** | **20,344** | **17,526** | **19,528** |
| *By type of issue* | | | | | | | | | | | |
| 2 General obligation | 56,980 | 60,409 | 69,934 | 9,597 | 8,154 | 4,827 | 10,135 | 6,515 | 5,812 | 5,619 | 6,791 |
| 3 Revenue | 88,677 | 110,813 | 134,989 | 18,261 | 12,117 | 18,035 | 19,530 | 16,084 | 14,532 | 11,907 | 12,737 |
| *By type of issuer* | | | | | | | | | | | |
| 4 State | 14,665 | 13,651 | 18,237 | 2,375 | 3,548 | 1,146 | 2,809 | 1,972 | 1,483 | 1,280 | 1,865 |
| 5 Special district or statutory authority[2] | 93,500 | 113,228 | 134,919 | 19,629 | 12,504 | 16,865 | 18,099 | 16,244 | 14,233 | 12,490 | 12,924 |
| 6 Municipality, county, or township | 37,492 | 44,343 | 70,558 | 5,859 | 4,219 | 4,851 | 7,220 | 5,673 | 4,628 | 3,756 | 4,739 |
| 7 **Issues for new capital** | **102,390** | **112,298** | **135,519** | **15,134** | **12,616** | **15,281** | **19,341** | **15,895** | **11,258** | **9,106** | **12,736** |
| *By use of proceeds* | | | | | | | | | | | |
| 8 Education | 23,964 | 26,851 | 31,860 | 4,297 | 4,080 | 2,819 | 4,911 | 2,733 | 2,435 | 2,041 | 2,605 |
| 9 Transportation | 11,890 | 12,324 | 13,951 | 771 | 1,089 | 1,043 | 2,962 | 3,677 | 1,982 | 918 | 1,598 |
| 10 Utilities and conservation | 9,618 | 9,791 | 12,219 | 1,866 | 749 | 5,971 | 2,368 | 795 | 1,179 | 831 | 2,785 |
| 11 Social welfare | 19,566 | 24,583 | 27,794 | 3,104 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 12 Industrial aid | 6,581 | 6,287 | 6,667 | 1,236 | 678 | 576 | 563 | 1,002 | 709 | 315 | 471 |
| 13 Other purposes | 30,771 | 32,462 | 35,095 | 3,860 | 3,255 | 2,482 | 5,279 | 4,674 | 2,764 | 2,726 | 3,359 |

1. Par amounts of long-term issues based on date of sale.
2. Includes school districts.

SOURCE. Securities Data Company beginning January 1990; *Investment Dealer's Digest* before then.

## 1.46 NEW SECURITY ISSUES U.S. Corporations

Millions of dollars

| Type of issue, offering, or issuer | 1995 | 1996 | 1997 | 1998 Feb. | 1998 Mar. | 1998 Apr. | 1998 May | 1998 June | 1998 July | 1998 Aug.[r] | 1998 Sept. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 **All issues**[1] | **673,571** | n.a. | n.a. | **75,961** | **115,694** | **83,646** | **84,449** | **109,687**[r] | n.a. | n.a. | n.a. |
| 2 **Bonds**[2] | **572,998** | n.a | n.a. | **64,996** | **97,323** | **71,929** | **70,313** | **93,243**[r] | n.a. | n.a. | n.a. |
| *By type of offering* | | | | | | | | | | | |
| 3 Public, domestic | 408,707 | 465,489 | 537,880 | 50,453 | 81,778 | 55,452 | 56,965 | 78,280 | 54,266 | 45,745 | 70,322 |
| 4 Private placement, domestic[3] | 87,492 | n.a. | n.a. | 7,600 | 7,600 | 7,600 | 7,600 | 7,600 | n.a. | n.a. | n.a. |
| 5 Sold abroad | 76,799 | 83,433 | 103,188 | 6,943 | 7,946 | 8,878 | 5,748 | 7,363 | 6,267 | 3,800 | 2,618 |
| *By industry group* | | | | | | | | | | | |
| 6 Nonfinancial | 156,763 | n.a. | n.a. | 19,733 | 24,901 | 24,585 | 20,456 | 24,444[r] | n.a. | n.a. | n.a. |
| 7 Financial | 416,235 | 429,157 | 510,953 | 45,263 | 72,422 | 47,345 | 49,857 | 68,799[r] | 43,313 | 36,746 | 63,876 |
| 8 **Stocks**[2] | **105,323** | **122,006** | **117,880** | **11,182** | **19,271** | **12,470** | **14,700** | **17,111** | **9,772** | **3,725** | **4,640** |
| *By type of offering* | | | | | | | | | | | |
| 9 Public | 73,223 | 122,006 | 117,880 | 11,182 | 19,271 | 12,470 | 14,700 | 17,111 | 9,772 | 3,725 | 4,640 |
| 10 Private placement[3] | 32,100 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| *By industry group* | | | | | | | | | | | |
| 11 Nonfinancial | 52,707 | 80,460 | 60,386 | 5,737 | 10,756 | 5,551 | 9,271 | 10,248 | 6,390 | 2,560 | 2,266 |
| 12 Financial | 20,516 | 41,546 | 57,494 | 5,445 | 8,515 | 6,919 | 5,429 | 6,863 | 3,382 | 1,165 | 2,374 |

1. Figures represent gross proceeds of issues maturing in more than one year; they are the principal amount or number of units calculated by multiplying by the offering price. Figures exclude secondary offerings, employee stock plans, investment companies other than closed-end, intracorporate transactions, and Yankee bonds. Stock data include ownership securities issued by limited partnerships.
2. Monthly data cover only public offerings.
3. Monthly data are not available.

SOURCE. Beginning July 1993, Securities Data Company and the Board of Governors of the Federal Reserve System.

## 1.47 OPEN-END INVESTMENT COMPANIES Net Sales and Assets[1]

Millions of dollars

| Item | 1996 | 1997 | 1998 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mar. | Apr. | May | June | July | Aug. | Sept.[r] | Oct. |
| 1 **Sales of own shares**[2] | **934,595** | **1,190,900** | **128,348** | **128,828** | **113,593** | **122,288** | **134,801** | **111,587** | **118,478** | **116,150** |
| 2 Redemptions of own shares | 702,711 | 918,728 | 97,248 | 97,087 | 84,421 | 97,899 | 107,368 | 118,812 | 107,049 | 109,438 |
| 3 Net sales[3] | 231,885 | 272,172 | 31,100 | 31,741 | 29,172 | 24,389 | 27,433 | −7,225 | 11,429 | 6,712 |
| 4 **Assets**[4] | **2,624,463** | **3,409,315** | **3,843,971** | **3,909,932** | **3,882,061** | **3,986,952** | **3,957,093** | **3,479,401** | **3,625,841** | **3,804,731** |
| 5 Cash[5] | 138,559 | 174,154 | 174,058 | 170,045 | 171,425 | 199,135 | 195,966 | 194,435 | 211,253 | 210,481 |
| 6 Other | 2,485,904 | 3,235,161 | 3,669,913 | 3,739,887 | 3,710,636 | 3,787,817 | 3,761,127 | 3,284,967 | 3,414,588 | 3,594,249 |

1. Data include stock, hybrid, and bond mutual funds and exclude money market mutual funds.
2. Excludes reinvestment of net income dividends and capital gains distributions and share issue of conversions from one fund to another in the same group.
3. Excludes sales and redemptions resulting from transfers of shares into or out of money market mutual funds within the same fund family.
4. Market value at end of period, less current liabilities.
5. Includes all U.S. Treasury securities and other short-term debt securities.

SOURCE. Investment Company Institute. Data based on reports of membership, which comprises substantially all open-end investment companies registered with the Securities and Exchange Commission. Data reflect underwritings of newly formed companies after their initial offering of securities.

## 1.48 CORPORATE PROFITS AND THEIR DISTRIBUTION

Billions of dollars; quarterly data at seasonally adjusted annual rates

| Account | 1995 | 1996 | 1997 | 1996 | 1997 | | | | 1998 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| 1 Profits with inventory valuation and capital consumption adjustment | 672.4 | 750.4 | 817.9 | 762.0 | 794.3 | 815.5 | 840.9 | 820.8 | 829.2 | 820.6 | 823.9 |
| 2 Profits before taxes | 635.6 | 680.2 | 734.4 | 685.7 | 712.4 | 729.8 | 758.9 | 736.4 | 719.1 | 723.5 | 717.0 |
| 3 Profits-tax liability | 211.0 | 226.1 | 246.1 | 224.2 | 238.8 | 241.9 | 254.2 | 249.3 | 239.9 | 241.6 | 243.8 |
| 4 Profits after taxes | 424.6 | 454.1 | 488.3 | 461.5 | 473.6 | 487.8 | 504.7 | 487.1 | 479.2 | 481.8 | 473.2 |
| 5 Dividends | 205.3 | 261.9 | 275.1 | 273.6 | 274.1 | 274.7 | 275.1 | 276.4 | 277.3 | 278.1 | 279.0 |
| 6 Undistributed profits | 219.3 | 192.3 | 213.2 | 187.9 | 199.5 | 213.2 | 229.5 | 210.6 | 201.8 | 203.7 | 194.3 |
| 7 Inventory valuation | −22.6 | −1.2 | 6.9 | 3.0 | 8.1 | 10.3 | 4.8 | 4.3 | 25.3 | 7.8 | 12.1 |
| 8 Capital consumption adjustment | 59.4 | 71.4 | 76.6 | 73.3 | 73.8 | 75.5 | 77.2 | 80.1 | 84.9 | 89.4 | 94.9 |

SOURCE. U.S. Department of Commerce, *Survey of Current Business*.

## 1.51 DOMESTIC FINANCE COMPANIES Assets and Liabilities[1]

Billions of dollars, end of period; not seasonally adjusted

| Account | 1994 | 1995 | 1996 | 1996 | 1997 | | | | 1998 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2[r] |
| ASSETS | | | | | | | | | | |
| 1 Accounts receivable, gross[2] | 543.7 | 607.0 | 637.1 | 637.1 | 648.0 | 651.6 | 660.5 | 663.3 | 667.2 | 676.0 |
| 2 Consumer | 201.9 | 233.0 | 244.9 | 244.9 | 249.4 | 255.1 | 254.5 | 256.8 | 251.7 | 251.3 |
| 3 Business | 274.9 | 301.6 | 309.5 | 309.5 | 315.2 | 311.7 | 319.5 | 318.5 | 325.9 | 334.9 |
| 4 Real estate | 66.9 | 72.4 | 82.7 | 82.7 | 83.4 | 84.8 | 86.4 | 87.9 | 89.6 | 89.9 |
| 5 LESS: Reserves for unearned income | 52.9 | 60.7 | 55.6 | 55.6 | 51.3 | 57.2 | 54.6 | 52.7 | 52.1 | 53.2 |
| 6 Reserves for losses | 11.3 | 12.8 | 13.1 | 13.1 | 12.8 | 13.3 | 12.7 | 13.0 | 13.1 | 13.2 |
| 7 Accounts receivable, net | 479.5 | 533.5 | 568.3 | 568.3 | 583.9 | 581.2 | 593.1 | 597.6 | 601.9 | 609.6 |
| 8 All other | 216.8 | 250.9 | 290.0 | 290.0 | 289.6 | 306.8 | 289.1 | 312.4 | 329.7 | 340.1 |
| 9 **Total assets** | **696.3** | **784.4** | **858.3** | **858.3** | **873.4** | **887.9** | **882.3** | **910.0** | **931.6** | **949.7** |
| LIABILITIES AND CAPITAL | | | | | | | | | | |
| 10 Bank loans | 14.8 | 15.3 | 19.7 | 19.7 | 18.4 | 18.8 | 20.4 | 24.1 | 22.0 | 22.3 |
| 11 Commercial paper | 171.6 | 168.6 | 177.6 | 177.6 | 185.3 | 193.7 | 189.6 | 201.5 | 211.7 | 225.9 |
| *Debt* | | | | | | | | | | |
| 12 Owed to parent | 41.8 | 51.1 | 60.3 | 60.3 | 61.0 | 60.0 | 61.6 | 64.7 | 64.6 | 60.0 |
| 13 Not elsewhere classified | 247.4 | 300.0 | 332.5 | 332.5 | 324.6 | 345.3 | 322.8 | 328.8 | 338.2 | 348.7 |
| 14 All other liabilities | 146.2 | 163.6 | 174.7 | 174.7 | 189.2 | 171.4 | 190.1 | 189.6 | 193.1 | 188.9 |
| 15 Capital, surplus, and undivided profits | 74.6 | 85.9 | 93.5 | 93.5 | 94.9 | 98.7 | 97.9 | 101.3 | 102.1 | 103.9 |
| 16 **Total liabilities and capital** | **696.3** | **784.4** | **858.3** | **858.3** | **873.4** | **887.9** | **882.3** | **910.0** | **931.6** | **949.7** |

1. Includes finance company subsidiaries of bank holding companies but not of retailers and banks. Data are amounts carried on the balance sheets of finance companies; securitized pools are not shown, as they are not on the books.
2. Before deduction for unearned income and losses.

## 1.52 DOMESTIC FINANCE COMPANIES Owned and Managed Receivables[1]

Billions of dollars, amounts outstanding

| Type of credit | 1995 | 1996 | 1997 | 1998 Apr. | May | June | July | Aug. | Sept. |
|---|---|---|---|---|---|---|---|---|---|
| | Seasonally adjusted | | | | | | | | |
| 1 **Total** | **682.4** | **761.9** | **809.8** | **825.3** | **833.0** | **831.3** | **840.6** | **846.4**[r] | **851.4** |
| 2 Consumer | 283.1 | 307.7 | 327.7 | 328.9 | 330.2 | 332.5 | 336.6 | 339.1[r] | 341.8 |
| 3 Real estate | 72.4 | 111.9 | 121.1 | 121.9 | 124.2 | 120.9 | 125.2 | 128.1 | 128.8 |
| 4 Business | 326.8 | 342.4 | 361.0 | 374.5 | 378.6 | 377.9 | 378.7 | 379.2 | 380.7 |
| | Not seasonally adjusted | | | | | | | | |
| 5 **Total** | **689.5** | **769.7** | **818.1** | **825.3** | **832.2** | **836.0** | **835.2** | **842.6**[r] | **847.8** |
| 6 Consumer | 285.8 | 310.6 | 330.9 | 326.7 | 329.4 | 335.4 | 338.5 | 340.5[r] | 342.8 |
| 7 Motor vehicles loans | 81.1 | 86.7 | 87.0 | 90.6 | 89.6 | 89.9 | 91.7 | 95.3 | 96.2 |
| 8 Motor vehicle leases | 80.8 | 92.5 | 96.8 | 95.9 | 95.9 | 97.0 | 97.3 | 96.9 | 94.9 |
| 9 Revolving[2] | 28.5 | 32.5 | 38.6 | 30.4 | 30.5 | 29.9 | 29.6 | 30.2 | 29.7 |
| 10 Other[3] | 42.6 | 33.2 | 34.4 | 33.4 | 33.5 | 34.4 | 35.0 | 34.7 | 34.6 |
| Securitized assets[4] | | | | | | | | | |
| 11 Motor vehicle loans | 34.8 | 36.8 | 44.3 | 42.8 | 45.7 | 49.3 | 50.2 | 49.2 | 51.8 |
| 12 Motor vehicle leases | 3.5 | 8.7 | 10.8 | 10.4 | 10.8 | 10.9 | 10.8 | 10.7 | 11.6 |
| 13 Revolving | n.a. | 0.0 | 0.0 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |
| 14 Other | 14.7 | 20.1 | 19.0 | 18.1 | 18.1 | 18.6 | 18.5 | 18.2 | 18.8 |
| 15 Real estate | 72.4 | 111.9 | 121.1 | 121.9 | 124.2 | 120.9 | 125.2 | 128.1 | 128.8 |
| 16 One- to four-family | n.a. | 52.1 | 59.0 | 62.4 | 65.2 | 62.3 | 65.9 | 68.6 | 68.4 |
| 17 Other | n.a. | 30.5 | 28.9 | 28.1 | 28.1 | 27.5 | 28.5 | 28.7 | 30.1 |
| Securitized real estate assets[4] | | | | | | | | | |
| 18 One- to four-family | n.a. | 28.9 | 33.0 | 31.2 | 30.7 | 30.9 | 30.6 | 30.7 | 30.2 |
| 19 Other | n.a. | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| 20 Business | 331.2 | 347.2 | 366.1 | 376.7 | 378.6 | 379.7 | 371.5 | 374.0 | 376.2 |
| 21 Motor vehicles | 66.5 | 67.1 | 63.5 | 68.2 | 69.1 | 68.4 | 61.1 | 62.5 | 65.5 |
| 22 Retail loans | 21.8 | 25.1 | 25.6 | 28.3 | 29.3 | 29.2 | 29.2 | 29.6 | 30.0 |
| 23 Wholesale loans[5] | 36.6 | 33.0 | 27.7 | 29.5 | 29.5 | 28.2 | 21.0 | 22.0 | 24.2 |
| 24 Leases | 8.0 | 9.0 | 10.2 | 10.4 | 10.4 | 11.0 | 10.9 | 10.9 | 11.3 |
| 25 Equipment | 8.0 | 9.0 | 10.2 | 207.8 | 209.3 | 212.8 | 212.8 | 212.0 | 210.8 |
| 26 Loans | 8.0 | 9.0 | 10.2 | 51.2 | 51.3 | 52.7 | 51.6 | 51.8 | 47.9 |
| 27 Leases | 8.0 | 9.0 | 10.2 | 156.7 | 158.0 | 160.2 | 161.2 | 160.2 | 162.9 |
| 28 Other business receivables[6] | 8.0 | 9.0 | 10.2 | 54.0 | 54.3 | 53.7 | 54.5 | 57.0 | 58.9 |
| Securitized assets[4] | | | | | | | | | |
| 29 Motor vehicles | 8.0 | 9.0 | 10.2 | 31.6 | 31.0 | 29.1 | 26.3 | 25.9 | 24.5 |
| 30 Retail loans | 8.0 | 9.0 | 10.2 | 1.9 | 1.9 | 2.3 | 2.2 | 2.1 | 2.0 |
| 31 Wholesale loans | 8.0 | 9.0 | 10.2 | 29.6 | 29.2 | 26.7 | 24.1 | 23.8 | 22.5 |
| 32 Leases | 8.0 | 9.0 | 10.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 33 Equipment | 8.0 | 9.0 | 10.2 | 10.3 | 10.2 | 10.5 | 11.5 | 11.4 | 11.3 |
| 34 Loans | 8.0 | 9.0 | 10.2 | 4.1 | 4.0 | 4.1 | 5.1 | 4.9 | 4.9 |
| 35 Leases | 8.0 | 9.0 | 10.2 | 6.2 | 6.2 | 6.4 | 6.4 | 6.4 | 6.4 |
| 36 Other business receivables[6] | 8.0 | 9.0 | 10.2 | 4.7 | 4.7 | 5.3 | 5.4 | 5.2 | 5.3 |

NOTE. This table has been revised to incorporate several changes resulting from the benchmarking of finance company receivables to the June 1996 Survey of Finance Companies. In that benchmark survey, and in the monthly surveys that have followed, more detailed breakdowns have been obtained for some components. In addition, previously unavailable data on securitized real estate loans are now included in this table. The new information has resulted in some reclassification of receivables among the three major categories (consumer, real estate, and business) and in discontinuities in some component series between May and June 1996.

Includes finance company subsidiaries of bank holding companies but not of retailers and banks. Data in this table also appear in the Board's G.20 (422) monthly statistical release. For ordering address, see inside front cover.

1. Owned receivables are those carried on the balance sheet of the institution. Managed receivables are outstanding balances of pools upon which securities have been issued; these balances are no longer carried on the balance sheets of the loan originator. Data are shown before deductions for unearned income and losses. Components may not sum to totals because of rounding.

2. Excludes revolving credit reported as held by depository institutions that are subsidiaries of finance companies.

3. Includes personal cash loans, mobile home loans, and loans to purchase other types of consumer goods such as appliances, apparel, boats, and recreation vehicles.

4. Outstanding balances of pools upon which securities have been issued; these balances are no longer carried on the balance sheets of the loan originator.

5. Credit arising from transactions between manufacturers and dealers, that is, floor plan financing.

6. Includes loans on commercial accounts receivable, factored commercial accounts, and receivable dealer capital; small loans used primarily for business or farm purposes; and wholesale and lease paper for mobile homes, campers, and travel trailers.

## 1.53 MORTGAGE MARKETS Mortgages on New Homes

Millions of dollars except as noted

| Item | 1995 | 1996 | 1997 | 1998 Apr. | 1998 May | 1998 June | 1998 July | 1998 Aug. | 1998 Sept. | 1998 Oct. |
|---|---|---|---|---|---|---|---|---|---|---|
| | Terms and yields in primary and secondary markets | | | | | | | | | |
| PRIMARY MARKETS | | | | | | | | | | |
| *Terms*[1] | | | | | | | | | | |
| 1 Purchase price (thousands of dollars) | 175.8 | 182.4 | 180.1 | 189.5 | 195.6 | 193.7 | 208.7 | 191.5 | 192.7 | 201.4 |
| 2 Amount of loan (thousands of dollars) | 134.5 | 139.2 | 140.3 | 147.1 | 150.2 | 151.0 | 160.1 | 150.4 | 150.8 | 155.8 |
| 3 Loan-to-price ratio (percent) | 78.6 | 78.2 | 80.4 | 80.4 | 79.1 | 81.0 | 78.7 | 81.3 | 80.9 | 79.8 |
| 4 Maturity (years) | 27.7 | 27.2 | 28.2 | 28.4 | 28.3 | 28.3 | 28.5 | 28.6 | 28.7 | 28.6 |
| 5 Fees and charges (percent of loan amount)[2] | 1.21 | 1.21 | 1.02 | 0.87 | 0.85 | 0.85 | 0.90 | 0.87 | 0.85 | 0.86 |
| *Yield (percent per year)* | | | | | | | | | | |
| 6 Contract rate[1] | 7.65 | 7.56 | 7.57 | 7.05 | 7.05 | 7.03 | 6.99 | 6.95 | 6.85 | 6.72 |
| 7 Effective rate[1,3] | 7.85 | 7.77 | 7.73 | 7.19 | 7.18 | 7.16 | 7.13 | 7.09 | 6.98 | 6.85 |
| 8 Contract rate (HUD series)[4] | 8.05 | 8.03 | 7.76 | 7.20 | 7.11 | 7.08 | 7.05 | 6.86 | 6.64 | 6.86 |
| SECONDARY MARKETS | | | | | | | | | | |
| *Yield (percent per year)* | | | | | | | | | | |
| 9 FHA mortgages (Section 203)[5] | 8.18 | 8.19 | 7.89 | 7.37 | 7.07 | 7.07 | 7.05 | 7.03 | 6.53 | 7.07 |
| 10 GNMA securities[6] | 7.57 | 7.48 | 7.26 | 6.63 | 6.63 | 6.54 | 6.48 | 6.42 | 6.05 | 6.10 |
| | Activity in secondary markets | | | | | | | | | |
| FEDERAL NATIONAL MORTGAGE ASSOCIATION | | | | | | | | | | |
| *Mortgage holdings (end of period)* | | | | | | | | | | |
| 11 Total | 253,511 | 287,052 | 316,678 | 333,571 | 343,922 | 349,249 | 359,827 | 366,890 | 375,665 | 386,452 |
| 12 FHA/VA insured | 28,762 | 30,592 | 31,925 | 32,734 | 32,771 | 32,896 | 33,036 | 32,929 | 32,903 | 32,814 |
| 13 Conventional | 224,749 | 256,460 | 284,753 | 300,837 | 311,151 | 316,353 | 326,791 | 333,961 | 342,762 | 353,638 |
| 14 Mortgage transactions purchased (during period) | 56,598 | 68,618 | 70,465 | 14,668 | 17,423 | 11,916 | 17,326 | 14,316 | 15,681 | 18,967 |
| *Mortgage commitments (during period)* | | | | | | | | | | |
| 15 Issued[7] | 56,092 | 65,859 | 69,965 | 17,556 | 10,612 | 16,921 | 13,217 | 17,016 | 16,282 | 30,551 |
| 16 To sell[8] | 360 | 130 | 1,298 | 0 | 0 | 0 | 419 | 233 | 249 | 393 |
| FEDERAL HOME LOAN MORTGAGE CORPORATION | | | | | | | | | | |
| *Mortgage holdings (end of period)*[8] | | | | | | | | | | |
| 17 Total | 107,424 | 137,755 | 164,421 | 189,471 | 192,603 | 196,634 | 202,582 | 206,856 | 216,521[r] | 231,458 |
| 18 FHA/VA insured | 267 | 220 | 177 | 162 | 158 | 422 | 456 | 489 | 569[r] | 575 |
| 19 Conventional | 107,157 | 137,535 | 164,244 | 189,309 | 192,445 | 196,212 | 202,126 | 206,367 | 215,952[r] | 230,833 |
| *Mortgage transactions (during period)* | | | | | | | | | | |
| 20 Purchases | 98,470 | 125,103 | 117,401 | 25,132 | 23,743 | 22,394 | 22,605 | 21,507 | 25,366[r] | 20,629 |
| 21 Sales | 85,877 | 119,702 | 114,258 | 24,479 | 23,338 | 21,133 | 22,263 | 20,634 | 24,294 | 19,472 |
| 22 Mortgage commitments contracted (during period)[9] | 118,659 | 128,995 | 120,089 | 24,468 | 26,100 | 20,008 | 23,528 | 24,694 | 23,375 | 25,024 |

1. Weighted averages based on sample surveys of mortgages originated by major institutional lender groups for purchase of newly built homes; compiled by the Federal Housing Finance Board in cooperation with the Federal Deposit Insurance Corporation.
2. Includes all fees, commissions, discounts, and "points" paid (by the borrower or the seller) to obtain a loan.
3. Average effective interest rate on loans closed for purchase of newly built homes, assuming prepayment at the end of ten years.
4. Average contract rate on new commitments for conventional first mortgages; from U.S. Department of Housing and Urban Development (HUD). Based on transactions on the first day of the subsequent month.
5. Average gross yield on thirty-year, minimum-downpayment first mortgages insured by the Federal Housing Administration (FHA) for immediate delivery in the private secondary market. Based on transactions on first day of subsequent month.
6. Average net yields to investors on fully modified pass-through securities backed by mortgages and guaranteed by the Government National Mortgage Association (GNMA), assuming prepayment in twelve years on pools of thirty-year mortgages insured by the Federal Housing Administration or guaranteed by the Department of Veterans Affairs.
7. Does not include standby commitments issued, but includes standby commitments converted.
8. Includes participation loans as well as whole loans.
9. Includes conventional and government-underwritten loans. The Federal Home Loan Mortgage Corporation's mortgage commitments and mortgage transactions include activity under mortgage securities swap programs, whereas the corresponding data for FNMA exclude swap activity.

## 1.54 MORTGAGE DEBT OUTSTANDING[1]

Millions of dollars, end of period

| Type of holder and property | 1994 | 1995 | 1996 | 1997 | | | 1998 | |
|---|---|---|---|---|---|---|---|---|
| | | | | Q2 | Q3 | Q4 | Q1 | Q2[p] |
| 1 **All holders** | **4,393,545** | **4,604,609** | **4,930,487** | **5,062,766** | **5,180,917** | **5,279,333** | **5,380,907** | **5,505,783** |
| *By type of property* | | | | | | | | |
| 2 One- to four-family residences | 3,355,868 | 3,530,400 | 3,761,560 | 3,860,763 | 3,956,815 | 4,029,268 | 4,102,830 | 4,195,738 |
| 3 Multifamily residences | 271,823 | 281,788 | 300,665 | 305,963 | 308,418 | 314,590 | 320,237 | 326,527 |
| 4 Nonfarm, nonresidential | 682,883 | 707,861 | 781,129 | 807,361 | 825,923 | 845,058 | 866,414 | 890,538 |
| 5 Farm | 82,971 | 84,561 | 87,134 | 88,680 | 89,760 | 90,417 | 91,425 | 92,980 |
| *By type of holder* | | | | | | | | |
| 6 Major financial institutions | 1,819,806 | 1,894,420 | 1,979,114 | 2,033,599 | 2,068,002 | 2,086,721 | 2,119,279 | 2,124,259 |
| 7 Commercial banks[2] | 1,012,711 | 1,090,189 | 1,145,389 | 1,196,461 | 1,227,131 | 1,244,108 | 1,270,032 | 1,280,732 |
| 8 One- to four-family | 615,861 | 669,434 | 698,508 | 733,694 | 752,323 | 762,531 | 779,927 | 784,929 |
| 9 Multifamily | 39,346 | 43,837 | 46,675 | 49,116 | 49,166 | 50,642 | 51,790 | 52,175 |
| 10 Nonfarm, nonresidential | 334,953 | 353,088 | 375,322 | 387,588 | 398,841 | 403,957 | 410,859 | 415,311 |
| 11 Farm | 22,551 | 23,830 | 24,883 | 26,063 | 26,801 | 26,978 | 27,456 | 28,316 |
| 12 Savings institutions[3] | 596,191 | 596,763 | 628,335 | 629,062 | 631,444 | 631,822 | 637,012 | 629,882 |
| 13 One- to four-family | 477,626 | 482,353 | 513,712 | 516,521 | 519,564 | 520,672 | 527,036 | 520,276 |
| 14 Multifamily | 64,343 | 61,987 | 61,570 | 60,070 | 60,348 | 59,543 | 59,074 | 58,704 |
| 15 Nonfarm, nonresidential | 53,933 | 52,135 | 52,723 | 52,132 | 51,187 | 51,252 | 50,532 | 50,519 |
| 16 Farm | 289 | 288 | 331 | 338 | 346 | 354 | 369 | 383 |
| 17 Life insurance companies | 210,904 | 207,468 | 205,390 | 208,077 | 209,426 | 210,792 | 212,235 | 213,645 |
| 18 One- to four-family | 7,018 | 7,316 | 6,772 | 6,842 | 7,080 | 7,186 | 7,321 | 7,488 |
| 19 Multifamily | 23,902 | 23,435 | 23,197 | 23,499 | 23,615 | 23,755 | 23,902 | 24,038 |
| 20 Nonfarm, nonresidential | 170,421 | 167,095 | 165,399 | 167,548 | 168,374 | 169,377 | 170,423 | 171,393 |
| 21 Farm | 9,563 | 9,622 | 10,022 | 10,188 | 10,358 | 10,473 | 10,589 | 10,726 |
| 22 Federal and related agencies | 315,580 | 306,774 | 300,935 | 292,966 | 291,410 | 292,581 | 293,499 | 294,547 |
| 23 Government National Mortgage Association | 6 | 2 | 2 | 7 | 7 | 8 | 8 | 8 |
| 24 One- to four-family | 6 | 2 | 2 | 7 | 7 | 8 | 8 | 8 |
| 25 Multifamily | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 Farmers Home Administration[4] | 41,781 | 41,791 | 41,596 | 41,400 | 41,332 | 41,195 | 40,972 | 40,921 |
| 27 One- to four-family | 18,098 | 17,705 | 17,303 | 17,239 | 17,458 | 17,253 | 17,160 | 17,059 |
| 28 Multifamily | 11,319 | 11,617 | 11,685 | 11,706 | 11,713 | 11,720 | 11,714 | 11,722 |
| 29 Nonfarm, nonresidential | 5,670 | 6,248 | 6,841 | 7,135 | 7,246 | 7,370 | 7,369 | 7,497 |
| 30 Farm | 6,694 | 6,221 | 5,768 | 5,321 | 4,916 | 4,852 | 4,729 | 4,644 |
| 31 Federal Housing and Veterans' Administrations | 10,964 | 9,809 | 6,244 | 4,200 | 3,462 | 3,821 | 3,694 | 3,631 |
| 32 One- to four-family | 4,753 | 5,180 | 3,524 | 2,299 | 1,437 | 1,767 | 1,641 | 1,610 |
| 33 Multifamily | 6,211 | 4,629 | 2,719 | 1,900 | 2,025 | 2,054 | 2,053 | 2,021 |
| 34 Resolution Trust Corporation | 10,428 | 1,864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 One- to four-family | 5,200 | 691 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 Multifamily | 2,859 | 647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 Nonfarm, nonresidential | 2,369 | 525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 Farm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 Federal Deposit Insurance Corporation | 7,821 | 4,303 | 2,431 | 1,816 | 1,476 | 724 | 786 | 564 |
| 40 One- to four-family | 1,049 | 492 | 365 | 272 | 221 | 109 | 118 | 85 |
| 41 Multifamily | 1,595 | 428 | 413 | 309 | 251 | 123 | 134 | 96 |
| 42 Nonfarm, nonresidential | 5,177 | 3,383 | 1,653 | 1,235 | 1,004 | 492 | 534 | 384 |
| 43 Farm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 Federal National Mortgage Association | 174,312 | 176,824 | 174,556 | 170,386 | 168,458 | 167,722 | 166,670 | 167,202 |
| 45 One- to four-family | 158,766 | 161,665 | 160,751 | 157,729 | 156,363 | 156,245 | 155,876 | 156,769 |
| 46 Multifamily | 15,546 | 15,159 | 13,805 | 12,657 | 12,095 | 11,477 | 10,794 | 10,433 |
| 47 Federal Land Banks | 28,555 | 28,428 | 29,602 | 29,963 | 30,346 | 30,657 | 31,005 | 31,352 |
| 48 One- to four-family | 1,671 | 1,673 | 1,742 | 1,763 | 1,786 | 1,804 | 1,824 | 1,845 |
| 49 Farm | 26,885 | 26,755 | 27,860 | 28,200 | 28,560 | 28,853 | 29,181 | 29,507 |
| 50 Federal Home Loan Mortgage Corporation | 41,712 | 43,753 | 46,504 | 45,194 | 46,329 | 48,454 | 50,364 | 50,869 |
| 51 One- to four-family | 38,882 | 39,901 | 41,758 | 40,092 | 40,953 | 42,629 | 44,440 | 44,597 |
| 52 Multifamily | 2,830 | 3,852 | 4,746 | 5,102 | 5,376 | 5,825 | 5,924 | 6,272 |
| 53 Mortgage pools or trusts[5] | 1,730,004 | 1,863,210 | 2,064,882 | 2,145,995 | 2,202,549 | 2,272,999 | 2,330,674 | 2,442,603 |
| 54 Government National Mortgage Association | 450,934 | 472,283 | 506,340 | 520,938 | 529,867 | 536,810 | 533,011 | 537,586 |
| 55 One- to four-family | 441,198 | 461,438 | 494,158 | 507,618 | 516,217 | 523,156 | 519,152 | 523,243 |
| 56 Multifamily | 9,736 | 10,845 | 12,182 | 13,320 | 13,650 | 13,654 | 13,859 | 14,343 |
| 57 Federal Home Loan Mortgage Corporation | 490,851 | 515,051 | 554,260 | 567,187 | 569,920 | 579,385 | 583,144 | 609,791 |
| 58 One- to four-family | 487,725 | 512,238 | 551,513 | 564,445 | 567,340 | 576,846 | 580,715 | 607,469 |
| 59 Multifamily | 3,126 | 2,813 | 2,747 | 2,742 | 2,580 | 2,539 | 2,429 | 2,322 |
| 60 Federal National Mortgage Association | 530,343 | 582,959 | 650,780 | 673,931 | 690,919 | 709,582 | 730,832 | 761,359 |
| 61 One- to four-family | 520,763 | 569,724 | 633,210 | 654,826 | 670,677 | 687,981 | 708,125 | 737,631 |
| 62 Multifamily | 9,580 | 13,235 | 17,570 | 19,105 | 20,242 | 21,601 | 22,707 | 23,728 |
| 63 Farmers Home Administration[4] | 19 | 11 | 3 | 2 | 2 | 2 | 2 | 2 |
| 64 One- to four-family | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 Multifamily | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 66 Nonfarm, nonresidential | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 67 Farm | 7 | 4 | 3 | 2 | 2 | 2 | 2 | 2 |
| 68 Private mortgage conduits | 257,857 | 292,906 | 353,499 | 383,937 | 411,841 | 447,219 | 483,685 | 533,865 |
| 69 One- to four-family[6] | 208,500 | 227,800 | 261,900 | 279,450 | 299,400 | 318,000 | 336,824 | 364,316 |
| 70 Multifamily | 11,744 | 15,584 | 21,967 | 24,355 | 25,655 | 29,264 | 33,477 | 38,144 |
| 71 Nonfarm, nonresidential | 37,613 | 49,522 | 69,633 | 80,132 | 86,786 | 99,955 | 113,384 | 131,405 |
| 72 Farm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 Individuals and others[7] | 528,155 | 540,206 | 585,556 | 590,206 | 618,955 | 627,033 | 637,455 | 644,375 |
| 74 One- to four-family | 368,749 | 372,786 | 376,341 | 377,966 | 405,990 | 413,082 | 422,663 | 428,413 |
| 75 Multifamily | 69,686 | 73,719 | 81,389 | 82,081 | 81,702 | 82,392 | 82,379 | 82,529 |
| 76 Nonfarm, nonresidential | 72,738 | 75,859 | 109,558 | 111,591 | 112,486 | 112,655 | 113,312 | 114,031 |
| 77 Farm | 16,983 | 17,841 | 18,268 | 18,567 | 18,777 | 18,904 | 19,100 | 19,402 |

1. Multifamily debt refers to loans on structures of five or more units.
2. Includes loans held by nondeposit trust companies but not loans held by bank trust departments.
3. Includes savings banks and savings and loan associations.
4. FmHA-guaranteed securities sold to the Federal Financing Bank were reallocated from FmHA mortgage pools to FmHA mortgage holdings in 1986:Q4 because of accounting changes by the Farmers Home Administration.
5. Outstanding principal balances of mortgage-backed securities insured or guaranteed by the agency indicated.
6. Includes securitized home equity loans.
7. Other holders include mortgage companies, real estate investment trusts, state and local credit agencies, state and local retirement funds, noninsured pension funds, credit unions, and finance companies.

SOURCE. Based on data from various institutional and government sources. Separation of nonfarm mortgage debt by type of property, if not reported directly, and interpolations and extrapolations, when required for some quarters, are estimated in part by the Federal Reserve. Line 69 from Inside Mortgage Securities and other sources.

## 1.55 CONSUMER CREDIT[1]

Millions of dollars, amounts outstanding, end of period

| Holder and type of credit | 1995 | 1996 | 1997 | 1998 Apr. | 1998 May | 1998 June | 1998 July | 1998 Aug. | 1998 Sept. |
|---|---|---|---|---|---|---|---|---|---|
| | Seasonally adjusted | | | | | | | | |
| 1 **Total** | **1,095,711** | **1,181,913** | **1,233,099** | **1,251,864[r]** | **1,254,302[r]** | **1,263,683[r]** | **1,269,266[r]** | **1,273,725[r]** | **1,282,088** |
| 2 Automobile | 364,209 | 392,321 | 413,369 | 421,213[r] | 422,624[r] | 425,510[r] | 427,749[r] | 431,499[r] | 433,354 |
| 3 Revolving | 443,183 | 499,486 | 531,140 | 541,834[r] | 541,184[r] | 545,339[r] | 543,140[r] | 545,258[r] | 548,360 |
| 4 Other[2] | 288,319 | 290,105 | 288,590 | 288,817[r] | 290,495[r] | 292,834[r] | 298,377[r] | 296,969[r] | 300,374 |
| | Not seasonally adjusted | | | | | | | | |
| 5 **Total** | **1,122,828** | **1,211,590** | **1,264,103** | **1,241,238[r]** | **1,243,178[r]** | **1,256,897[r]** | **1,262,382[r]** | **1,273,941[r]** | **1,285,123** |
| *By major holder* | | | | | | | | | |
| 6 Commercial banks | 501,963 | 526,769 | 512,563 | 500,207 | 497,389 | 491,509 | 491,777 | 498,775 | 499,958 |
| 7 Finance companies | 152,123 | 152,391 | 160,022 | 154,328 | 153,556 | 154,275 | 156,366 | 160,151 | 160,457 |
| 8 Credit unions | 131,939 | 144,148 | 152,362 | 151,056[r] | 152,218[r] | 152,400[r] | 153,735[r] | 154,146[r] | 155,666 |
| 9 Savings institutions | 40,106 | 44,711 | 47,172 | 47,500 | 47,915 | 48,329 | 48,744 | 49,158 | 49,571 |
| 10 Nonfinancial business[3] | 85,061 | 77,745 | 78,927 | 65,093[r] | 65,227[r] | 65,265[r] | 65,481[r] | 66,011[r] | 65,601 |
| 11 Pools of securitized assets[4] | 211,636 | 265,826 | 313,057 | 323,054 | 326,873 | 345,119 | 346,279 | 345,700 | 353,870 |
| *By major type of credit*[5] | | | | | | | | | |
| 12 Automobile | 367,069 | 395,609 | 416,962 | 415,975[r] | 418,244[r] | 425,227[r] | 429,350[r] | 434,178[r] | 437,340 |
| 13 Commercial banks | 151,437 | 157,047 | 155,254 | 151,278 | 151,677 | 150,877 | 153,203 | 155,508 | 155,970 |
| 14 Finance companies | 81,073 | 86,690 | 87,015 | 90,564 | 89,569 | 89,948 | 91,741 | 95,257 | 96,183 |
| 15 Pools of securitized assets[4] | 44,635 | 51,719 | 64,950 | 63,737 | 65,988 | 71,615 | 72,470 | 70,766 | 72,477 |
| 16 Revolving | 464,134 | 522,860 | 555,858 | 535,602[r] | 535,576[r] | 539,572[r] | 536,882[r] | 542,095[r] | 545,704 |
| 17 Commercial banks | 210,298 | 228,615 | 219,826 | 209,171 | 207,318 | 200,901 | 197,646 | 200,424 | 198,946 |
| 18 Finance companies | 28,460 | 32,493 | 38,608 | 30,398 | 30,495 | 29,893 | 29,605 | 30,155 | 29,691 |
| 19 Nonfinancial business[3] | 53,525 | 44,901 | 44,966 | 33,487 | 33,412 | 33,544 | 33,807 | 34,009 | 33,743 |
| 20 Pools of securitized assets[4] | 147,934 | 188,712 | 221,465 | 233,668 | 235,347 | 245,635 | 246,031 | 247,422 | 253,366 |
| 21 Other | 291,625 | 293,121 | 291,283 | 289,661[r] | 289,358[r] | 292,098[r] | 296,150[r] | 297,668[r] | 302,079 |
| 22 Commercial banks | 140,228 | 141,107 | 137,483 | 139,758 | 138,394 | 139,731 | 140,928 | 142,843 | 145,042 |
| 23 Finance companies | 42,590 | 33,208 | 34,399 | 33,366 | 33,492 | 34,434 | 35,020 | 34,739 | 34,583 |
| 24 Nonfinancial business[3] | 31,536 | 32,844 | 33,961 | 31,606[r] | 31,815[r] | 31,721[r] | 31,674[r] | 32,002[r] | 31,858 |
| 25 Pools of securitized assets[4] | 19,067 | 25,395 | 26,642 | 25,649 | 25,538 | 27,869 | 27,778 | 27,512 | 28,027 |

1. The Board's series on amounts of credit covers most short- and intermediate-term credit extended to individuals. Data in this table also appear in the Board's G.19 (421) monthly statistical release. For ordering address, see inside front cover.
2. Comprises mobile home loans and all other loans that are not included in automobile or revolving credit, such as loans for education, boats, trailers, or vacations. These loans may be secured or unsecured.
3. Includes retailers and gasoline companies.
4. Outstanding balances of pools upon which securities have been issued; these balances are no longer carried on the balance sheets of the loan originator.
5. Totals include estimates for certain holders for which only consumer credit totals are available.

## 1.56 TERMS OF CONSUMER CREDIT[1]

Percent per year except as noted

| Item | 1995 | 1996 | 1997 | 1998 Mar. | 1998 Apr. | 1998 May | 1998 June | 1998 July | 1998 Aug. | 1998 Sept. |
|---|---|---|---|---|---|---|---|---|---|---|
| INTEREST RATES | | | | | | | | | | |
| *Commercial banks*[2] | | | | | | | | | | |
| 1 48-month new car | 9.57 | 9.05 | 9.02 | n.a. | n.a. | 8.69 | n.a. | n.a. | 8.71 | n.a. |
| 2 24-month personal | 13.94 | 13.54 | 13.90 | n.a. | n.a. | 13.76 | n.a. | n.a. | 13.45 | n.a. |
| Credit card plan | | | | | | | | | | |
| 3 All accounts | 15.90 | 15.63 | 15.77 | n.a. | n.a. | 15.67 | n.a. | n.a. | 15.83 | n.a. |
| 4 Accounts assessed interest | 15.64 | 15.50 | 15.57 | n.a. | n.a. | 15.62 | n.a. | n.a. | 15.85 | n.a. |
| *Auto finance companies* | | | | | | | | | | |
| 5 New car | 11.19 | 9.84 | 7.12 | 5.94 | 6.20 | 6.07 | 6.02 | 6.25 | 6.00 | 5.92 |
| 6 Used car | 14.48 | 13.53 | 13.27 | 12.79 | 12.76 | 12.73 | 12.63 | 12.51 | 12.68 | 12.65 |
| OTHER TERMS[3] | | | | | | | | | | |
| *Maturity (months)* | | | | | | | | | | |
| 7 New car | 54.1 | 51.6 | 54.1 | 51.5 | 50.7 | 50.8 | 50.9 | 51.7 | 53.0 | 53.1 |
| 8 Used car | 52.2 | 51.4 | 51.0 | 52.6 | 52.9 | 52.9 | 54.0 | 54.1 | 54.1 | 54.2 |
| *Loan-to-value ratio* | | | | | | | | | | |
| 9 New car | 92 | 91 | 92 | 92 | 91 | 93 | 91 | 92 | 93 | 93 |
| 10 Used car | 99 | 100 | 99 | 97 | 98 | 99 | 100 | 100 | 101 | 101 |
| *Amount financed (dollars)* | | | | | | | | | | |
| 11 New car | 16,210 | 16,987 | 18,077 | 18,932 | 18,922 | 18,793 | 18,878 | 19,084 | 19,068 | 19,028 |
| 12 Used car | 11,590 | 12,182 | 12,281 | 12,431 | 12,716 | 12,607 | 12,698 | 12,733 | 12,407 | 12,731 |

1. The Board's series on amounts of credit covers most short- and intermediate-term credit extended to individuals. Data in this table also appear in the Board's G.19 (421) monthly statistical release. For ordering address, see inside front cover.
2. Data are available for only the second month of each quarter.
3. At auto finance companies.

## 1.57 FUNDS RAISED IN U.S. CREDIT MARKETS[1]

Billions of dollars; quarterly data at seasonally adjusted annual rates

| Transaction category or sector | 1993 | 1994 | 1995 | 1996 | 1997 | 1997 | | | | 1998 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2[r] | Q3 |
| | Nonfinancial sectors | | | | | | | | | | | |
| 1 **Total net borrowing by domestic nonfinancial sectors** | **588.0** | **571.5[r]** | **700.4[r]** | **726.7[r]** | **769.6[r]** | **675.9[r]** | **617.7[r]** | **829.6** | **955.1[r]** | **922.1[r]** | **938.0** | **930.6** |
| *By sector and instrument* | | | | | | | | | | | | |
| 2 Federal government | 256.1 | 155.9 | 144.4 | 145.0 | 23.1 | 64.9 | −43.5 | 30.3 | 40.8 | −30.0[r] | −70.9 | −136.5 |
| 3 Treasury securities | 248.3 | 155.7 | 142.9 | 146.6 | 23.2 | 66.3 | −43.8 | 31.2 | 39.0 | −27.6[r] | −69.4 | −136.1 |
| 4 Budget agency securities and mortgages | 7.8 | .2 | 1.5 | −1.6 | −.1 | −1.4 | .2 | −.9 | 1.7 | −2.4 | −1.4 | −.4 |
| 5 Nonfederal | 331.9 | 415.6[r] | 555.9[r] | 581.7[r] | 746.4[r] | 611.0[r] | 661.2[r] | 799.2[r] | 914.3[r] | 952.1[r] | 1,008.9 | 1,067.0 |
| *By instrument* | | | | | | | | | | | | |
| 6 Commercial paper | 10.0 | 21.4 | 18.1 | −.9 | 13.7 | 7.2 | 20.3 | 14.5 | 12.8 | 53.9 | 6.6 | 88.4 |
| 7 Municipal securities and loans | 74.8 | −35.9 | −48.2 | 2.6 | 71.4 | 34.1 | 59.6 | 88.9 | 103.2 | 116.7 | 100.1 | 84.1 |
| 8 Corporate bonds | 75.2 | 23.3 | 73.3 | 72.5 | 90.7 | 79.4 | 86.1 | 122.9 | 74.4 | 157.2 | 160.8 | 88.0 |
| 9 Bank loans n.e.c. | 6.4 | 75.2 | 102.3 | 66.2 | 107.3[r] | 140.7 | 118.1 | 31.6 | 138.7[r] | 55.8[r] | 157.3 | 142.6 |
| 10 Other loans and advances | −18.9 | 34.0 | 67.2 | 33.8 | 68.7[r] | 34.2 | 20.8[r] | 78.0[r] | 141.6[r] | 83.2[r] | 37.9 | 78.0 |
| 11 Mortgages | 123.7 | 172.7[r] | 204.3[r] | 318.8[r] | 342.1[r] | 253.0[r] | 296.7[r] | 413.0[r] | 405.8 | 428.1[r] | 481.2 | 497.8 |
| 12 Home | 156.2 | 178.2[r] | 173.9[r] | 265.3[r] | 268.3[r] | 218.2[r] | 211.4[r] | 334.2[r] | 309.3 | 324.1[r] | 360.5 | 365.8 |
| 13 Multifamily residential | −6.8 | −1.3[r] | 8.0[r] | 12.7[r] | 11.5[r] | 4.1[r] | 12.9[r] | 6.6[r] | 22.3 | 19.9 | 22.6 | 22.9 |
| 14 Commercial | −26.7 | −6.4[r] | 20.8[r] | 38.3[r] | 59.1[r] | 28.6[r] | 68.4[r] | 67.9[r] | 71.6 | 80.0[r] | 91.9 | 103.9 |
| 15 Farm | 1.0 | 2.2 | 1.6 | 2.6 | 3.3 | 2.1 | 4.1 | 4.3 | 2.6 | 4.0 | 6.2 | 5.3 |
| 16 Consumer credit | 60.7 | 124.9 | 138.9 | 88.8 | 52.5 | 62.5 | 59.5 | 50.3 | 37.8 | 57.3[r] | 65.1 | 88.2 |
| *By borrowing sector* | | | | | | | | | | | | |
| 17 Household | 207.8 | 311.0[r] | 343.7[r] | 370.3[r] | 355.6[r] | 334.9[r] | 329.7[r] | 362.9[r] | 394.9[r] | 437.2[r] | 469.8 | 472.7 |
| 18 Nonfinancial business | 57.9 | 150.9[r] | 263.7[r] | 218.2[r] | 334.8[r] | 259.2[r] | 289.1[r] | 363.8[r] | 427.1[r] | 420.6[r] | 460.2 | 521.6 |
| 19 Corporate | 52.1 | 143.3[r] | 236.8[r] | 171.4[r] | 265.0[r] | 206.4[r] | 214.5[r] | 291.5[r] | 347.5[r] | 331.4[r] | 354.6 | 404.7 |
| 20 Nonfarm noncorporate | 3.2 | 3.3 | 23.9 | 42.0[r] | 63.5 | 47.8 | 68.6 | 66.8[r] | 70.6[r] | 81.4[r] | 98.2 | 110.2 |
| 21 Farm | 2.6 | 4.4 | 2.9 | 4.8 | 6.4 | 4.9 | 6.0 | 5.5 | 9.0 | 7.9 | 7.4 | 6.7 |
| 22 State and local government | 66.2 | −46.2 | −51.5 | −6.8 | 56.1 | 16.9 | 42.5 | 72.6 | 92.3 | 94.3 | 78.9 | 72.7 |
| 23 Foreign net borrowing in United States | 69.8 | −14.0 | 71.1 | 76.9 | 56.9 | 31.2 | 61.7 | 92.5 | 42.3 | 68.5[r] | 86.6 | −27.0 |
| 24 Commercial paper | −9.6 | −26.1 | 13.5 | 11.3 | 3.7 | 15.5 | 10.4 | −11.6 | .7 | 56.0 | −24.8 | 6.9 |
| 25 Bonds | 82.9 | 12.2 | 49.7 | 55.8 | 46.7 | 15.5 | 38.7 | 100.3 | 32.4 | 14.3 | 107.5 | −34.8 |
| 26 Bank loans n.e.c. | .7 | 1.4 | 8.5 | 9.1 | 8.5 | −.7 | 11.5 | 7.3 | 15.7 | 5.2[r] | 8.4 | 3.5 |
| 27 Other loans and advances | −4.2 | −1.5 | −.5 | .8 | −2.0 | .9 | 1.2 | −3.5 | −6.5 | −7.0 | −4.4 | −2.6 |
| 28 **Total domestic plus foreign** | **657.8** | **557.5[r]** | **771.5[r]** | **803.6[r]** | **826.5[r]** | **707.1[r]** | **679.3[r]** | **922.1[r]** | **997.4[r]** | **990.6[r]** | **1,024.7** | **903.5** |
| | Financial sectors | | | | | | | | | | | |
| 29 **Total net borrowing by financial sectors** | **294.4** | **468.4** | **456.4** | **556.2** | **644.3[r]** | **336.5** | **657.1[r]** | **595.5[r]** | **987.9** | **839.8[r]** | **1,012.9** | **992.8** |
| *By instrument* | | | | | | | | | | | | |
| 30 Federal government-related | 165.3 | 287.5 | 204.1 | 231.5 | 212.8 | 105.7 | 286.2 | 161.0 | 298.1 | 227.3 | 413.4 | 561.6 |
| 31 Government-sponsored enterprise securities | 80.6 | 176.9 | 105.9 | 90.4 | 98.4 | −8.9 | 198.1 | 46.4 | 157.9 | 142.5 | 166.4 | 294.0 |
| 32 Mortgage pool securities | 84.7 | 115.4 | 98.2 | 141.1 | 114.4 | 114.6 | 88.1 | 114.6 | 140.3 | 84.8 | 247.0 | 267.5 |
| 33 Loans from U.S. government | .0 | −4.8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 34 Private | 129.1 | 180.9 | 252.3 | 324.7 | 431.5[r] | 230.9 | 370.9[r] | 434.5[r] | 689.8 | 612.5[r] | 599.5 | 431.2 |
| 35 Open market paper | −5.5 | 40.5 | 42.7 | 92.2 | 166.7 | 176.6 | 77.0 | 168.8 | 244.2 | 237.4 | 134.8 | 141.0 |
| 36 Corporate bonds | 123.1 | 121.8 | 196.7 | 179.7 | 207.9[r] | 61.7 | 229.4[r] | 194.8[r] | 345.8 | 315.5[r] | 373.5 | 158.8 |
| 37 Bank loans n.e.c. | −14.4 | −13.7 | 3.9 | 16.9 | 13.6 | 6.5 | −6.0 | 23.2 | 30.7 | 18.9 | 7.2 | 41.1 |
| 38 Other loans and advances | 22.4 | 22.6 | 3.4 | 27.9 | 35.6 | −20.1 | 63.0 | 37.5 | 61.7 | 32.7 | 76.0 | 82.3 |
| 39 Mortgages | 3.6 | 9.8 | 5.6 | 7.9 | 7.8 | 6.2 | 7.5 | 10.1 | 7.3 | 8.0 | 8.0 | 8.0 |
| *By borrowing sector* | | | | | | | | | | | | |
| 40 Commercial banking | 13.4 | 20.1 | 22.5 | 13.0 | 46.1 | 14.4 | 76.4 | 32.5 | 61.0 | 83.5 | 80.0 | 78.2 |
| 41 Savings institutions | 11.3 | 12.8 | 2.6 | 25.5 | 19.7 | −16.8 | 31.9 | 22.3 | 41.7 | 10.6 | 31.2 | 63.7 |
| 42 Credit unions | .2 | .2 | −.1 | .1 | .1 | −.2 | .2 | .2 | .3 | .5 | .2 | 1.0 |
| 43 Life insurance companies | .2 | .3 | −.1 | 1.1 | .2 | .8 | .1 | .2 | −.3 | .0 | −.6 | 1.6 |
| 44 Government-sponsored enterprises | 80.6 | 172.1 | 105.9 | 90.4 | 98.4 | −8.9 | 198.1 | 46.4 | 157.9 | 142.5 | 166.4 | 294.0 |
| 45 Federally related mortgage pools | 84.7 | 115.4 | 98.2 | 141.1 | 114.4 | 114.6 | 88.1 | 114.6 | 140.3 | 84.8 | 247.0 | 267.5 |
| 46 Issuers of asset-backed securities (ABSs) | 83.6 | 72.9 | 141.1 | 153.6 | 204.4[r] | 85.8 | 120.7[r] | 226.2[r] | 385.1[r] | 254.4[r] | 367.2 | 272.4 |
| 47 Finance companies | −1.4 | 48.7 | 50.2 | 45.9 | 48.7 | 5.6 | 120.5 | 8.9 | 59.6 | 80.1 | 101.8 | −13.6 |
| 48 Mortgage companies | .0 | −11.5 | .4 | 12.4 | −1.3 | −.7 | −12.2 | 3.6 | 4.2 | 5.2 | −5.5 | 3.0 |
| 49 Real estate investment trusts (REITs) | 3.4 | 13.7 | 5.7 | 11.0 | 24.8 | 15.1 | 19.8 | 32.0 | 32.1 | 36.3 | 33.9 | 27.4 |
| 50 Brokers and dealers | 12.0 | .5 | −5.0 | −2.0 | 8.1 | −2.9 | 34.9 | −6.9 | 7.0 | −1.0 | 20.0 | 16.5 |
| 51 Funding corporations | 6.3 | 23.1 | 34.9 | 64.1 | 80.7 | 129.7 | −21.5 | 115.4 | 99.2 | 142.8 | −28.6 | −19.1 |

## 1.57 FUNDS RAISED IN U.S. CREDIT MARKETS[1]—Continued

| Transaction category or sector | 1993 | 1994 | 1995 | 1996 | 1997 | 1997 | | | | 1998 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2[r] | Q3 |
| | All sectors | | | | | | | | | | | |
| 52 **Total net borrowing, all sectors** | **952.2** | **1,025.9[r]** | **1,227.8[r]** | **1,359.8[r]** | **1,470.7[r]** | **1,043.7[r]** | **1,336.4[r]** | **1,517.6[r]** | **1,985.3[r]** | **1,830.3[r]** | **2,037.6** | **1,896.3** |
| 53 Open market paper | −5.1 | 35.7 | 74.3 | 102.6 | 184.1 | 199.3 | 107.7 | 171.7 | 257.7 | 347.3 | 116.6 | 236.2 |
| 54 U.S. government securities | 421.4 | 448.1 | 348.5 | 376.5 | 235.9 | 170.6 | 242.6 | 191.3 | 338.9 | 197.3[r] | 342.5 | 425.1 |
| 55 Municipal securities | 74.8 | −35.9 | −48.2 | 2.6 | 71.4 | 34.1 | 59.6 | 88.9 | 103.2 | 116.7 | 100.1 | 84.1 |
| 56 Corporate and foreign bonds | 281.2 | 157.3 | 319.6 | 308.0 | 345.4[r] | 156.6 | 354.2[r] | 418.1[r] | 452.7[r] | 487.0[r] | 641.8 | 212.0 |
| 57 Bank loans n.e.c. | −7.2 | 62.9 | 114.7 | 92.1 | 129.3[r] | 146.5 | 123.6 | 62.2 | 185.1[r] | 79.9[r] | 172.9 | 187.2 |
| 58 Other loans and advances | −.8 | 50.3 | 70.2 | 62.5 | 102.2[r] | 15.0 | 85.0[r] | 112.0[r] | 196.8[r] | 108.9[r] | 109.4 | 157.6 |
| 59 Mortgages | 127.3 | 182.5[r] | 209.9[r] | 326.8[r] | 349.9[r] | 259.2[r] | 304.2[r] | 423.1[r] | 413.1 | 436.1[r] | 489.2 | 505.8 |
| 60 Consumer credit | 60.7 | 124.9 | 138.9 | 88.8 | 52.5 | 62.5 | 59.5 | 50.3 | 37.8 | 57.3[r] | 65.1 | 88.2 |
| | Funds raised through mutual funds and corporate equities | | | | | | | | | | | |
| 61 **Total net issues** | **429.7** | **125.2** | **143.9** | **234.2[r]** | **183.3[r]** | **171.7[r]** | **175.0[r]** | **240.8[r]** | **145.9[r]** | **209.4[r]** | **260.3** | **−118.2** |
| 62 Corporate equities | 137.7 | 24.6 | −3.5 | −3.4[r] | −81.8[r] | −77.9[r] | −75.1[r] | −59.1[r] | −115.1[r] | −112.0[r] | −123.4 | −266.7 |
| 63 Nonfinancial corporations | 21.3 | −44.9 | −58.3 | −64.2 | −114.4[r] | −90.4 | −100.0 | −124.0 | −143.3[r] | −139.2[r] | −128.7 | −221.8 |
| 64 Foreign shares purchased by U.S. residents | 63.4 | 48.1 | 50.4 | 60.0 | 41.3 | 46.6 | 54.4 | 64.3 | −.3 | 13.6 | 4.0 | −33.1 |
| 65 Financial corporations | 53.0 | 21.4 | 4.4 | .8[r] | −8.6[r] | −34.1[r] | −29.4[r] | .5[r] | 28.5[r] | 13.6[r] | 1.3 | −11.9 |
| 66 Mutual fund shares | 292.0 | 100.6 | 147.4 | 237.6 | 265.1 | 249.6 | 250.1 | 299.9 | 261.0 | 321.4 | 383.7 | 148.5 |

1. Data in this table also appear in the Board's Z.1 (780) quarterly statistical release, tables F.2 through F.4. For ordering address, see inside front cover.

## 1.58 SUMMARY OF FINANCIAL TRANSACTIONS[1]

Billions of dollars except as noted; quarterly data at seasonally adjusted annual rates

| Transaction category or sector | 1993 | 1994 | 1995 | 1996 | 1997 | 1997 | | | | 1998[r] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| NET LENDING IN CREDIT MARKETS[2] | | | | | | | | | | | | |
| 1 **Total net lending in credit markets** | **952.2** | **1,025.9[r]** | **1,227.8[r]** | **1,359.8[r]** | **1,470.7[r]** | **1,043.7[r]** | **1,336.4[r]** | **1,517.6[r]** | **1,985.3[r]** | **1,830.3** | **2,037.6** | **1,896.3** |
| 2 Domestic nonfederal nonfinancial sectors | 41.6 | 238.0[r] | −107.0[r] | −10.7[r] | −108.2[r] | −253.6[r] | −59.8[r] | −160.3[r] | 40.7[r] | −232.0 | 433.9 | −101.0 |
| 3 Household | 1.0 | 274.7[r] | −11.5[r] | −11.4[r] | −125.4[r] | −285.4[r] | −75.5[r] | −153.7[r] | 12.9[r] | −261.4 | 321.6 | −223.6 |
| 4 Nonfinancial corporate business | 9.1 | 17.7 | −8.8 | 20.0[r] | 14.8[r] | 58.8[r] | −28.7[r] | 31.7 | −2.6[r] | 33.8 | −27.8 | 1.3 |
| 5 Nonfarm noncorporate business | −1.1 | .6 | 4.7 | 4.4 | 2.7 | 2.5 | 2.7 | 2.8 | 2.9 | 3.0 | 3.2 | 3.3 |
| 6 State and local governments | 32.6 | −55.0 | −91.4 | −23.7 | −.3 | −29.5 | 41.8 | −41.0 | 27.5 | −7.4 | 136.9 | 118.1 |
| 7 Federal government | −18.4 | −27.5 | −.2 | −7.7 | 4.9 | 1.7 | 5.7 | 3.3 | 9.0 | 15.5 | 12.8 | 13.9 |
| 8 Rest of the world | 129.3 | 132.3 | 273.9 | 414.7 | 312.5[r] | 330.6 | 308.6[r] | 402.9[r] | 208.0[r] | 237.4 | 317.5 | 78.1 |
| 9 Financial sectors | 799.7 | 683.0 | 1,061.1[r] | 963.5[r] | 1,261.5[r] | 964.9[r] | 1,081.8[r] | 1,271.7[r] | 1,727.7[r] | 1,809.4 | 1,273.4 | 1,905.3 |
| 10 Monetary authority | 36.2 | 31.5 | 12.7 | 12.3 | 38.3 | 34.4 | 42.9 | 22.9 | 52.9 | 27.4 | 7.7 | 48.3 |
| 11 Commercial banking | 142.2 | 163.4 | 265.9 | 187.5 | 324.3[r] | 316.0 | 290.0 | 226.2 | 464.9[r] | 292.9 | 136.1 | 242.1 |
| 12 U.S.-chartered banks | 149.6 | 148.1 | 186.5 | 119.6 | 274.9 | 206.1 | 286.7 | 220.7 | 386.2 | 260.5 | 130.5 | 286.6 |
| 13 Foreign banking offices in United States | −9.8 | 11.2 | 75.4 | 63.3 | 40.2 | 101.7 | −3.6 | 4.6 | 58.2 | 11.6 | 18.1 | −53.5 |
| 14 Bank holding companies | .0 | .9 | −.3 | 3.9 | 5.4 | 2.2 | 5.1 | −5.0 | 19.4 | 15.3 | −17.6 | 6.0 |
| 15 Banks in U.S.-affiliated areas | 2.4 | 3.3 | 4.2 | .7 | 3.7[r] | 6.1 | 1.8 | 5.8 | 1.1[r] | 5.5 | 5.1 | 2.9 |
| 16 Savings institutions | −23.3 | 6.7 | −7.6 | 19.9 | −4.7 | −5.3 | 23.8 | −35.3 | −2.0 | 10.1 | −11.7 | 38.7 |
| 17 Credit unions | 21.7 | 28.1 | 16.2 | 25.5 | 16.8 | 20.5 | 25.2 | 13.6 | 7.7 | 16.5 | 22.7 | 20.4 |
| 18 Bank personal trusts and estates | 9.5 | 7.1 | −8.3 | −7.7 | 7.6 | 3.4 | 10.7 | 7.3 | 8.8 | 2.4 | 3.1 | 2.0 |
| 19 Life insurance companies | 100.9 | 66.7 | 99.2 | 72.5 | 101.0 | 88.3 | 174.4 | 106.0 | 35.3 | 102.9 | 67.2 | 86.8 |
| 20 Other insurance companies | 27.7 | 24.9 | 21.5 | 22.5 | 25.2 | 6.0 | 28.0 | 32.0 | 34.7 | 23.4 | −1.5 | −9.9 |
| 21 Private pension funds | 49.5 | 45.5 | 61.3 | 48.3 | 67.6 | 55.0 | 58.5 | 66.2 | 90.7 | 72.6 | 141.8 | 97.2 |
| 22 State and local government retirement funds | 22.7 | 22.3 | 27.5 | 45.9 | 36.6 | 23.2 | 34.6 | 79.1 | 9.5 | 81.7 | 60.6 | 83.9 |
| 23 Money market mutual funds | 20.4 | 30.0 | 86.5 | 88.8 | 87.5 | 58.2 | 26.1 | 121.5 | 144.2 | 172.0 | 200.1 | 247.5 |
| 24 Mutual funds | 159.5 | −7.1 | 52.5 | 48.9 | 80.9 | 63.9 | 90.0 | 108.0 | 61.8 | 143.6 | 152.6 | 107.8 |
| 25 Closed-end funds | 20.0 | −3.7 | 10.5 | 4.7[r] | −3.4[r] | −3.4[r] | −3.4[r] | −3.4[r] | −3.4[r] | −2.4 | −2.4 | −2.4 |
| 26 Government-sponsored enterprises | 87.8 | 117.8 | 84.7 | 92.0 | 95.0 | 44.9 | 119.9 | 55.8 | 159.2 | 166.0 | 143.4 | 249.0 |
| 27 Federally related mortgage pools | 84.7 | 115.4 | 98.2 | 141.1 | 114.4 | 114.6 | 88.1 | 114.6 | 140.3 | 84.8 | 247.0 | 267.5 |
| 28 Asset-backed securities issuers (ABSs) | 81.0 | 65.8 | 119.3 | 123.4 | 166.0[r] | 62.3 | 105.9[r] | 163.7[r] | 332.2 | 195.3 | 336.1 | 237.1 |
| 29 Finance companies | −20.9 | 48.3 | 49.9 | 18.4 | 21.9 | 39.8 | .9 | 68.3 | −21.3[r] | 28.7 | 27.1 | 83.5 |
| 30 Mortgage companies | .0 | −24.0 | −3.4 | 8.2 | 16.4 | −1.3 | −24.4 | 82.9 | 8.3 | 10.4 | −11.0 | 5.9 |
| 31 Real estate investment trusts (REITs) | .6 | 4.7 | 2.2 | 2.0 | −2.0 | −2.1 | −2.1 | −2.1 | −1.7 | −2.0 | −2.0 | −2.0 |
| 32 Brokers and dealers | 14.8 | −44.2 | 90.1 | −15.7 | 13.7 | −14.5 | −11.7 | 15.8 | 65.3 | 250.4 | −188.6 | 123.7 |
| 33 Funding corporations | −35.3 | −16.2 | −17.8[r] | 25.2[r] | 58.6[r] | 60.9[r] | 4.7[r] | 28.7[r] | 140.2[r] | 132.6 | −54.8 | −21.8 |
| RELATION OF LIABILITIES TO FINANCIAL ASSETS | | | | | | | | | | | | |
| 34 **Net flows through credit markets** | **952.2** | **1,025.9[r]** | **1,227.8[r]** | **1,359.8[r]** | **1,470.7[r]** | **1,043.7[r]** | **1,336.4[r]** | **1,517.6[r]** | **1,985.3[r]** | **1,830.3** | **2,037.6** | **1,896.3** |
| *Other financial sources* | | | | | | | | | | | | |
| 35 Official foreign exchange | .8 | −5.8 | 8.8 | −6.3 | .7 | −17.6 | .4 | 2.4 | 17.5 | 1.0 | 8.1 | 11.4 |
| 36 Special drawing rights certificates | .0 | .0 | 2.2 | −.5 | −.5 | −2.1 | .0 | .0 | .0 | .0 | .0 | .0 |
| 37 Treasury currency | .4 | .7 | .6 | .1 | .0 | .4 | .2 | 1.3 | −1.9 | .3 | .2 | 1.7 |
| 38 Foreign deposits | −18.5 | 52.9 | 35.3 | 85.9 | 107.4 | 186.7 | 23.9 | 116.1 | 103.0 | −45.3 | 89.0 | 77.1 |
| 39 Net interbank transactions | 50.5 | 89.8 | 9.9 | −51.6 | −19.4[r] | −78.4 | −57.0 | −21.7[r] | 79.6[r] | −107.1 | 23.3 | 22.9 |
| 40 Checkable deposits and currency | 117.3 | −9.7 | −12.7 | 15.8 | 41.5 | 81.8 | 50.6 | −38.4 | 71.9 | 65.6 | 109.3 | −61.2 |
| 41 Small time and savings deposits | −70.3 | −39.9 | 96.6 | 97.2 | 97.1 | 151.5 | 34.0 | 47.0 | 155.9[r] | 154.9 | 36.2 | 111.2 |
| 42 Large time deposits | −23.5 | 19.6 | 65.6 | 114.0 | 122.5 | 56.3 | 174.7 | 188.4 | 70.7[r] | 186.2 | −16.5 | 80.5 |
| 43 Money market fund shares | 20.2 | 43.3 | 142.3 | 145.8 | 157.6 | 157.6 | 98.9 | 226.2 | 147.8 | 248.0 | 186.4 | 400.7 |
| 44 Security repurchase agreements | 71.3 | 78.2 | 110.4 | 40.0 | 115.2 | 32.7 | 218.9 | 111.2 | 98.1 | 242.8 | −45.4 | 181.6 |
| 45 Corporate equities | 137.7 | 24.6 | −3.5 | −3.4[r] | −81.8[r] | −77.9[r] | −75.1[r] | −59.1[r] | −115.1[r] | −112.0 | −123.4 | −266.7 |
| 46 Mutual fund shares | 292.0 | 100.6 | 147.4 | 237.6 | 265.1 | 249.6 | 250.1 | 299.9 | 261.0 | 321.4 | 383.7 | 148.5 |
| 47 Trade payables | 52.2 | 94.0 | 101.5[r] | 76.9[r] | 98.0[r] | 59.9[r] | 48.8[r] | 130.0[r] | 153.2[r] | 90.6 | 4.7 | 36.4 |
| 48 Security credit | 61.4 | −.1 | 26.7 | 52.4 | 110.1 | 110.4 | 127.5 | 90.6 | 111.9 | 168.9 | −110.3 | 69.2 |
| 49 Life insurance reserves | 36.0 | 34.5 | 44.9 | 43.6 | 52.9 | 49.8 | 62.5 | 62.8 | 36.6 | 47.3 | 36.8 | 26.1 |
| 50 Pension fund reserves | 255.7[r] | 246.2 | 233.2 | 230.8 | 296.8 | 256.6 | 318.9 | 326.9 | 284.8 | 253.8 | 280.6 | 258.9 |
| 51 Taxes payable | 11.4 | 2.6 | 6.2 | 16.2 | 14.6[r] | 21.7 | 14.1[r] | 30.2[r] | −7.6[r] | 9.4 | −6.7 | 34.5 |
| 52 Investment in bank personal trusts | .9 | 17.8 | 4.0 | −8.6 | 75.0 | 68.8 | 71.8 | 80.8 | 78.4 | 50.3 | 57.5 | 47.8 |
| 53 Noncorporate proprietors' equity | 25.5 | 55.6 | 71.3[r] | 49.3[r] | 40.6[r] | 49.6[r] | 47.5[r] | 48.2[r] | 17.2[r] | 36.5 | 9.9 | 12.0 |
| 54 Miscellaneous | 340.0 | 252.4[r] | 457.3[r] | 451.4[r] | 593.4[r] | 787.2[r] | 532.0[r] | 636.7[r] | 417.7[r] | 1,220.1 | 422.0 | 830.8 |
| 55 **Total financial sources** | **2,313.0[r]** | **2,083.2[r]** | **2,776.0[r]** | **2,946.5[r]** | **3,557.6[r]** | **3,188.3[r]** | **3,279.2[r]** | **3,797.0[r]** | **3,966.0[r]** | **4,663.0** | **3,383.0** | **3,919.6** |
| *Liabilities not identified as assets (−)* | | | | | | | | | | | | |
| 56 Treasury currency | −.2 | −.2 | −.5 | −.9 | −.6 | −.3 | −.5 | .7 | −2.4 | −.2 | −.3 | 1.2 |
| 57 Foreign deposits | −5.7 | 43.0 | 25.1 | 59.4 | 107.4 | 176.9 | 10.7[r] | 93.8[r] | 148.3 | −94.7 | 145.1 | 44.3 |
| 58 Net interbank liabilities | 4.2 | −2.7 | −3.1 | −3.3 | −19.9[r] | 30.3 | −26.7 | −50.0 | −33.0[r] | 30.7 | 11.4 | 19.3 |
| 59 Security repurchase agreements | 46.4 | 69.4 | 22.9 | −.7 | 59.5[r] | −107.3 | 185.3 | −10.6[r] | 170.5[r] | 99.3 | −107.3 | 57.2 |
| 60 Taxes payable | 15.8 | 16.6 | 21.1 | 20.4 | 17.2[r] | 19.3 | 29.3[r] | 15.3[r] | 5.2[r] | 6.5 | 9 | 25.7 |
| 61 Miscellaneous | −170.8 | −150.0[r] | −213.5[r] | −82.0[r] | −254.9[r] | 26.9[r] | −414.3[r] | −94.8[r] | −537.4[r] | 92.5 | −108.2 | 5.1 |
| *Floats not included in assets (−)* | | | | | | | | | | | | |
| 62 Federal government checkable deposits | −1.5 | −4.8 | −6.0 | .5 | −2.7 | −4.6 | −8.3 | 10.0 | −7.9 | 7.5 | −41.7 | 24.1 |
| 63 Other checkable deposits | −1.3 | −2.8 | −3.8 | −4.0 | −3.9 | −3.3 | −4.3 | −3.0 | −5.0 | −4.0 | −3.0 | −3.2 |
| 64 Trade credit | −4.0 | 1.5 | −11.7[r] | −27.0[r] | 15.1[r] | −8.7[r] | −58.7[r] | 48.0[r] | 79.7[r] | 12.6 | −97.1 | −73.6 |
| 65 **Total identified to sectors as assets** | **2,430.0[r]** | **2,113.3[r]** | **2,945.3[r]** | **2,984.2[r]** | **3,640.4[r]** | **3,059.2[r]** | **3,566.7[r]** | **3,787.6[r]** | **4,148.1[r]** | **4,512.9** | **3,583.2** | **3,819.5** |

1. Data in this table also appear in the Board's Z.1 (780) quarterly statistical release, tables F.1 and F.5. For ordering address, see inside front cover.

2. Excludes corporate equities and mutual fund shares.

## 1.59 SUMMARY OF CREDIT MARKET DEBT OUTSTANDING[1]

Billions of dollars, end of period

| Transaction category or sector | 1994 | 1995 | 1996 | 1997 | 1997 | | | | 1998 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| | Nonfinancial sectors | | | | | | | | | | |
| 1 **Total credit market debt owed by domestic nonfinancial sectors** | **13,013.7[r]** | **13,714.1[r]** | **14,440.8[r]** | **15,208.8[r]** | **14,608.2[r]** | **14,727.5[r]** | **14,931.5[r]** | **15,208.8[r]** | **15,440.4[r]** | **15,636.0[r]** | **15,865.1** |
| *By sector and instrument* | | | | | | | | | | | |
| 2 Federal government | 3,492.3 | 3,636.7 | 3,781.8 | 3,804.9 | 3,829.8 | 3,760.6 | 3,771.2 | 3,804.9 | 3,830.8[r] | 3,749.0 | 3,720.2 |
| 3 Treasury securities | 3,465.6 | 3,608.5 | 3,755.1 | 3,778.3 | 3,803.5 | 3,734.3 | 3,745.1 | 3,778.3 | 3,804.8[r] | 3,723.4 | 3,694.7 |
| 4 Budget agency securities and mortgages | 26.7 | 28.2 | 26.6 | 26.5 | 26.3 | 26.3 | 26.1 | 26.5 | 25.9 | 25.6 | 25.5 |
| 5 Nonfederal | 9,521.4[r] | 10,077.3[r] | 10,659.0[r] | 11,403.9[r] | 10,778.4[r] | 10,966.9[r] | 11,160.2 | 11,403.9[r] | 11,609.7[r] | 11,887.1[r] | 12,145.0 |
| *By instrument* | | | | | | | | | | | |
| 6 Commercial paper | 139.2 | 157.4 | 156.4 | 168.6 | 168.7 | 179.3 | 176.6 | 168.6 | 193.1 | 202.5 | 216.9 |
| 7 Municipal securities and loans | 1,341.7 | 1,293.5 | 1,296.0 | 1,367.5 | 1,305.1 | 1,326.8 | 1,340.2 | 1,367.5 | 1,397.1 | 1,429.3[r] | 1,440.0 |
| 8 Corporate bonds | 1,253.0 | 1,326.3 | 1,398.8 | 1,489.5 | 1,418.7 | 1,440.2 | 1,470.9 | 1,489.5 | 1,528.8 | 1,569.0 | 1,591.0 |
| 9 Bank loans n.e.c. | 759.9 | 862.1 | 928.3 | 1,035.6[r] | 964.5 | 1,000.2 | 1,000.1 | 1,035.6[r] | 1,051.6[r] | 1,097.0[r] | 1,123.9 |
| 10 Other loans and advances | 669.6 | 736.9 | 770.6 | 839.3[r] | 784.4 | 788.5[r] | 802.9[r] | 839.3[r] | 865.6[r] | 873.8[r] | 887.6 |
| 11 Mortgages | 4,374.1[r] | 4,578.4[r] | 4,897.2[r] | 5,239.3 | 4,950.6[r] | 5,026.8[r] | 5,142.7 | 5,239.3 | 5,337.4[r] | 5,458.6[r] | 5,596.9 |
| 12 Home | 3,355.5[r] | 3,529.4[r] | 3,761.0[r] | 4,029.3 | 3,805.7[r] | 3,860.6[r] | 3,956.8 | 4,029.3 | 4,101.3[r] | 4,192.4[r] | 4,297.6 |
| 13 Multifamily residential | 265.6 | 273.6[r] | 289.9[r] | 301.4 | 290.9[r] | 294.2 | 295.8 | 301.4 | 306.4 | 312.0 | 317.7 |
| 14 Commercial | 670.0[r] | 690.8[r] | 759.1[r] | 818.3 | 766.3[r] | 783.4[r] | 800.3[r] | 818.3 | 838.3 | 861.2[r] | 887.2 |
| 15 Farm | 83.0 | 84.6 | 87.1 | 90.4 | 87.7 | 88.7 | 89.8 | 90.4 | 91.4 | 93.0 | 94.3 |
| 16 Consumer credit | 983.9 | 1,122.8 | 1,211.6 | 1,264.1 | 1,186.4 | 1,205.0 | 1,226.7 | 1,264.1 | 1,236.1[r] | 1,256.9[r] | 1,288.7 |
| *By borrowing sector* | | | | | | | | | | | |
| 17 Household | 4,452.5[r] | 4,801.1[r] | 5,142.7[r] | 5,500.9[r] | 5,177.1[r] | 5,268.6[r] | 5,379.0[r] | 5,500.9[r] | 5,558.5[r] | 5,683.7[r] | 5,823.5 |
| 18 Nonfinancial business | 3,947.3[r] | 4,206.0[r] | 4,452.9[r] | 4,783.5[r] | 4,532.3[r] | 4,612.2[r] | 4,685.7[r] | 4,783.5[r] | 4,906.9[r] | 5,032.5[r] | 5,142.7 |
| 19 Corporate | 2,683.2[r] | 2,915.1[r] | 3,115.3[r] | 3,376.1[r] | 3,184.3[r] | 3,241.9[r] | 3,297.4[r] | 3,376.1[r] | 3,479.9[r] | 3,575.5[r] | 3,656.7 |
| 20 Nonfarm noncorporate | 1,121.8 | 1,145.8 | 1,187.7[r] | 1,251.2[r] | 1,199.7[r] | 1,216.8[r] | 1,232.9[r] | 1,251.2[r] | 1,271.6[r] | 1,296.1 | 1,323.0 |
| 21 Farm | 142.2 | 145.1 | 149.9 | 156.3 | 148.3 | 153.4 | 155.4 | 156.3 | 155.4 | 160.9 | 163.0 |
| 22 State and local government | 1,121.7 | 1,070.2 | 1,063.4 | 1,119.5 | 1,069.0 | 1,086.1 | 1,095.5 | 1,119.5 | 1,144.3 | 1,170.8[r] | 1,178.8 |
| 23 **Foreign credit market debt held in United States** | **370.8** | **441.9** | **518.8** | **569.6** | **524.3** | **539.2** | **557.7** | **569.6** | **584.1** | **606.6[r]** | **600.3** |
| 24 Commercial paper | 42.7 | 56.2 | 67.5 | 65.1 | 69.3 | 71.3 | 64.3 | 65.1 | 76.7 | 71.4 | 74.0 |
| 25 Bonds | 242.3 | 291.9 | 347.7 | 394.4 | 351.6 | 361.2 | 386.3 | 394.4 | 398.0 | 424.9[r] | 416.2 |
| 26 Bank loans n.e.c. | 26.1 | 34.6 | 43.7 | 52.1 | 43.5 | 46.4 | 48.2 | 52.1 | 53.4[r] | 55.5 | 56.4 |
| 27 Other loans and advances | 59.8 | 59.3 | 60.0 | 58.0 | 59.9 | 60.3 | 58.9 | 58.0 | 55.9 | 54.8 | 53.8 |
| 28 **Total credit market debt owed by nonfinancial sectors, domestic and foreign** | **13,384.5[r]** | **14,156.0[r]** | **14,959.6[r]** | **15,778.4[r]** | **15,132.5[r]** | **15,266.7[r]** | **15,489.2[r]** | **15,778.4[r]** | **16,024.5[r]** | **16,242.6[r]** | **16,465.5** |
| | Financial sectors | | | | | | | | | | |
| 29 **Total credit market debt owed by financial sectors** | **3,822.2** | **4,281.2** | **4,837.3** | **5,448.6[r]** | **4,916.5** | **5,084.9[r]** | **5,205.3[r]** | **5,448.6[r]** | **5,653.5[r]** | **5,911.5[r]** | **6,164.5** |
| *By instrument* | | | | | | | | | | | |
| 30 Federal government-related | 2,172.7 | 2,376.8 | 2,608.3 | 2,821.0 | 2,634.7 | 2,706.2 | 2,746.5 | 2,821.0 | 2,877.9 | 2,981.2 | 3,121.6 |
| 31 Government-sponsored enterprise securities | 700.6 | 806.5 | 896.9 | 995.3 | 894.7 | 944.2 | 955.8 | 995.3 | 1,030.9 | 1,072.5 | 1,146.0 |
| 32 Mortgage pool securities | 1,472.1 | 1,570.3 | 1,711.4 | 1,825.8 | 1,740.0 | 1,762.1 | 1,790.7 | 1,825.8 | 1,847.0 | 1,908.7 | 1,975.6 |
| 33 Loans from U.S. government | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 34 Private | 1,649.5 | 1,904.4 | 2,229.1 | 2,627.5[r] | 2,281.8 | 2,378.6[r] | 2,458.8[r] | 2,627.5[r] | 2,775.6[r] | 2,930.3[r] | 3,042.9 |
| 35 Open market paper | 441.6 | 486.9 | 579.1 | 745.7 | 623.0 | 642.5 | 684.7 | 745.7 | 804.9 | 838.9 | 874.2 |
| 36 Corporate bonds | 1,008.8 | 1,205.4 | 1,385.1 | 1,560.0[r] | 1,396.5 | 1,457.6[r] | 1,478.1[r] | 1,560.0[r] | 1,634.7[r] | 1,732.5[r] | 1,777.3 |
| 37 Bank loans n.e.c. | 48.9 | 52.8 | 69.7 | 83.3 | 70.6 | 69.2 | 74.8 | 83.3 | 87.3 | 89.3 | 99.3 |
| 38 Other loans and advances | 131.6 | 135.0 | 162.9 | 198.5 | 157.9 | 173.7 | 183.0 | 198.5 | 206.6 | 225.6 | 246.2 |
| 39 Mortgages | 18.7 | 24.3 | 32.2 | 40.0 | 33.8 | 35.6 | 38.2 | 40.0 | 42.0 | 44.0 | 46.0 |
| *By borrowing sector* | | | | | | | | | | | |
| 40 Commercial banks | 94.5 | 102.6 | 113.6 | 140.6 | 115.3 | 125.7 | 130.0 | 140.6 | 148.7 | 159.6[r] | 169.6 |
| 41 Bank holding companies | 133.6 | 148.0 | 150.0 | 168.6 | 151.6 | 160.5 | 164.0 | 168.6 | 181.2 | 190.5[r] | 200.3 |
| 42 Savings institutions | 112.4 | 115.0 | 140.5 | 160.3 | 136.3 | 144.3 | 149.8 | 160.3 | 162.9 | 170.7 | 186.6 |
| 43 Credit unions | .5 | .4 | .4 | .6 | .4 | .4 | .5 | .6 | .7 | .8 | 1.0 |
| 44 Life insurance companies | .6 | .5 | 1.6 | 1.8 | 1.8 | 1.8 | 1.9 | 1.8 | 1.8 | 1.6 | 2.0 |
| 45 Government-sponsored enterprises | 700.6 | 806.5 | 896.9 | 995.3 | 894.7 | 944.2 | 955.8 | 995.3 | 1,030.9 | 1,072.5 | 1,146.0 |
| 46 Federally related mortgage pools | 1,472.1 | 1,570.3 | 1,711.4 | 1,825.8 | 1,740.0 | 1,762.1 | 1,790.7 | 1,825.8 | 1,847.0 | 1,908.7 | 1,975.6 |
| 47 Issuers of asset-backed securities (ABSs) | 579.0 | 720.1 | 873.8 | 1,089.3[r] | 889.9 | 917.9[r] | 989.0[r] | 1,089.3[r] | 1,147.2[r] | 1,236.7[r] | 1,308.7 |
| 48 Brokers and dealers | 34.3 | 29.3 | 27.3 | 35.3 | 26.6 | 35.3 | 33.6 | 35.3 | 35.1 | 40.1 | 44.2 |
| 49 Finance companies | 433.7 | 483.9 | 529.8 | 554.5 | 528.4 | 557.8 | 532.7 | 554.5 | 571.9 | 596.9 | 589.5 |
| 50 Mortgage companies | 18.7 | 19.1 | 31.5 | 30.3 | 31.4 | 28.3 | 29.2 | 30.3 | 31.6 | 30.2 | 30.9 |
| 51 Real estate investment trusts (REITs) | 31.1 | 36.8 | 47.8 | 72.6 | 51.6 | 56.6 | 64.6 | 72.6 | 81.7 | 90.1 | 97.0 |
| 52 Funding corporations | 211.0 | 248.6 | 312.7 | 373.8 | 348.6 | 350.0 | 363.4 | 373.8 | 412.9 | 413.0[r] | 413.1 |
| | All sectors | | | | | | | | | | |
| 53 **Total credit market debt, domestic and foreign** | **17,206.8[r]** | **18,437.2[r]** | **19,797.0[r]** | **21,227.0** | **20,049.0[r]** | **20,351.5[r]** | **20,694.5** | **21,227.0** | **21,678.0[r]** | **22,154.1[r]** | **22,630.0** |
| 54 Open market paper | 623.5 | 700.4 | 803.0 | 979.4 | 861.1 | 893.1 | 925.7 | 979.4 | 1,074.8 | 1,112.7 | 1,165.1 |
| 55 U.S. government securities | 5,665.0 | 6,013.6 | 6,390.0 | 6,625.9 | 6,464.5 | 6,466.8 | 6,517.7 | 6,625.9 | 6,708.6[r] | 6,730.2 | 6,841.8 |
| 56 Municipal securities | 1,341.7 | 1,293.5 | 1,296.0 | 1,367.5 | 1,305.1 | 1,326.8 | 1,340.2 | 1,367.5 | 1,397.1 | 1,429.3[r] | 1,440.0 |
| 57 Corporate and foreign bonds | 2,504.0 | 2,823.6 | 3,131.7 | 3,444.0[r] | 3,166.8 | 3,259.1[r] | 3,335.3[r] | 3,444.0[r] | 3,561.5[r] | 3,726.4[r] | 3,784.5 |
| 58 Bank loans n.e.c. | 834.9 | 949.6 | 1,041.7 | 1,171.0[r] | 1,078.6 | 1,115.8 | 1,123.1 | 1,171.0[r] | 1,192.3[r] | 1,241.8[r] | 1,279.6 |
| 59 Other loans and advances | 860.9 | 931.1 | 993.6 | 1,095.8[r] | 1,002.3 | 1,022.5[r] | 1,044.9[r] | 1,095.8[r] | 1,128.2[r] | 1,154.3[r] | 1,187.5 |
| 60 Mortgages | 4,392.8[r] | 4,602.7[r] | 4,929.4[r] | 5,279.3 | 4,984.3[r] | 5,062.5[r] | 5,180.9 | 5,279.3 | 5,379.4[r] | 5,502.6[r] | 5,642.9 |
| 61 Consumer credit | 983.9 | 1,122.8 | 1,211.6 | 1,264.1 | 1,186.4 | 1,205.0 | 1,226.7 | 1,264.1 | 1,236.1[r] | 1,256.9[r] | 1,288.7 |

1. Data in this table also appear in the Board's Z.1 (780) quarterly statistical release, tables L.2 through L.4. For ordering address, see inside front cover.

## 1.60 SUMMARY OF FINANCIAL ASSETS AND LIABILITIES[1]

Billions of dollars except as noted, end of period

| Transaction category or sector | 1994 | 1995 | 1996 | 1997 | 1997 Q1 | 1997 Q2 | 1997 Q3 | 1997 Q4 | 1998[r] Q1 | 1998[r] Q2 | 1998[r] Q3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CREDIT MARKET DEBT OUTSTANDING[2] | | | | | | | | | | | |
| 1 **Total credit market assets** | **17,206.8[r]** | **18,437.2[r]** | **19,797.0[r]** | **21,227.0** | **20,049.0[r]** | **20,351.5[r]** | **20,694.5** | **21,227.0** | **21,678.0** | **22,154.1** | **22,630.0** |
| 2 Domestic nonfederal nonfinancial sectors | 3,038.1[r] | 2,890.0[r] | 2,919.3[r] | 2,761.1[r] | 2,849.1[r] | 2,798.0[r] | 2,739.4[r] | 2,761.1[r] | 2,699.8 | 2,766.7 | 2,758.4 |
| 3 Household | 1,981.4[r] | 1,928.7[r] | 1,966.7[r] | 1,791.3[r] | 1,909.6[r] | 1,849.7[r] | 1,793.7[r] | 1,791.3[r] | 1,744.4 | 1,778.2 | 1,739.5 |
| 4 Nonfinancial corporate business | 289.2 | 280.4 | 291.0[r] | 305.8[r] | 286.8 | 281.4[r] | 290.4[r] | 305.8[r] | 294.7 | 289.7 | 291.8 |
| 5 Nonfarm noncorporate business | 37.6 | 42.3 | 46.7 | 49.4 | 47.4 | 48.0 | 48.7 | 49.4 | 50.2 | 51.0 | 51.8 |
| 6 State and local governments | 729.9 | 638.6 | 614.8 | 614.5 | 605.4 | 618.9 | 606.6 | 614.5 | 610.5 | 647.8 | 675.3 |
| 7 Federal government | 203.4 | 203.2 | 195.5 | 200.4 | 195.9 | 197.3 | 198.2 | 200.4 | 204.3 | 207.5 | 210.9 |
| 8 Rest of the world | 1,216.0 | 1,530.3 | 1,931.2 | 2,258.9[r] | 2,019.4 | 2,095.0[r] | 2,196.4[r] | 2,258.9[r] | 2,323.5 | 2,401.6 | 2,421.7 |
| 9 Financial sectors | 12,749.2 | 13,813.7[r] | 14,750.9[r] | 16,006.6[r] | 14,984.6[r] | 15,261.2[r] | 15,560.5[r] | 16,006.6[r] | 16,450.3 | 16,778.3 | 17,239.0 |
| 10 Monetary authority | 368.2 | 380.8 | 393.1 | 431.4 | 397.1 | 412.4 | 412.7 | 431.4 | 433.8 | 440.3 | 446.5 |
| 11 Commercial banking | 3,254.3 | 3,520.1 | 3,707.7 | 4,031.9[r] | 3,775.7 | 3,856.8 | 3,912.9 | 4,031.9[r] | 4,093.3 | 4,136.4 | 4,195.6 |
| 12 U.S.-chartered banks | 2,869.6 | 3,056.1 | 3,175.8 | 3,450.7 | 3,218.1 | 3,295.2 | 3,351.9 | 3,450.7 | 3,505.1 | 3,543.6 | 3,616.2 |
| 13 Foreign banking offices in United States | 337.1 | 412.6 | 475.8 | 516.1 | 499.5 | 501.8 | 501.0 | 516.1 | 517.9 | 525.6 | 510.0 |
| 14 Bank holding companies | 18.4 | 18.0 | 22.0 | 27.4 | 22.5 | 23.8 | 22.5 | 27.4 | 31.2 | 26.8 | 28.3 |
| 15 Banks in U.S.-affiliated areas | 29.2 | 33.4 | 34.1 | 37.8[r] | 35.6 | 36.1 | 37.5 | 37.8[r] | 39.2 | 40.4 | 41.1 |
| 16 Savings institutions | 920.8 | 913.3 | 933.2 | 928.5 | 931.9 | 937.8 | 929.0 | 928.5 | 931.0 | 928.1 | 937.8 |
| 17 Credit unions | 246.8 | 263.0 | 288.5 | 305.3 | 291.2 | 299.9 | 303.9 | 305.3 | 306.7 | 315.1 | 320.7 |
| 18 Bank personal trusts and estates | 248.0 | 239.7 | 232.0 | 239.5 | 232.8 | 235.5 | 237.3 | 239.5 | 240.1 | 240.9 | 241.4 |
| 19 Life insurance companies | 1,482.6 | 1,581.8 | 1,654.3 | 1,755.2 | 1,680.2 | 1,724.1 | 1,750.4 | 1,755.2 | 1,784.8 | 1,801.9 | 1,823.3 |
| 20 Other insurance companies | 446.4 | 468.7 | 491.2 | 515.3 | 491.6 | 498.6 | 506.6 | 515.3 | 521.1 | 520.8 | 518.3 |
| 21 Private pension funds | 656.9 | 718.2 | 766.5 | 834.2 | 780.3 | 794.9 | 811.5 | 834.2 | 852.3 | 887.7 | 912.1 |
| 22 State and local government retirement funds | 455.8 | 483.3 | 529.2 | 565.8 | 531.6 | 542.7 | 562.0 | 565.8 | 582.5 | 600.2 | 621.4 |
| 23 Money market mutual funds | 459.0 | 545.5 | 634.3 | 721.9 | 659.0 | 656.5 | 678.7 | 721.9 | 775.0 | 815.9 | 869.9 |
| 24 Mutual funds | 718.8 | 771.3 | 820.2 | 901.1 | 838.5 | 861.3 | 890.4 | 901.1 | 939.3 | 977.6 | 1,007.0 |
| 25 Closed-end funds | 86.0 | 96.4 | 101.1[r] | 97.7[r] | 100.3[r] | 99.4[r] | 98.5[r] | 97.7[r] | 97.1 | 96.5 | 95.9 |
| 26 Government-sponsored enterprises | 663.3 | 748.0 | 813.6 | 908.6 | 824.3 | 854.8 | 868.7 | 908.6 | 949.5 | 985.9 | 1,048.1 |
| 27 Federally related mortgage pools | 1,472.1 | 1,570.3 | 1,711.4 | 1,825.8 | 1,740.0 | 1,762.1 | 1,790.7 | 1,825.8 | 1,847.0 | 1,908.7 | 1,975.6 |
| 28 Asset-backed securities issuers (ABSs) | 541.7 | 661.0 | 784.4 | 950.4[r] | 794.6 | 818.9[r] | 863.3[r] | 950.4[r] | 993.5 | 1,075.3 | 1,138.4 |
| 29 Finance companies | 476.2 | 526.2 | 544.5 | 566.4 | 552.4 | 553.1 | 564.4 | 566.4 | 572.0 | 579.0 | 593.7 |
| 30 Mortgage companies | 36.5 | 33.0 | 41.2 | 57.6 | 40.9 | 34.8 | 55.5 | 57.6 | 60.2 | 57.4 | 58.9 |
| 31 Real estate investment trusts (REITs) | 13.3 | 15.5 | 17.5 | 15.5 | 17.0 | 16.5 | 15.9 | 15.5 | 15.0 | 14.5 | 14.0 |
| 32 Brokers and dealers | 93.3 | 183.4 | 167.7 | 181.4 | 164.1 | 161.2 | 165.1 | 181.4 | 244.0 | 196.9 | 227.8 |
| 33 Funding corporations | 109.3 | 94.1[r] | 119.3[r] | 173.2[r] | 141.1[r] | 139.9[r] | 142.9[r] | 173.2[r] | 212.0 | 199.2 | 192.7 |
| RELATION OF LIABILITIES TO FINANCIAL ASSETS | | | | | | | | | | | |
| 34 **Total credit market debt** | **17,206.8[r]** | **18,437.2[r]** | **19,797.0[r]** | **21,227.0** | **20,049.0[r]** | **20,351.5[r]** | **20,694.5** | **21,227.0** | **21,678.0** | **22,154.1** | **22,630.0** |
| *Other liabilities* | | | | | | | | | | | |
| 35 Official foreign exchange | 53.2 | 63.7 | 53.7 | 48.9 | 46.3 | 46.7 | 46.1 | 48.9 | 48.2 | 50.1 | 54.5 |
| 36 Special drawing rights certificates | 8.0 | 10.2 | 9.7 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 |
| 37 Treasury currency | 17.6 | 18.2 | 18.3 | 18.3 | 18.4 | 18.4 | 18.7 | 18.3 | 18.4 | 18.4 | 18.8 |
| 38 Foreign deposits | 373.9 | 418.8 | 516.1 | 619.4 | 562.8 | 568.8 | 597.8 | 619.4 | 608.1 | 630.4 | 649.6 |
| 39 Net interbank liabilities | 280.1 | 290.7 | 240.8 | 219.7[r] | 210.9 | 197.1 | 189.4[r] | 219.7[r] | 182.7 | 192.2 | 192.8 |
| 40 Checkable deposits and currency | 1,242.0 | 1,229.3 | 1,245.1 | 1,286.6 | 1,220.0 | 1,265.3 | 1,234.2 | 1,286.6 | 1,259.4 | 1,321.0 | 1,282.8 |
| 41 Small time and savings deposits | 2,183.2 | 2,279.7 | 2,377.0 | 2,474.1 | 2,427.1 | 2,432.3 | 2,438.8 | 2,474.1 | 2,525.2 | 2,530.8 | 2,553.4 |
| 42 Large time deposits | 411.2 | 476.9 | 590.9 | 713.4 | 606.0 | 646.7 | 696.1 | 713.4 | 760.9 | 754.0 | 776.2 |
| 43 Money market fund shares | 602.9 | 745.3 | 891.1 | 1,048.7 | 950.8 | 952.4 | 1,005.1 | 1,048.7 | 1,130.7 | 1,153.7 | 1,249.7 |
| 44 Security repurchase agreements | 549.5 | 659.9 | 699.9 | 815.1 | 713.8 | 766.7 | 795.4 | 815.1 | 879.5 | 867.0 | 913.6 |
| 45 Mutual fund shares | 1,477.3 | 1,852.8 | 2,342.4 | 2,989.4 | 2,410.6 | 2,717.5 | 2,973.6 | 2,989.4 | 3,340.2 | 3,439.0 | 3,117.3 |
| 46 Security credit | 279.0 | 305.7 | 358.1 | 468.2 | 380.0 | 414.8 | 432.2 | 468.2 | 505.3 | 481.0 | 491.8 |
| 47 Life insurance reserves | 505.3 | 550.2 | 593.8 | 646.7 | 606.2 | 621.9 | 637.6 | 646.7 | 658.6 | 667.8 | 674.3 |
| 48 Pension fund reserves | 4,870.5 | 5,589.4[r] | 6,315.4[r] | 7,399.0[r] | 6,402.3[r] | 6,907.5[r] | 7,290.6[r] | 7,399.0[r] | 7,957.6 | 8,052.7 | 7,528.6 |
| 49 Trade payables | 1,140.6 | 1,242.2[r] | 1,319.0[r] | 1,417.0[r] | 1,301.8[r] | 1,319.8[r] | 1,352.0[r] | 1,417.0[r] | 1,407.0 | 1,413.9 | 1,422.8 |
| 50 Taxes payable | 101.4 | 107.6 | 123.8 | 138.4[r] | 137.3 | 133.9[r] | 143.2[r] | 138.4[r] | 149.4 | 140.4 | 150.8 |
| 51 Investment in bank personal trusts | 699.4 | 803.0 | 871.7 | 1,082.8 | 888.7 | 982.9 | 1,058.9 | 1,082.8 | 1,179.3 | 1,207.2 | 1,112.4 |
| 52 Miscellaneous | 5,331.6[r] | 5,705.9[r] | 6,028.5[r] | 6,504.4[r] | 6,302.8[r] | 6,276.1[r] | 6,488.9[r] | 6,504.4[r] | 6,789.6 | 6,874.4 | 7,210.9 |
| 53 **Total liabilities** | **37,333.7[r]** | **40,786.5[r]** | **44,392.1[r]** | **49,126.2[r]** | **45,244.2[r]** | **46,629.6[r]** | **48,102.1[r]** | **49,126.2[r]** | **51,087.1** | **51,957.0** | **52,039.5** |
| *Financial assets not included in liabilities (+)* | | | | | | | | | | | |
| 54 Gold and special drawing rights | 21.1 | 22.1 | 21.4 | 21.1 | 20.9 | 21.1 | 21.0 | 21.1 | 21.2 | 21.0 | 21.2 |
| 55 Corporate equities | 6,237.9 | 8,331.3 | 10,062.4 | 12,776.0 | 10,063.5 | 11,627.0 | 12,649.4 | 12,776.0 | 14,397.6 | 14,556.1 | 12,758.4 |
| 56 Household equity in noncorporate business | 3,380.4[r] | 3,598.7[r] | 3,806.7[r] | 4,129.6[r] | 3,903.4[r] | 3,992.9[r] | 4,059.6[r] | 4,129.6[r] | 4,140.2 | 4,169.2 | 4,151.0 |
| *Liabilities not identified as assets (−)* | | | | | | | | | | | |
| 57 Treasury currency | −5.4 | −5.8 | −6.7 | −7.3 | −6.8 | −6.9 | −6.7 | −7.3 | −7.4 | −7.4 | −7.1 |
| 58 Foreign deposits | 325.4 | 360.2 | 431.2 | 534.5 | 475.4 | 478.1[r] | 501.5 | 534.5 | 510.8 | 547.1 | 558.1 |
| 59 Net interbank transactions | −6.5 | −9.0 | −10.6 | −32.2[r] | −1.6 | −8.1 | −22.1 | −32.2[r] | −21.2 | −17.1 | −15.5 |
| 60 Security repurchase agreements | 67.8 | 90.7 | 90.0 | 149.5[r] | 68.1 | 108.6 | 116.4[r] | 149.5[r] | 177.8 | 145.7 | 170.4 |
| 61 Taxes payable | 48.8 | 62.4 | 76.9 | 91.5[r] | 74.8 | 77.6[r] | 88.0[r] | 91.5[r] | 87.3 | 91.6 | 97.9 |
| 62 Miscellaneous | −1,039.2[r] | −1,324.3[r] | −1,698.4[r] | −2,106.4[r] | −1,576.9[r] | −1,675.4[r] | −1,656.8[r] | −2,106.4[r] | −2,017.5 | −2,022.3 | −1,990.9 |
| *Floats not included in assets (−)* | | | | | | | | | | | |
| 63 Federal government checkable deposits | 3.4 | 3.1 | −1.6 | −8.1 | −9.7 | −6.8 | −7.8 | −8.1 | −10.4 | −16.1 | −12.0 |
| 64 Other checkable deposits | 38.0 | 34.2 | 30.1 | 26.2 | 25.6 | 27.9 | 19.5 | 26.2 | 21.4 | 24.2 | 15.7 |
| 65 Trade credit | −245.9 | −257.6[r] | −284.5[r] | −280.5[r] | −339.5[r] | −366.6[r] | −372.3[r] | −280.5[r] | −330.0 | −365.9 | −390.4 |
| 66 **Total identified to sectors as assets** | **47,786.6[r]** | **53,784.7[r]** | **59,656.3[r]** | **67,685.8[r]** | **60,522.6[r]** | **63,642.1[r]** | **66,172.6[r]** | **67,685.8[r]** | **71,235.2** | **72,323.7** | **70,543.7** |

1. Data in this table also appear in the Board's Z.1 (780) quarterly statistical release, tables L.1 and L.5. For ordering address, see inside front cover.

2. Excludes corporate equities and mutual fund shares.

## 2.10 NONFINANCIAL BUSINESS ACTIVITY Selected Measures

Monthly data seasonally adjusted, and indexes 1992=100, except as noted

| Measure | 1995 | 1996 | 1997 | 1998 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Feb. | Mar. | Apr. | May | June | July[r] | Aug.[r] | Sept.[r] | Oct. |
| 1 **Industrial production**[1] | **114.4** | **119.5** | **126.8** | **130.2** | **130.7** | **131.3** | **131.9** | **130.6** | **130.5** | **132.5** | **132.0** | **132.0** |
| *Market groupings* | | | | | | | | | | | | |
| 2 Products, total | 110.7 | 114.4 | 119.6 | 122.5 | 123.2 | 124.0 | 124.5 | 123.6 | 123.3 | 125.1 | 124.4 | 124.4 |
| 3 Final, total | 111.5 | 115.5 | 121.1 | 124.2 | 125.3 | 126.2 | 126.6 | 125.5 | 124.7 | 127.0 | 126.1 | 126.4 |
| 4 Consumer goods | 109.5 | 111.3 | 114.1 | 115.2 | 115.8 | 116.4 | 116.8 | 115.1 | 114.0 | 116.1 | 115.2 | 115.1 |
| 5 Equipment | 114.9 | 122.7 | 133.9 | 140.3 | 142.4 | 143.6 | 144.2 | 144.1 | 143.9 | 146.5 | 145.8 | 146.6 |
| 6 Intermediate | 108.1 | 110.9 | 115.2 | 117.1 | 116.9 | 117.3 | 118.2 | 118.0 | 119.1 | 119.1 | 118.9 | 118.4 |
| 7 Materials | 120.4 | 127.8 | 138.2 | 142.5 | 142.7 | 143.1 | 143.6 | 141.8 | 141.9 | 144.5 | 144.5 | 144.4 |
| *Industry groupings* | | | | | | | | | | | | |
| 8 Manufacturing | 115.9 | 121.4 | 129.7 | 133.7 | 134.1 | 134.9 | 135.4 | 133.7 | 133.6 | 135.9 | 135.3 | 135.7 |
| 9 Capacity utilization, manufacturing (percent)[2] | 82.7 | 81.4 | 82.0 | 81.8 | 81.6 | 81.7 | 81.6 | 80.2 | 79.8 | 80.9 | 80.1 | 80.1 |
| 10 Construction contracts[3] | 122.1 | 130.9[r] | 142.2[r] | 148.0[r] | 144.0[r] | 149.0[r] | 149.0[r] | 149.0[r] | 150.0 | 148.0 | 140.0 | 136.0 |
| 11 Nonagricultural employment, total[4] | 114.9 | 117.2 | 119.9 | 122.4 | 122.5 | 122.8 | 123.2 | 123.3 | 123.5 | 123.8 | 123.9 | 124.0 |
| 12 Goods-producing, total | 98.3 | 99.0 | 100.3 | 102.6 | 102.4 | 102.7 | 102.5 | 102.6 | 101.9 | 102.4 | 102.2 | 102.1 |
| 13 Manufacturing, total | 97.5 | 97.2 | 97.6 | 99.1 | 99.1 | 99.1 | 99.0 | 98.9 | 97.9 | 98.4 | 98.3 | 98.1 |
| 14 Manufacturing, production workers | 99.0 | 98.4 | 98.9 | 100.6 | 100.5 | 100.4 | 100.1 | 99.9 | 98.4 | 99.1 | 99.2 | 98.9 |
| 15 Service-producing | 120.2 | 123.0 | 126.2 | 128.8 | 128.9 | 129.3 | 129.7 | 130.0 | 130.4 | 130.6 | 130.9 | 131.1 |
| 16 Personal income, total | 156.1 | 165.2 | 174.5 | 180.2 | 180.9 | 181.4 | 182.2 | 182.7 | 183.4 | 184.2 | 184.5 | n.a. |
| 17 Wages and salary disbursements | 150.9 | 159.8 | 171.2 | 178.9 | 179.5 | 180.3 | 181.5 | 181.8 | 182.8 | 184.1 | 184.3 | n.a. |
| 18 Manufacturing | 130.3 | 135.7 | 144.7 | 151.0 | 151.2 | 151.0 | 151.5 | 150.5 | 149.6 | 151.4 | 151.8 | n.a. |
| 19 Disposable personal income[5] | 156.4 | 164.0 | 171.7 | 176.0 | 176.7 | 177.0 | 177.5 | 177.9 | 178.6 | 179.2 | 179.4 | n.a. |
| 20 Retail sales[5] | 151.5 | 159.6 | 166.9 | 172.2 | 172.4 | 173.7 | 175.8 | 176.0 | 174.8 | 174.9 | 175.4 | 177.1 |
| *Prices*[6] | | | | | | | | | | | | |
| 21 Consumer (1982–84=100) | 152.4 | 156.9 | 160.5 | 161.9 | 162.2 | 162.5 | 162.8 | 163.0 | 163.2 | 163.4 | 163.6 | 164.0 |
| 22 Producer finished goods (1982=100) | 127.9 | 131.3 | 131.8 | 130.2 | 130.1 | 130.4 | 130.6 | 130.7[r] | 130.9 | 130.6 | 130.6 | 131.4 |

1. Data in this table appear in the Board's G.17 (419) monthly statistical release. The data are also available on the Board's web site, http://www.federalreserve.gov/releases/g17. The latest historical revision of the industrial production index and the capacity utilization rates was released in November 1998. The recent annual revision is described in an article in the January 1999 issue of the *Bulletin*. For a description of the methods of estimating industrial production and capacity utilization, see "Industrial Production and Capacity Utilization: Historical Revision and Recent Developments," *Federal Reserve Bulletin*, vol. 83 (February 1997), pp. 67–92, and the references cited therein. For details about the construction of individual industrial production series, see "Industrial Production: 1989 Developments and Historical Revision," *Federal Reserve Bulletin*, vol. 76 (April 1990), pp. 187–204.

2. Ratio of index of production to index of capacity. Based on data from the Federal Reserve, DRI McGraw-Hill, U.S. Department of Commerce, and other sources.

3. Index of dollar value of total construction contracts, including residential, nonresidential, and heavy engineering, from McGraw-Hill Information Systems Company, F.W. Dodge Division.

4. Based on data from U.S. Department of Labor, *Employment and Earnings*. Series covers employees only, excluding personnel in the armed forces.

5. Based on data from U.S. Department of Commerce, *Survey of Current Business*.

6. Based on data not seasonally adjusted. Seasonally adjusted data for changes in the price indexes can be obtained from the U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*.

NOTE. Basic data (not indexes) for series mentioned in notes 4 and 5, and indexes for series mentioned in notes 3 and 6, can also be found in the *Survey of Current Business*.

## 2.11 LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT

Thousands of persons; monthly data seasonally adjusted

| Category | 1995 | 1996 | 1997 | 1998 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Mar. | Apr. | May | June | July | Aug. | Sept.[r] | Oct. |
| HOUSEHOLD SURVEY DATA[1] | | | | | | | | | | | |
| 1 Civilian labor force[2] | 132,304 | 133,943 | 126,297 | 137,523 | 137,242 | 137,364 | 137,447 | 137,296 | 137,415 | 138,075 | 137,976 |
| *Employment* | | | | | | | | | | | |
| 2 Nonagricultural industries[3] | 121,460 | 123,264 | 126,159 | 127,862 | 128,033 | 128,118 | 127,867 | 127,626 | 127,640 | 128,247 | 128,075 |
| 3 Agriculture | 3,440 | 3,443 | 3,399 | 3,132 | 3,350 | 3,335 | 3,343 | 3,441 | 3,529 | 3,518 | 3,603 |
| *Unemployment* | | | | | | | | | | | |
| 4 Number | 7,404 | 7,236 | 6,739 | 6,529 | 5,859 | 5,910 | 6,237 | 6,230 | 6,247 | 6,310 | 6,299 |
| 5 Rate (percent of civilian labor force) | 5.6 | 5.4 | 4.9 | 4.7 | 4.3 | 4.3 | 4.5 | 4.5 | 4.5 | 4.6 | 4.6 |
| ESTABLISHMENT SURVEY DATA | | | | | | | | | | | |
| 6 **Nonagricultural payroll employment**[4] | **117,191** | **119,523** | **122,257** | **124,914** | **125,234** | **125,562** | **125,751** | **125,869** | **126,191**[r] | **126,348** | **126,464** |
| 7 Manufacturing | 18,524 | 18,457 | 18,538 | 18,829 | 18,827 | 18,805 | 18,780 | 18,594 | 18,693 | 18,683 | 18,631 |
| 8 Mining | 581 | 574 | 573 | 587 | 582 | 579 | 578 | 571 | 571 | 570 | 565 |
| 9 Contract construction | 5,160 | 5,400 | 5,627 | 5,860 | 5,930 | 5,917 | 5,946 | 5,970 | 5,989[r] | 5,968 | 5,987 |
| 10 Transportation and public utilities | 6,132 | 6,261 | 6,426 | 6,504 | 6,513 | 6,534 | 6,538 | 6,550 | 6,570[r] | 6,572 | 6,591 |
| 11 Trade | 27,565 | 28,108 | 28,788 | 29,042 | 29,133 | 29,238 | 29,269 | 29,374 | 29,383[r] | 29,472 | 29,463 |
| 12 Finance | 6,806 | 6,899 | 7,053 | 7,258 | 7,289 | 7,311 | 7,333 | 7,370 | 7,372 | 7,385 | 7,410 |
| 13 Service | 33,117 | 34,377 | 35,597 | 37,106 | 37,196 | 37,350 | 37,494 | 37,614 | 37,691[r] | 37,756 | 37,851 |
| 14 Government | 19,305 | 19,447 | 19,655 | 19,728 | 19,764 | 19,828 | 19,813 | 19,826 | 19,922[r] | 19,942 | 19,966 |

1. Beginning January 1994, reflects redesign of current population survey and population controls from the 1990 census.

2. Persons sixteen years of age and older, including Resident Armed Forces. Monthly figures are based on sample data collected during the calendar week that contains the twelfth day; annual data are averages of monthly figures. By definition, seasonality does not exist in population figures.

3. Includes self-employed, unpaid family, and domestic service workers.

4. Includes all full- and part-time employees who worked during, or received pay for, the pay period that includes the twelfth day of the month; excludes proprietors, self-employed persons, household and unpaid family workers, and members of the armed forces. Data are adjusted to the March 1992 benchmark, and only seasonally adjusted data are available at this time.

SOURCE. Based on data from U.S. Department of Labor, *Employment and Earnings*.

## 2.12 OUTPUT, CAPACITY, AND CAPACITY UTILIZATION[1]

Seasonally adjusted

| Series | 1997 | 1998[r] | | | 1997 | 1998[r] | | | 1997 | 1998[r] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q4[r] | Q1 | Q2 | Q3 | Q4[r] | Q1 | Q2 | Q3 | Q4[r] | Q1 | Q2 | Q3 |
| | Output (1992=100) | | | | Capacity (percent of 1992 output) | | | | Capacity utilization rate (percent)[2] | | | |
| 1 **Total industry** | **129.8** | **130.4** | **131.3** | **131.7** | **155.7** | **157.6** | **159.6** | **161.5** | **83.4** | **82.7** | **82.3** | **81.5** |
| 2 Manufacturing | 133.1 | 133.8 | 134.7 | 134.9 | 161.3 | 163.5 | 165.8 | 168.1 | 82.5 | 81.8 | 81.2 | 80.3 |
| 3 Primary processing[3] | 121.0 | 121.2 | 121.1 | 120.4 | 141.8 | 143.0 | 144.0 | 145.1 | 85.3 | 84.8 | 84.1 | 83.0 |
| 4 Advanced processing[4] | 139.0 | 140.1 | 141.4 | 142.1 | 170.7 | 173.5 | 176.4 | 179.2 | 81.4 | 80.8 | 80.2 | 79.3 |
| 5 Durable goods | 153.0 | 154.4 | 156.1 | 157.8 | 186.5 | 190.2 | 193.9 | 197.5 | 82.1 | 81.2 | 80.5 | 79.9 |
| 6 Lumber and products | 114.5 | 115.6 | 116.4 | 117.9 | 140.8 | 142.0 | 143.0 | 143.9 | 81.3 | 81.4 | 81.4 | 81.9 |
| 7 Primary metals | 128.5 | 128.2 | 125.3 | 122.5 | 139.7 | 140.8 | 142.0 | 143.2 | 92.0 | 91.0 | 88.3 | 85.5 |
| 8 Iron and steel | 127.9 | 128.3 | 124.0 | 119.0 | 139.4 | 140.9 | 142.8 | 144.6 | 91.8 | 91.0 | 86.9 | 82.3 |
| 9 Nonferrous | 129.1 | 128.0 | 127.0 | 126.7 | 139.8 | 140.4 | 140.8 | 141.3 | 92.3 | 91.2 | 90.1 | 89.7 |
| 10 Industrial machinery and equipment | 187.5 | 194.1 | 203.0 | 208.3 | 219.5 | 226.5 | 234.7 | 242.9 | 85.4 | 85.7 | 86.5 | 85.7 |
| 11 Electrical machinery | 273.7 | 278.2 | 282.8 | 290.7 | 335.1 | 351.2 | 366.6 | 381.6 | 81.7 | 79.2 | 77.1 | 76.2 |
| 12 Motor vehicles and parts | 147.5 | 140.8 | 135.3 | 136.8 | 181.4 | 182.8 | 183.9 | 184.9 | 81.3 | 77.0 | 73.6 | 74.0 |
| 13 Aerospace and miscellaneous transportation equipment | 99.3 | 102.7 | 106.1 | 107.1 | 126.7 | 127.0 | 127.5 | 128.0 | 78.4 | 80.8 | 83.2 | 83.7 |
| 14 Nondurable goods | 112.4 | 112.7 | 112.7 | 111.6 | 135.0 | 135.8 | 136.6 | 137.5 | 83.3 | 83.1 | 82.5 | 81.1 |
| 15 Textile mill products | 113.5 | 113.6 | 113.2 | 112.7 | 133.9 | 134.8 | 134.9 | 135.1 | 84.7 | 84.3 | 83.9 | 83.5 |
| 16 Paper and products | 115.8 | 115.5 | 115.0 | 115.0 | 129.6 | 130.6 | 131.6 | 132.5 | 89.3 | 88.5 | 87.4 | 86.8 |
| 17 Chemicals and products | 116.6 | 116.8 | 116.9 | 115.0 | 146.1 | 147.1 | 148.0 | 148.9 | 79.8 | 79.4 | 79.0 | 77.2 |
| 18 Plastics materials | 128.2 | 127.3 | 127.5 | 131.3 | 138.2 | 139.4 | 140.7 | 141.9 | 92.8 | 91.3 | 90.6 | 91.7 |
| 19 Petroleum products | 110.3 | 111.6 | 112.0 | 113.0 | 115.8 | 116.2 | 116.5 | 116.8 | 95.2 | 96.1 | 96.1 | 96.8 |
| 20 Mining | 105.9 | 107.0 | 105.3 | 104.0 | 119.4 | 119.7 | 119.9 | 120.1 | 88.6 | 89.4 | 87.8 | 86.6 |
| 21 Utilities | 114.2 | 110.9 | 115.6 | 119.5 | 125.8 | 125.9 | 126.2 | 126.5 | 90.8 | 88.1 | 91.6 | 94.5 |
| 22 Electric | 115.1 | 112.8 | 118.3 | 121.6 | 123.5 | 123.5 | 123.8 | 124.0 | 93.2 | 91.3 | 95.6 | 98.0 |

| Series | 1973 | 1975 | Previous cycle[5] | | Latest cycle[6] | | 1997 | 1998 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High | Low | High | Low | High | Low | Oct. | May | June | July[r] | Aug.[r] | Sept. | Oct.[p] |
| | Capacity utilization rate (percent)[2] | | | | | | | | | | | | |
| 1 **Total industry** | **89.2** | **72.6** | **87.3** | **71.1** | **85.4** | **78.1** | **83.4** | **82.6[r]** | **81.5[r]** | **81.1** | **82.0** | **81.4** | **81.1** |
| 2 Manufacturing | 88.5 | 70.5 | 86.9 | 69.0 | 85.7 | 76.6 | 82.3 | 81.6[r] | 80.2[r] | 79.8 | 80.9 | 80.1 | 80.1 |
| 3 Primary processing[3] | 91.2 | 68.2 | 88.1 | 66.2 | 88.9 | 77.7 | 85.2 | 84.3[r] | 83.3[r] | 83.4 | 83.3 | 82.4 | 82.1 |
| 4 Advanced processing[4] | 87.2 | 71.8 | 86.7 | 70.4 | 84.2 | 76.1 | 81.3 | 80.7[r] | 79.2[r] | 78.5 | 80.1 | 79.4 | 79.4 |
| 5 Durable goods | 89.2 | 68.9 | 87.7 | 63.9 | 84.6 | 73.1 | 82.0 | 81.1[r] | 79.3[r] | 78.6 | 81.0 | 80.0 | 80.1 |
| 6 Lumber and products | 88.7 | 61.2 | 87.9 | 60.8 | 93.6 | 75.5 | 80.9 | 81.4[r] | 81.5[r] | 81.8 | 82.3 | 81.6 | 81.9 |
| 7 Primary metals | 100.2 | 65.9 | 94.2 | 45.1 | 92.7 | 73.7 | 92.0 | 89.1[r] | 85.8[r] | 85.9 | 87.2 | 83.6 | 82.8 |
| 8 Iron and steel | 105.8 | 66.6 | 95.8 | 37.0 | 95.2 | 71.8 | 92.3 | 87.9[r] | 83.5[r] | 83.5 | 85.2 | 78.1 | 76.7 |
| 9 Nonferrous | 90.8 | 59.8 | 91.1 | 60.1 | 89.3 | 74.2 | 91.9 | 90.6[r] | 88.6[r] | 88.9 | 89.7 | 90.4 | 90.4 |
| 10 Industrial machinery and equipment | 96.0 | 74.3 | 93.2 | 64.0 | 85.4 | 72.3 | 85.7 | 86.3[r] | 86.6[r] | 87.0 | 85.4 | 84.8 | 84.0 |
| 11 Electrical machinery | 89.2 | 64.7 | 89.4 | 71.6 | 84.0 | 75.0 | 81.9 | 76.9[r] | 76.8[r] | 76.8 | 76.2 | 75.5 | 75.4 |
| 12 Motor vehicles and parts | 93.4 | 51.3 | 95.0 | 45.5 | 89.1 | 55.9 | 80.1 | 78.3[r] | 65.7[r] | 58.3 | 83.4 | 80.2 | 81.3 |
| 13 Aerospace and miscellaneous transportation equipment | 78.4 | 67.6 | 81.9 | 66.6 | 87.3 | 79.2 | 78.1 | 83.4[r] | 83.2[r] | 83.8 | 84.0 | 83.2 | 84.7 |
| 14 Nondurable goods | 87.8 | 71.7 | 87.5 | 76.4 | 87.3 | 80.7 | 83.1 | 82.7[r] | 81.8[r] | 81.7 | 81.1 | 80.6 | 80.4 |
| 15 Textile mill products | 91.4 | 60.0 | 91.2 | 72.3 | 90.4 | 77.7 | 84.8 | 84.8[r] | 83.0[r] | 83.9 | 83.5 | 83.0 | 83.0 |
| 16 Paper and products | 97.1 | 69.2 | 96.1 | 80.6 | 93.5 | 85.0 | 89.0 | 87.4[r] | 87.1[r] | 87.7 | 87.0 | 85.6 | 84.9 |
| 17 Chemicals and products | 87.6 | 69.7 | 84.6 | 69.9 | 86.2 | 79.3 | 79.8 | 79.0[r] | 78.3[r] | 77.9 | 77.0 | 76.8 | 76.8 |
| 18 Plastics materials | 102.0 | 50.6 | 90.9 | 63.4 | 97.0 | 74.8 | 91.7 | 90.5[r] | 89.7[r] | 91.6 | 92.9 | 90.7 | 90.8 |
| 19 Petroleum products | 96.7 | 81.1 | 90.0 | 66.8 | 88.5 | 85.1 | 96.0 | 95.7[r] | 95.7[r] | 97.2 | 97.6 | 95.5 | 92.4 |
| 20 Mining | 94.3 | 88.2 | 96.0 | 80.3 | 88.0 | 87.0 | 89.0 | 87.9[r] | 87.3[r] | 87.2 | 86.6 | 86.0 | 84.6 |
| 21 Utilities | 96.2 | 82.9 | 89.1 | 75.9 | 92.6 | 83.4 | 92.3 | 91.3[r] | 94.0[r] | 93.7 | 94.3 | 95.6 | 92.0 |
| 22 Electric | 99.0 | 82.7 | 88.2 | 78.9 | 95.0 | 87.1 | 95.0 | 96.0[r] | 97.7[r] | 96.7 | 97.7 | 99.7 | 95.5 |

1. Data in this table appear in the Board's G.17 (419) monthly statistical release. The data are also available on the Board's web site, http://www.federalreserve.gov/releases/g17. The latest historical revision of the industrial production index and the capacity utilization rates was released in November 1998. The recent annual revision is described in an article in the January 1999 issue of the *Bulletin*. For a description of the methods of estimating industrial production and capacity utilization, see "Industrial Production and Capacity Utilization: Historical Revision and Recent Developments," *Federal Reserve Bulletin*, vol. 83 (February 1997), pp. 67–92, and the references cited therein. For details about the construction of individual industrial production series, see "Industrial Production: 1989 Developments and Historical Revision," *Federal Reserve Bulletin*, vol. 76 (April 1990), pp. 187–204.

2. Capacity utilization is calculated as the ratio of the Federal Reserve's seasonally adjusted index of industrial production to the corresponding index of capacity.

3. Primary processing includes textiles; lumber; paper; industrial chemicals; synthetic materials; fertilizer materials; petroleum products; rubber and plastics; stone, clay, and glass; primary metals; and fabricated metals.

4. Advanced processing includes foods; tobacco; apparel; furniture and fixtures; printing and publishing; chemical products such as drugs and toiletries; agricultural chemicals, leather and products; machinery; transportation equipment; instruments; and miscellaneous manufactures.

5. Monthly highs, 1978–80; monthly lows, 1982.

6. Monthly highs, 1988–89; monthly lows, 1990–91.

## 2.13 INDUSTRIAL PRODUCTION Indexes and Gross Value[1]

Monthly data seasonally adjusted

| Group | 1992 proportion | 1997 avg. | 1997r Oct. | 1997r Nov. | 1997r Dec. | 1998 Jan.r | 1998 Feb.r | 1998 Mar.r | 1998 Apr.r | 1998 Mayr | 1998 Juner | 1998 Julyr | 1998 Aug.r | 1998 Sept. | 1998 Oct.p |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Index (1992 = 100) | | | | | | | | | | | | |
| MAJOR MARKETS | | | | | | | | | | | | | | | |
| 1 **Total index** | **100.0** | **126.8** | **129.3** | **129.9** | **130.3** | **130.3** | **130.2** | **130.7** | **131.3** | **131.9** | **130.6** | **130.5** | **132.5** | **132.0** | **132.0** |
| 2 Products | 60.5 | 119.6 | 121.5 | 122.2 | 122.3 | 122.6 | 122.5 | 123.2 | 124.0 | 124.5 | 123.6 | 123.3 | 125.1 | 124.4 | 124.4 |
| 3 Final products | 46.3 | 121.1 | 123.1 | 124.1 | 124.0 | 124.5 | 124.2 | 125.3 | 126.2 | 126.6 | 125.5 | 124.7 | 127.0 | 126.1 | 126.4 |
| 4 Consumer goods, total | 29.1 | 114.1 | 114.9 | 115.9 | 115.4 | 116.0 | 115.2 | 115.8 | 116.4 | 116.8 | 115.1 | 114.0 | 116.1 | 115.2 | 115.1 |
| 5 Durable consumer goods | 6.1 | 129.6 | 131.0 | 135.1 | 133.3 | 135.1 | 134.5 | 135.9 | 136.9 | 138.3 | 130.7 | 124.6 | 140.0 | 137.5 | 139.7 |
| 6 Automotive products | 2.6 | 129.1 | 132.0 | 138.4 | 134.5 | 133.0 | 131.5 | 132.7 | 134.6 | 136.8 | 121.7 | 107.3 | 141.7 | 135.8 | 140.3 |
| 7 Autos and trucks | 1.7 | 135.7 | 141.1 | 149.1 | 144.1 | 141.0 | 138.6 | 138.9 | 141.3 | 143.5 | 118.2 | 92.8 | 151.4 | 143.4 | 150.3 |
| 8 Autos, consumer | .9 | 114.9 | 114.4 | 119.4 | 113.1 | 115.1 | 104.8 | 106.5 | 107.4 | 108.4 | 93.8 | 75.8 | 124.4 | 128.3 | 119.9 |
| 9 Trucks, consumer | .7 | 157.1 | 166.6 | 177.3 | 173.5 | 166.1 | 170.5 | 169.8 | 173.8 | 177.1 | 142.2 | 110.0 | 178.9 | 161.2 | 180.6 |
| 10 Auto parts and allied goods | .9 | 118.5 | 118.0 | 122.1 | 119.8 | 120.5 | 120.3 | 122.7 | 123.7 | 126.0 | 125.4 | 125.6 | 127.6 | 124.7 | 125.8 |
| 11 Other | 3.5 | 130.1 | 130.1 | 132.4 | 132.3 | 136.7 | 136.9 | 138.5 | 138.8 | 139.4 | 137.8 | 138.7 | 138.3 | 138.7 | 138.9 |
| 12 Appliances, televisions, and air conditioners | 1.0 | 176.1 | 181.3 | 186.5 | 187.4 | 195.5 | 197.9 | 203.8 | 203.4 | 202.7 | 199.9 | 207.8 | 209.2 | 206.1 | 208.3 |
| 13 Carpeting and furniture | .8 | 112.8 | 113.0 | 116.8 | 112.6 | 119.2 | 115.8 | 114.3 | 115.9 | 119.1 | 117.0 | 117.3 | 116.1 | 117.1 | 118.4 |
| 14 Miscellaneous home goods | 1.6 | 114.2 | 112.2 | 112.4 | 114.1 | 115.6 | 116.8 | 118.3 | 118.2 | 117.9 | 117.1 | 115.9 | 115.3 | 116.5 | 115.4 |
| 15 Nondurable consumer goods | 23.0 | 110.2 | 110.8 | 111.2 | 110.9 | 111.3 | 110.5 | 110.8 | 111.4 | 111.5 | 111.2 | 111.2 | 110.3 | 109.8 | 109.2 |
| 16 Foods and tobacco | 10.3 | 108.2 | 107.8 | 109.2 | 108.4 | 110.4 | 110.1 | 109.1 | 110.2 | 110.8 | 108.5 | 108.5 | 107.8 | 107.1 | 107.6 |
| 17 Clothing | 2.4 | 101.1 | 101.1 | 100.0 | 100.6 | 100.7 | 99.3 | 100.4 | 99.9 | 98.8 | 98.8 | 98.4 | 97.2 | 96.1 | 94.6 |
| 18 Chemical products | 4.5 | 119.5 | 121.3 | 120.9 | 121.8 | 121.3 | 121.2 | 121.3 | 123.2 | 122.5 | 122.8 | 122.2 | 119.1 | 119.0 | 118.9 |
| 19 Paper products | 2.9 | 108.0 | 108.2 | 110.8 | 109.5 | 109.2 | 107.7 | 106.3 | 106.2 | 105.7 | 105.3 | 106.3 | 106.6 | 106.3 | 106.3 |
| 20 Energy | 2.9 | 111.6 | 115.6 | 112.0 | 112.5 | 109.1 | 106.5 | 113.2 | 111.5 | 112.5 | 118.2 | 118.4 | 119.4 | 118.8 | 114.0 |
| 21 Fuels | .8 | 109.3 | 111.5 | 107.4 | 110.2 | 111.0 | 110.4 | 111.2 | 111.6 | 110.9 | 111.4 | 112.9 | 112.1 | 109.3 | 105.0 |
| 22 Residential utilities | 2.1 | 112.3 | 117.1 | 113.9 | 113.2 | 107.6 | 104.0 | 113.7 | 111.0 | 112.9 | 121.2 | 120.7 | 122.7 | 123.2 | 118.1 |
| 23 Equipment | 17.2 | 133.9 | 137.9 | 138.6 | 139.4 | 139.5 | 140.3 | 142.4 | 143.6 | 144.2 | 144.1 | 143.9 | 146.5 | 145.8 | 146.6 |
| 24 Business equipment | 13.2 | 148.7 | 154.4 | 155.4 | 156.5 | 156.3 | 157.0 | 160.1 | 162.2 | 163.1 | 163.6 | 163.5 | 167.3 | 166.8 | 167.7 |
| 25 Information processing and related | 5.4 | 181.6 | 190.3 | 191.8 | 194.5 | 195.3 | 199.2 | 202.3 | 206.0 | 209.2 | 210.3 | 211.8 | 214.0 | 215.6 | 217.6 |
| 26 Computer and office equipment | 1.1 | 415.8 | 465.0 | 474.3 | 496.8 | 520.3 | 547.4 | 584.9 | 601.5 | 620.6 | 638.6 | 654.6 | 674.2 | 696.5 | 715.8 |
| 27 Industrial | 4.0 | 136.1 | 138.6 | 138.0 | 139.8 | 138.4 | 136.6 | 139.4 | 139.4 | 138.1 | 142.9 | 144.2 | 142.8 | 139.6 | 139.2 |
| 28 Transit | 2.5 | 116.7 | 123.7 | 127.0 | 125.6 | 126.0 | 126.8 | 130.3 | 133.6 | 135.5 | 128.2 | 121.9 | 142.5 | 139.5 | 141.7 |
| 29 Autos and trucks | 1.2 | 124.0 | 127.7 | 133.4 | 127.4 | 126.2 | 120.9 | 121.6 | 123.4 | 125.1 | 108.6 | 91.7 | 136.9 | 131.0 | 129.6 |
| 30 Other | 1.3 | 136.0 | 139.7 | 138.8 | 138.7 | 137.7 | 136.9 | 139.8 | 140.8 | 139.6 | 141.7 | 146.6 | 132.6 | 141.0 | 140.7 |
| 31 Defense and space equipment | 3.3 | 76.2 | 75.8 | 75.7 | 75.8 | 76.2 | 76.3 | 75.9 | 75.9 | 76.0 | 75.8 | 76.1 | 76.5 | 75.7 | 76.7 |
| 32 Oil and gas well drilling | .6 | 149.3 | 150.6 | 151.6 | 149.6 | 153.9 | 157.4 | 155.7 | 147.6 | 147.1 | 136.7 | 131.9 | 127.7 | 123.4 | 119.4 |
| 33 Manufactured homes | .2 | 141.4 | 139.8 | 141.5 | 142.3 | 147.1 | 149.6 | 148.0 | 148.0 | 149.0 | 146.1 | 151.1 | 145.7 | 145.0 | 146.0 |
| 34 Intermediate products, total | 14.2 | 115.2 | 116.5 | 116.3 | 117.0 | 117.0 | 117.1 | 116.9 | 117.3 | 118.2 | 118.0 | 119.1 | 119.1 | 118.9 | 118.4 |
| 35 Construction supplies | 5.3 | 122.4 | 122.3 | 123.6 | 124.2 | 125.5 | 125.7 | 124.7 | 125.4 | 126.6 | 126.1 | 128.5 | 128.5 | 127.5 | 127.9 |
| 36 Business supplies | 8.9 | 111.0 | 113.0 | 112.0 | 112.6 | 112.0 | 112.1 | 112.2 | 112.5 | 113.3 | 113.2 | 113.6 | 113.6 | 113.7 | 112.8 |
| 37 Materials | 39.5 | 138.2 | 141.9 | 142.4 | 143.4 | 142.6 | 142.5 | 142.7 | 143.1 | 143.6 | 141.8 | 141.9 | 144.5 | 144.5 | 144.4 |
| 38 Durable goods materials | 20.8 | 165.0 | 171.9 | 173.2 | 174.1 | 173.6 | 173.5 | 173.7 | 174.5 | 175.4 | 171.7 | 171.8 | 177.5 | 177.0 | 178.0 |
| 39 Durable consumer parts | 4.0 | 143.1 | 146.1 | 147.0 | 150.0 | 143.1 | 144.2 | 143.7 | 144.4 | 147.9 | 131.9 | 129.7 | 149.6 | 147.5 | 149.2 |
| 40 Equipment parts | 7.6 | 238.5 | 256.6 | 259.2 | 261.1 | 263.4 | 264.5 | 265.8 | 266.9 | 268.6 | 271.0 | 274.1 | 277.3 | 279.0 | 281.2 |
| 41 Other | 9.2 | 127.2 | 129.6 | 130.5 | 130.0 | 130.7 | 129.7 | 129.7 | 130.3 | 129.6 | 128.3 | 128.1 | 128.6 | 128.0 | 128.2 |
| 42 Basic metal materials | 3.1 | 121.9 | 124.0 | 125.8 | 123.5 | 126.1 | 125.9 | 123.7 | 123.5 | 123.0 | 120.1 | 120.2 | 122.4 | 118.4 | 117.6 |
| 43 Nondurable goods materials | 8.9 | 113.4 | 114.4 | 115.5 | 116.1 | 114.8 | 114.9 | 114.2 | 114.4 | 114.1 | 113.9 | 114.1 | 113.7 | 113.0 | 112.7 |
| 44 Textile materials | 1.1 | 111.2 | 112.8 | 112.4 | 113.5 | 109.9 | 111.1 | 110.6 | 110.5 | 111.0 | 110.2 | 110.1 | 109.7 | 109.3 | 109.5 |
| 45 Paper materials | 1.8 | 115.9 | 117.7 | 116.8 | 117.9 | 117.2 | 117.0 | 116.3 | 116.3 | 115.5 | 117.3 | 117.3 | 116.4 | 114.9 | 113.8 |
| 46 Chemical materials | 3.9 | 114.4 | 116.1 | 116.9 | 117.6 | 117.2 | 116.5 | 115.6 | 116.2 | 115.6 | 114.8 | 114.6 | 114.3 | 113.6 | 113.4 |
| 47 Other | 2.1 | 110.0 | 108.4 | 113.0 | 112.3 | 110.0 | 111.4 | 111.0 | 110.9 | 111.2 | 110.6 | 111.7 | 111.8 | 111.5 | 111.4 |
| 48 Energy materials | 9.7 | 103.7 | 104.2 | 102.2 | 103.8 | 103.0 | 102.8 | 103.7 | 103.8 | 104.3 | 104.8 | 104.8 | 104.4 | 105.9 | 103.7 |
| 49 Primary energy | 6.3 | 101.4 | 101.6 | 99.7 | 101.1 | 101.6 | 101.4 | 101.0 | 101.3 | 101.0 | 101.8 | 102.9 | 101.3 | 102.4 | 100.1 |
| 50 Converted fuel materials | 3.3 | 108.0 | 109.2 | 107.1 | 109.1 | 105.8 | 105.6 | 109.0 | 108.6 | 110.8 | 110.7 | 108.6 | 110.4 | 112.5 | 110.7 |
| SPECIAL AGGREGATES | | | | | | | | | | | | | | | |
| 51 Total excluding autos and trucks | 97.1 | 126.6 | 129.2 | 129.6 | 130.2 | 130.2 | 130.2 | 130.7 | 131.3 | 131.8 | 131.2 | 131.6 | 132.2 | 131.9 | 131.8 |
| 52 Total excluding motor vehicles and parts | 95.1 | 126.1 | 128.6 | 129.0 | 129.5 | 129.7 | 129.7 | 130.3 | 130.9 | 131.3 | 131.2 | 131.7 | 131.5 | 131.2 | 131.1 |
| 53 Total excluding computer and office equipment | 98.2 | 123.8 | 126.0 | 126.6 | 126.9 | 126.7 | 126.4 | 126.7 | 127.3 | 127.7 | 126.4 | 126.2 | 128.1 | 127.5 | 127.4 |
| 54 Consumer goods excluding autos and trucks | 27.4 | 112.9 | 113.4 | 114.2 | 113.8 | 114.7 | 113.9 | 114.5 | 115.1 | 115.3 | 114.8 | 114.9 | 114.3 | 113.7 | 113.3 |
| 55 Consumer goods excluding energy | 26.2 | 114.4 | 114.8 | 116.4 | 115.7 | 116.8 | 116.2 | 116.1 | 117.0 | 117.3 | 114.7 | 113.5 | 115.8 | 114.8 | 115.3 |
| 56 Business equipment excluding autos and trucks | 12.0 | 151.5 | 157.5 | 157.9 | 159.9 | 159.7 | 161.1 | 164.6 | 166.7 | 167.4 | 170.0 | 171.8 | 170.7 | 170.8 | 172.1 |
| 57 Business equipment excluding computer and office equipment | 12.1 | 134.4 | 138.5 | 139.2 | 139.7 | 138.8 | 138.7 | 140.8 | 142.3 | 142.6 | 142.7 | 142.2 | 145.4 | 144.4 | 144.9 |
| 58 Materials excluding energy | 29.8 | 149.0 | 153.7 | 155.1 | 155.8 | 155.0 | 155.0 | 154.9 | 155.5 | 156.0 | 153.4 | 153.6 | 157.1 | 156.6 | 157.1 |

## 2.13 INDUSTRIAL PRODUCTION Indexes and Gross Value[1]—Continued

| Group | SIC code[2] | 1992 proportion | 1997 avg. | 1997[r] Oct. | 1997[r] Nov. | 1997[r] Dec. | 1998 Jan.[r] | 1998 Feb.[r] | 1998 Mar.[r] | 1998 Apr.[r] | 1998 May[r] | 1998 June[r] | 1998 July[r] | 1998 Aug.[r] | 1998 Sept. | 1998 Oct.[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Index (1992 = 100) | | | | | | | | | | | | |
| MAJOR INDUSTRIES | | | | | | | | | | | | | | | | |
| 59 **Total index** | ... | **100.0** | **126.8** | **129.3** | **129.9** | **130.3** | **130.3** | **130.2** | **130.7** | **131.3** | **131.9** | **130.6** | **130.5** | **132.5** | **132.0** | **132.0** |
| 60 Manufacturing | ... | 85.4 | 129.7 | 132.2 | 133.3 | 133.7 | 133.8 | 133.7 | 134.1 | 134.9 | 135.4 | 133.7 | 133.6 | 135.9 | 135.3 | 135.7 |
| 61 Primary processing | ... | 26.5 | 119.1 | 120.3 | 121.1 | 121.5 | 121.6 | 121.1 | 121.0 | 121.5 | 121.4 | 120.2 | 120.7 | 120.8 | 119.8 | 119.7 |
| 62 Advanced processing | ... | 58.9 | 134.7 | 138.1 | 139.3 | 139.7 | 139.8 | 140.0 | 140.6 | 141.6 | 142.3 | 140.4 | 139.9 | 143.5 | 143.0 | 143.8 |
| 63 Durable goods | .. | 45.0 | 147.1 | 151.8 | 153.3 | 154.0 | 153.9 | 154.0 | 155.2 | 156.2 | 157.2 | 154.8 | 154.4 | 160.0 | 159.1 | 160.2 |
| 64 Lumber and products | 24 | 2.0 | 114.2 | 113.5 | 114.8 | 115.0 | 115.2 | 116.2 | 115.3 | 116.1 | 116.4 | 116.7 | 117.5 | 118.5 | 117.7 | 118.4 |
| 65 Furniture and fixtures | 25 | 1.4 | 117.7 | 118.6 | 119.7 | 120.4 | 119.4 | 118.6 | 121.5 | 121.0 | 120.6 | 122.0 | 120.8 | 119.7 | 121.6 | 122.9 |
| 66 Stone, clay, and glass products | 32 | 2.1 | 122.3 | 123.0 | 123.7 | 125.0 | 124.6 | 124.0 | 124.5 | 124.0 | 124.5 | 123.5 | 125.4 | 126.7 | 126.9 | 127.1 |
| 67 Primary metals | 33 | 3.1 | 125.3 | 128.2 | 129.3 | 127.8 | 129.2 | 128.1 | 127.1 | 127.5 | 126.5 | 122.1 | 122.6 | 124.8 | 120.0 | 119.2 |
| 68 Iron and steel | 331,2 | 1.7 | 124.2 | 128.2 | 128.0 | 127.6 | 128.9 | 128.2 | 127.7 | 126.7 | 125.5 | 119.8 | 120.2 | 123.2 | 113.5 | 112.0 |
| 69 Raw steel | 331PT | .1 | 115.9 | 118.5 | 120.2 | 119.6 | 122.5 | 123.3 | 120.0 | 122.4 | 121.9 | 116.0 | 118.3 | 120.3 | 112.6 | 110.4 |
| 70 Nonferrous | 333–6,9 | 1.4 | 126.7 | 128.2 | 130.9 | 128.1 | 129.7 | 128.0 | 126.4 | 128.4 | 127.6 | 124.9 | 125.4 | 126.7 | 127.9 | 127.9 |
| 71 Fabricated metal products | 34 | 5.0 | 124.7 | 126.1 | 126.8 | 128.2 | 127.6 | 126.6 | 127.2 | 127.8 | 128.7 | 128.0 | 127.8 | 126.6 | 126.2 | 126.8 |
| 72 Industrial machinery and equipment | 35 | 8.0 | 179.4 | 186.4 | 187.3 | 189.0 | 191.8 | 192.3 | 198.4 | 200.6 | 202.5 | 205.8 | 209.0 | 207.5 | 208.3 | 208.9 |
| 73 Computer and office equipment | 357 | 1.8 | 423.7 | 472.0 | 481.3 | 502.2 | 526.3 | 552.6 | 589.6 | 605.4 | 623.9 | 641.4 | 657.0 | 676.3 | 698.4 | 717.7 |
| 74 Electrical machinery | 36 | 7.3 | 253.4 | 269.8 | 274.9 | 276.5 | 277.7 | 278.5 | 278.2 | 280.8 | 282.0 | 285.5 | 289.4 | 290.7 | 291.8 | 295.0 |
| 75 Transportation equipment | 37 | 9.5 | 117.1 | 121.7 | 123.8 | 124.1 | 121.3 | 121.5 | 122.3 | 123.3 | 125.2 | 114.2 | 108.2 | 130.6 | 127.5 | 129.7 |
| 76 Motor vehicles and parts | 371 | 4.9 | 139.9 | 144.9 | 149.0 | 148.6 | 141.9 | 140.4 | 140.0 | 140.8 | 144.1 | 121.1 | 107.6 | 154.2 | 148.6 | 151.0 |
| 77 Autos and light trucks | 371PT | 2.6 | 127.8 | 131.9 | 139.2 | 134.1 | 132.0 | 128.2 | 128.8 | 130.9 | 132.7 | 110.1 | 86.9 | 141.9 | 136.4 | 140.2 |
| 78 Aerospace and miscellaneous transportation equipment | 372–6,9 | 4.6 | 94.7 | 98.9 | 99.0 | 100.0 | 100.9 | 102.6 | 104.5 | 105.7 | 106.3 | 106.3 | 107.1 | 107.5 | 106.6 | 108.7 |
| 79 Instruments | 38 | 5.4 | 110.3 | 112.5 | 111.8 | 112.0 | 111.5 | 112.5 | 112.8 | 113.0 | 113.8 | 112.4 | 112.6 | 113.4 | 113.7 | 114.0 |
| 80 Miscellaneous | 39 | 1.3 | 119.1 | 119.0 | 118.5 | 119.9 | 119.7 | 119.9 | 120.0 | 120.1 | 119.1 | 118.5 | 118.5 | 117.7 | 117.4 | 116.6 |
| 81 Nondurable goods | ... | 40.4 | 111.3 | 112.0 | 112.6 | 112.7 | 113.1 | 112.8 | 112.4 | 113.0 | 113.0 | 112.0 | 112.1 | 111.5 | 111.2 | 111.1 |
| 82 Foods | 20 | 9.4 | 108.0 | 107.5 | 109.1 | 109.0 | 110.5 | 109.9 | 109.7 | 110.3 | 110.7 | 109.2 | 109.0 | 108.2 | 107.9 | 108.7 |
| 83 Tobacco products | 21 | 1.6 | 110.9 | 112.0 | 112.1 | 106.4 | 110.1 | 112.7 | 105.3 | 109.8 | 111.5 | 104.7 | 106.0 | 107.0 | 104.2 | 101.8 |
| 84 Textile mill products | 22 | 1.8 | 112.2 | 113.1 | 114.1 | 113.1 | 115.0 | 113.2 | 112.6 | 113.3 | 114.5 | 112.0 | 113.2 | 112.8 | 112.2 | 112.2 |
| 85 Apparel products | 23 | 2.2 | 102.8 | 102.7 | 101.8 | 102.3 | 102.5 | 101.1 | 101.6 | 101.0 | 100.4 | 100.5 | 100.1 | 98.8 | 97.6 | 96.7 |
| 86 Paper and products | 26 | 3.6 | 114.4 | 115.0 | 116.1 | 116.2 | 115.7 | 115.9 | 115.0 | 115.2 | 115.0 | 114.9 | 115.9 | 115.3 | 113.7 | 113.1 |
| 87 Printing and publishing | 27 | 6.7 | 105.2 | 106.4 | 107.1 | 107.0 | 106.4 | 106.4 | 105.4 | 105.5 | 105.6 | 105.5 | 105.4 | 105.1 | 105.5 | 105.4 |
| 88 Chemicals and products | 28 | 9.9 | 114.9 | 116.3 | 116.2 | 117.3 | 117.0 | 116.7 | 116.6 | 117.7 | 116.9 | 116.2 | 115.7 | 114.6 | 114.6 | 114.8 |
| 89 Petroleum products | 29 | 1.4 | 109.8 | 111.1 | 109.1 | 110.6 | 111.2 | 110.5 | 113.0 | 112.8 | 111.5 | 111.6 | 113.4 | 114.0 | 111.6 | 108.1 |
| 90 Rubber and plastic products | 30 | 3.5 | 128.2 | 129.2 | 130.9 | 130.9 | 131.0 | 131.1 | 131.4 | 133.2 | 133.1 | 132.4 | 132.7 | 132.3 | 132.9 | 133.6 |
| 91 Leather and products | 31 | .3 | 81.9 | 80.0 | 78.7 | 78.8 | 77.3 | 78.3 | 77.9 | 76.3 | 75.8 | 74.5 | 75.3 | 74.4 | 74.2 | 72.8 |
| 92 Mining | ... | 6.9 | 105.8 | 106.2 | 104.9 | 106.4 | 107.6 | 107.5 | 105.8 | 105.7 | 105.4 | 104.7 | 104.6 | 104.0 | 103.5 | 101.9 |
| 93 Metal | 10 | .5 | 110.0 | 113.2 | 115.9 | 107.5 | 110.9 | 123.2 | 109.3 | 106.9 | 108.5 | 108.0 | 105.7 | 109.4 | 107.7 | 107.2 |
| 94 Coal | 12 | 1.0 | 107.8 | 107.7 | 100.3 | 116.1 | 112.4 | 104.3 | 103.4 | 107.2 | 106.0 | 110.4 | 112.8 | 109.7 | 115.8 | 110.8 |
| 95 Oil and gas extraction | 13 | 4.8 | 103.1 | 103.5 | 102.6 | 102.2 | 103.6 | 104.6 | 104.0 | 102.9 | 102.4 | 100.4 | 100.0 | 99.3 | 97.6 | 96.4 |
| 96 Stone and earth minerals | 14 | .6 | 120.3 | 119.8 | 122.0 | 121.9 | 127.5 | 123.1 | 120.0 | 123.3 | 124.4 | 125.6 | 125.4 | 126.4 | 124.2 | 124.7 |
| 97 Utilities | ... | 7.7 | 112.8 | 116.1 | 113.6 | 113.1 | 109.8 | 109.0 | 114.0 | 112.8 | 115.2 | 118.7 | 118.3 | 119.3 | 120.9 | 116.6 |
| 98 Electric | 491,493PT | 6.2 | 113.2 | 117.4 | 114.1 | 113.8 | 111.4 | 111.2 | 115.7 | 115.2 | 118.9 | 121.0 | 119.8 | 121.2 | 123.7 | 118.5 |
| 99 Gas | 492,493PT | 1.6 | 111.2 | 110.2 | 111.0 | 109.9 | 102.2 | 99.3 | 106.3 | 102.0 | 98.3 | 108.4 | 111.7 | 110.5 | 108.2 | 107.6 |
| SPECIAL AGGREGATES | | | | | | | | | | | | | | | | |
| 100 Manufacturing excluding motor vehicles and parts | .. | 80.5 | 129.1 | 131.5 | 132.4 | 132.8 | 133.4 | 133 4 | 133.8 | 134.6 | 134.9 | 134.5 | 135.1 | 134.9 | 134.5 | 134.9 |
| 101 Manufacturing excluding office and computing machines | ... | 83.6 | 126.3 | 128.4 | 129.4 | 129.7 | 129.6 | 129 4 | 129.5 | 130.2 | 130.6 | 128.8 | 128.6 | 130.8 | 130.0 | 130.4 |
| | | | | Gross value (billions of 1992 dollars, annual rates) | | | | | | | | | | | | |
| MAJOR MARKETS | | | | | | | | | | | | | | | | |
| 102 **Products, total** | ... | **2,001.9** | **2,406.1** | **2,440.1** | **2,456.3** | **2,455.0** | **2,462.9** | **2,456.2** | **2,474.5** | **2,489.8** | **2,498.5** | **2,470.3** | **2,454.6** | **2,525.7** | **2,504.0** | **2,504.2** |
| 103 Final | . | 1,552.1 | 1,886.0 | 1,914.7 | 1,931.2 | 1,927.4 | 1,935.8 | 1,928.6 | 1,948.1 | 1,961.6 | 1,966.1 | 1,938.2 | 1,915.6 | 1,987.4 | 1,967.8 | 1,971.2 |
| 104 Consumer goods | .. | 1,049.6 | 1,198.0 | 1,208.8 | 1,218.8 | 1,212.7 | 1,220.1 | 1,210.8 | 1,218.7 | 1,224.8 | 1,225.2 | 1,201.8 | 1,185.0 | 1,226.6 | 1,212.5 | 1,212.2 |
| 105 Equipment | . | 502.5 | 687.3 | 708.3 | 714.8 | 717.3 | 718.2 | 720.6 | 732.5 | 739.9 | 744.2 | 740.1 | 734.3 | 764.9 | 759.5 | 763.5 |
| 106 Intermediate | ... | 449.9 | 521.1 | 525.9 | 526.0 | 528.2 | 528.0 | 528.3 | 527.6 | 529.7 | 533.6 | 532.6 | 538.4 | 539.6 | 537.3 | 534.4 |

1. Data in this table appear in the Board's G.17 (419) monthly statistical release. The data are also available on the Board's web site, http://www.federalreserve.gov/releases/g17. The latest historical revision of the industrial production index and the capacity utilization rates was released in November 1998. The recent annual revision is described in an article in the January 1999 issue of the *Bulletin*. For a description of the methods of estimating industrial production and capacity utilization, see "Industrial Production and Capacity Utilization: Historical Revision and Recent Developments," *Federal Reserve Bulletin*, vol. 83 (February 1997), pp. 67–92, and the references cited therein. For details about the construction of individual industrial production series, see "Industrial Production: 1989 Developments and Historical Revision," *Federal Reserve Bulletin*, vol. 76 (April 1990), pp. 187–204.

2. Standard industrial classification.

## 2.14 HOUSING AND CONSTRUCTION

Monthly figures at seasonally adjusted annual rates except as noted

| Item | 1995 | 1996 | 1997 | 1997 | 1998 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
| | Private residential real estate activity (thousands of units except as noted) | | | | | | | | | | | | |
| NEW UNITS | | | | | | | | | | | | | |
| 1 Permits authorized | 1,333 | 1,426 | 1,442 | 1,467 | 1,553 | 1,635 | 1,569 | 1,517 | 1,543 | 1,517 | 1,581 | 1,618 | 1,544 |
| 2 One-family | 997 | 1,070 | 1,056 | 1,094 | 1,142 | 1,176 | 1,136 | 1,145 | 1,152 | 1,128 | 1,173 | 1,180 | 1,164 |
| 3 Two-family or more | 335 | 356 | 387 | 373 | 411 | 459 | 433 | 372 | 391 | 389 | 408 | 438 | 380 |
| 4 Started | 1,354 | 1,477 | 1,474 | 1,540 | 1,545 | 1,616 | 1,585 | 1,546 | 1,538 | 1,620 | 1,704 | 1,621 | 1,579 |
| 5 One-family | 1,076 | 1,161 | 1,134 | 1,130 | 1,225 | 1,263 | 1,239 | 1,237 | 1,224 | 1,269 | 1,300 | 1,261 | 1,248 |
| 6 Two-family or more | 278 | 316 | 340 | 410 | 320 | 353 | 346 | 309 | 314 | 351 | 404 | 360 | 331 |
| 7 Under construction at end of period[1] | 776 | 820 | 834 | 872 | 888 | 907 | 911 | 911 | 917 | 930 | 937 | 942 | 949 |
| 8 One-family | 554 | 584 | 570 | 580 | 593 | 609 | 616 | 619 | 627 | 639 | 643 | 647 | 650 |
| 9 Two-family or more | 222 | 235 | 264 | 292 | 295 | 298 | 295 | 292 | 290 | 291 | 294 | 295 | 299 |
| 10 Completed | 1,319 | 1,405 | 1,407 | 1,413 | 1,314 | 1,461 | 1,486 | 1,509 | 1,458 | 1,484 | 1,549 | 1,514 | 1,470 |
| 11 One-family | 1,073 | 1,123 | 1,122 | 1,094 | 1,007 | 1,142 | 1,130 | 1,198 | 1,112 | 1,166 | 1,225 | 1,172 | 1,183 |
| 12 Two-family or more | 247 | 283 | 285 | 319 | 307 | 319 | 356 | 311 | 346 | 318 | 324 | 342 | 287 |
| 13 Mobile homes shipped | 341 | 361 | 354 | 353 | 362 | 377 | 374 | 370 | 374 | 362 | 380 | 368 | 369 |
| *Merchant builder activity in one-family units* | | | | | | | | | | | | | |
| 14 Number sold | 667 | 757 | 803 | 805 | 853 | 878 | 836 | 892 | 892 | 919 | 873 | 830 | 822 |
| 15 Number for sale at end of period[1] | 374 | 326 | 287 | 282 | 281 | 281 | 285 | 286 | 287 | 287 | 285 | 286 | 292 |
| *Price of units sold (thousands of dollars)*[2] | | | | | | | | | | | | | |
| 16 Median | 133.9 | 140.0 | 145.9 | 145.9 | 148.0 | 156.0 | 152.0 | 148.0 | 153.2 | 148.0 | 149.8 | 150.0 | 152.0 |
| 17 Average | 158.7 | 166.4 | 175.8 | 175.8 | 178.6 | 181.6 | 178.9 | 176.7 | 183.5 | 175.9 | 178.4 | 182.0 | 180.6 |
| EXISTING UNITS (one-family) | | | | | | | | | | | | | |
| 18 Number sold | 3,812 | 4,087 | 4,215 | 4,370 | 4,370 | 4,770 | 4,890 | 4,770 | 4,830 | 4,740 | 4,910 | 4,730 | 4,680 |
| *Price of units sold (thousands of dollars)*[2] | | | | | | | | | | | | | |
| 19 Median | 113.1 | 118.2 | 124.1 | 125.9 | 126.1 | 124.5 | 127.1 | 128.2 | 130.5 | 134.0 | 133.8 | 132.9 | 131.3 |
| 20 Average | 139.1 | 145.5 | 154.2 | 157.5 | 156.8 | 153.9 | 157.2 | 159.7 | 162.3 | 169.2 | 168.4 | 165.9 | 163.2 |
| | Value of new construction (millions of dollars)[3] | | | | | | | | | | | | |
| CONSTRUCTION | | | | | | | | | | | | | |
| **21 Total put in place** | **538,158** | **581,813** | **618,051** | **626,290** | **633,714** | **638,180** | **639,913** | **645,974** | **635,396** | **650,341** | **657,710** | **657,834** | **660,643** |
| 22 Private | 408,012 | 444,743 | 470,969 | 478,363 | 487,807 | 490,896 | 494,333 | 500,078 | 496,495 | 503,592 | 510,650 | 511,655 | 511,730 |
| 23 Residential | 231,191 | 255,570 | 265,536 | 273,020 | 278,956 | 282,496 | 286,045 | 289,666 | 288,003 | 291,907 | 299,196 | 299,471 | 302,725 |
| 24 Nonresidential | 176,821 | 189,173 | 205,433 | 205,343 | 208,851 | 208,400 | 208,288 | 210,412 | 208,492 | 211,685 | 211,454 | 212,184 | 209,005 |
| 25 Industrial buildings | 32,535 | 32,563 | 31,417 | 29,794 | 31,055 | 30,936 | 31,474 | 31,457 | 29,642 | 30,067 | 28,588 | 31,020 | 28,092 |
| 26 Commercial buildings | 68,245 | 75,722 | 83,727 | 83,214 | 85,807 | 84,152 | 83,981 | 86,064 | 86,321 | 88,480 | 87,999 | 85,590 | 84,815 |
| 27 Other buildings | 27,084 | 30,637 | 37,382 | 39,275 | 37,694 | 39,151 | 37,812 | 39,168 | 37,678 | 37,334 | 37,436 | 37,470 | 38,079 |
| 28 Public utilities and other | 48,957 | 50,252 | 52,906 | 53,060 | 54,295 | 54,161 | 55,021 | 53,723 | 54,851 | 55,804 | 57,431 | 58,104 | 58,019 |
| 29 Public | 130,147 | 137,070 | 147,082 | 147,927 | 145,907 | 147,284 | 145,580 | 145,896 | 138,901 | 146,749 | 147,060 | 146,180 | 148,913 |
| 30 Military | 2,983 | 2,639 | 2,625 | 2,342 | 2,474 | 2,916 | 2,818 | 2,850 | 2,471 | 2,659 | 3,309 | 2,912 | 2,513 |
| 31 Highway | 38,126 | 41,326 | 45,246 | 45,306 | 46,067 | 45,561 | 45,559 | 46,175 | 42,030 | 44,541 | 43,776 | 44,757 | 46,364 |
| 32 Conservation and development | 6,371 | 5,926 | 5,628 | 6,422 | 5,281 | 6,305 | 5,488 | 4,985 | 5,146 | 5,989 | 5,445 | 5,370 | 6,040 |
| 33 Other | 82,667 | 87,179 | 93,583 | 93,857 | 92,085 | 92,502 | 91,715 | 91,886 | 89,254 | 93,560 | 94,530 | 93,141 | 93,996 |

1. Not at annual rates.
2. Not seasonally adjusted
3. Recent data on value of new construction may not be strictly comparable with data for previous periods because of changes by the Bureau of the Census in its estimating techniques. For a description of these changes, see *Construction Reports* (C-30-76-5), issued by the Census Bureau in July 1976.

SOURCE. Bureau of the Census estimates for all series except (1) mobile homes, which are private, domestic shipments as reported by the Manufactured Housing Institute and seasonally adjusted by the Census Bureau, and (2) sales and prices of existing units, which are published by the National Association of Realtors. All back and current figures are available from the originating agency. Permit authorizations are those reported to the Census Bureau from 19,000 jurisdictions beginning in 1994.

## 2.15 CONSUMER AND PRODUCER PRICES

Percentage changes based on seasonally adjusted data except as noted

| Item | Change from 12 months earlier | | Change from 3 months earlier (annual rate) | | | | Change from 1 month earlier | | | | | Index level, Oct. 1998[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 Oct. | 1998 Oct. | 1997 | 1998r | | | 1998 | | | | | |
| | | | Dec. | Mar. | June | Sept. | June | July | Aug. | Sept. | Oct. | |
| CONSUMER PRICES[2] (1982–84=100) | | | | | | | | | | | | |
| 1 **All items** | **2.1** | **1.5** | **1.5** | **.2** | **2.5** | **1.5** | **.1** | **.2** | **.2** | **.0** | **.2** | **164.0** |
| 2 Food | 1.8 | 2.4 | 1.5 | 1.3 | 3.0 | 2.0 | .1 | .2 | .2 | .0 | .6 | 162.0 |
| 3 Energy items | .9 | −9.1 | −7.7 | −21.1 | −1.9 | −8.7 | −.7 | .0 | −1.0 | −1.3 | .9 | 101.3 |
| 4 All items less food and energy | 2.3 | 2.3 | 2.4 | 2.4 | 2.6 | 2.3 | .1 | .2 | .2 | .2 | .2 | 174.7 |
| 5 Commodities | .5 | .8 | .6 | .8 | 1.1 | 1.1 | .0 | .1 | .2 | −.1 | .0 | 143.8 |
| 6 Services | 3.0 | 3.0 | 3.3 | 3.0 | 3.2 | 3.0 | .2 | .2 | .3 | .3 | .2 | 192.3 |
| PRODUCER PRICES (1982=100) | | | | | | | | | | | | |
| 7 Finished goods | −.3 | −.7 | −1.2 | −3.0 | .3 | .3 | −.2 | .2 | −.4 | .3 | .2 | 131.4 |
| 8 Consumer foods | −1.1 | .3 | 1.5 | −1.8 | .9 | 1.8 | .1r | .4 | −.4 | .4 | .4 | 135.5 |
| 9 Consumer energy | −1.9 | −10.1 | −5.7 | −27.0 | −1.1 | −10.2 | −1.2r | −.3r | −2.3 | −.1 | 1.2 | 74.8 |
| 10 Other consumer goods | .7 | 2.0 | −.3 | 3.9 | 1.4 | 3.3 | .0 | .3 | .0 | .5 | .0 | 148.9 |
| 11 Capital equipment | −.3 | −.4 | −2.0 | .0 | −1.2 | .9 | −.1r | .1 | −.3 | .4 | .0 | 138.0 |
| *Intermediate materials* | | | | | | | | | | | | |
| 12 Excluding foods and feeds | −.2 | −2.3 | −.6 | −4.4 | −1.3 | −1.9 | −.3r | −.1r | −.2 | −.2 | −.2 | 122.7 |
| 13 Excluding energy | .4 | −1.1 | .0 | −.9 | −1.2 | −1.5 | −.1 | .0 | −.1 | −.3 | −.3 | 132.7 |
| *Crude materials* | | | | | | | | | | | | |
| 14 Foods | −7.9 | −6.1 | 4.1 | −14.3 | −.7 | −22.6 | .6r | −3.4r | −1.1 | −1.9 | 4.0 | 103.4 |
| 15 Energy | 12.2 | −29.5 | 5.4 | −53.5 | −14.6 | −15.2 | −8.0r | 2.8r | −5.1 | −1.7 | 1.9 | 65.4 |
| 16 Other | 1.8 | −13.7 | −8.2 | −13.6 | −5.6 | −18.3 | −.4r | −1.7r | −2.0 | −1.3 | −2.7 | 133.7 |

1. Not seasonally adjusted.
2. Figures for consumer prices are for all urban consumers and reflect a rental-equivalence measure of homeownership.

SOURCE. U.S. Department of Labor, Bureau of Labor Statistics.

## 2.16 GROSS DOMESTIC PRODUCT AND INCOME

Billions of current dollars except as noted; quarterly data at seasonally adjusted annual rates

| Account | 1995 | 1996 | 1997 | 1997 Q3 | 1997 Q4 | 1998 Q1 | 1998 Q2 | 1998 Q3 |
|---|---|---|---|---|---|---|---|---|
| GROSS DOMESTIC PRODUCT | | | | | | | | |
| 1 **Total** | **7,269.6** | **7,661.6** | **8,110.9** | **8,170.8** | **8,254.5** | **8,384.2** | **8,440.6** | **8,526.5** |
| *By source* | | | | | | | | |
| 2 Personal consumption expenditures | 4,953.9 | 5,215.7 | 5,493.7 | 5,540.3 | 5,593.2 | 5,676.5 | 5,773.7 | 5,843.0 |
| 3 Durable goods | 611.0 | 643.3 | 673.0 | 681.2 | 682.2 | 705.1 | 720.1 | 715.5 |
| 4 Nondurable goods | 1,473.6 | 1,539.2 | 1,600.6 | 1,611.3 | 1,613.2 | 1,633.1 | 1,655.2 | 1,670.7 |
| 5 Services | 2,869.2 | 3,033.2 | 3,220.1 | 3,247.9 | 3,297.8 | 3,338.2 | 3,398.4 | 3,456.8 |
| 6 Gross private domestic investment | 1,043.2 | 1,131.9 | 1,256.0 | 1,265.7 | 1,292.0 | 1,366.6 | 1,345.0 | 1,361.8 |
| 7 Fixed investment | 1,012.5 | 1,099.8 | 1,188.6 | 1,211.1 | 1,220.1 | 1,271.1 | 1,305.8 | 1,303.0 |
| 8 Nonresidential | 727.7 | 787.9 | 860.7 | 882.3 | 882.8 | 921.3 | 941.9 | 931.1 |
| 9 Structures | 201.3 | 216.9 | 240.2 | 243.8 | 246.4 | 245.0 | 245.4 | 241.7 |
| 10 Producers' durable equipment | 526.4 | 571.0 | 620.5 | 638.5 | 636.4 | 676.3 | 696.6 | 689.4 |
| 11 Residential structures | 284.8 | 311.8 | 327.9 | 328.8 | 337.4 | 349.8 | 363.8 | 372.0 |
| 12 Change in business inventories | 30.7 | 32.1 | 67.4 | 54.6 | 71.9 | 95.5 | 39.2 | 58.7 |
| 13 Nonfarm | 40.1 | 24.5 | 63.1 | 47.3 | 66.9 | 90.5 | 31.5 | 51.7 |
| 14 Net exports of goods and services | −83.9 | −91.2 | −93.4 | −94.7 | −98.8 | −123.7 | −159.3 | −168.7 |
| 15 Exports | 819.4 | 873.8 | 965.4 | 981.7 | 988.6 | 973.3 | 949.6 | 935.7 |
| 16 Imports | 903.3 | 965.0 | 1,058.8 | 1,076.4 | 1,087.4 | 1,097.1 | 1,108.9 | 1.104.4 |
| 17 Government consumption expenditures and gross investment | 1,356.4 | 1,405.2 | 1,454.6 | 1,459.5 | 1,468.1 | 1,464.9 | 1,481.2 | 1,490.5 |
| 18 Federal | 509.1 | 518.4 | 520.2 | 521.0 | 520.1 | 511.6 | 520.7 | 518.7 |
| 19 State and local | 847.3 | 886.8 | 934.4 | 938.5 | 947.9 | 953.3 | 960.4 | 971.8 |
| *By major type of product* | | | | | | | | |
| 20 Final sales, total | 7,238.9 | 7,629.5 | 8,043.5 | 8,116.2 | 8,182.6 | 8,288.7 | 8,401.3 | 8,467.8 |
| 21 Goods | 2,644.9 | 2,780.3 | 2,911.2 | 2,944.3 | 2,948.7 | 3,005.8 | 3,025.3 | 3,024.3 |
| 22 Durable | 1,143.4 | 1,228.8 | 1,310.1 | 1,337.1 | 1,334.3 | 1,376.9 | 1,380.8 | 1,365.9 |
| 23 Nondurable | 1,501.5 | 1,551.6 | 1,601.0 | 1,607.2 | 1,614.4 | 1,628.8 | 1,644.4 | 1,658.4 |
| 24 Services | 3,974.9 | 4,179.5 | 4,414.1 | 4,448.0 | 4,501.2 | 4,538.4 | 4,619.5 | 4,678.9 |
| 25 Structures | 619.1 | 669.7 | 718.3 | 723.9 | 732.7 | 744.6 | 756.6 | 764.6 |
| 26 Change in business inventories | 30.7 | 32.1 | 67.4 | 54.6 | 71.9 | 95.5 | 39.2 | 58.7 |
| 27 Durable goods | 32.4 | 20.8 | 33.6 | 19.9 | 34.0 | 49.9 | 4.5 | 25.9 |
| 28 Nondurable goods | −1.7 | 11.4 | 33.8 | 34.7 | 37.9 | 45.6 | 34.7 | 32.8 |
| MEMO | | | | | | | | |
| 29 **Total GDP in chained 1992 dollars** | **6,761.7** | **6,994.8** | **7,269.8** | **7,311.2** | **7,364.6** | **7,464.7** | **7,498.6** | **7,559.5** |
| NATIONAL INCOME | | | | | | | | |
| 30 **Total** | **5,923.7** | **6,256.0** | **6,646.5** | **6,704.8** | **6,767.9** | **6,875.0** | **6,945.5** | n.a. |
| 31 Compensation of employees | 4,208.9 | 4,409.0 | 4,687.2 | 4,715.5 | 4,798.0 | 4,882.8 | 4,945.2 | 5,009.7 |
| 32 Wages and salaries | 3,441.9 | 3,640.4 | 3,893.6 | 3,919.3 | 3,993.6 | 4,065.9 | 4,121.6 | 4,179.4 |
| 33 Government and government enterprises | 622.7 | 640.9 | 664.2 | 666.7 | 671.4 | 679.5 | 685.8 | 692.4 |
| 34 Other | 2,819.2 | 2,999.5 | 3,229.4 | 3,252.6 | 3,322.2 | 3,386.4 | 3,435.8 | 3,487.0 |
| 35 Supplement to wages and salaries | 767.0 | 768.6 | 793.7 | 796.2 | 804.4 | 816.8 | 823.5 | 830.3 |
| 36 Employer contributions for social insurance | 365.3 | 381.7 | 400.7 | 402.7 | 407.4 | 414.1 | 417.9 | 422.0 |
| 37 Other labor income | 401.6 | 387.0 | 392.9 | 393.6 | 397.0 | 402.8 | 405.7 | 408.3 |
| 38 Proprietors' income[1] | 488.1 | 527.7 | 551.2 | 556.5 | 558.0 | 564.2 | 571.7 | 574.9 |
| 39 Business and professional[1] | 465.6 | 488.8 | 515.8 | 520.2 | 526.6 | 536.8 | 544.0 | 550.7 |
| 40 Farm[1] | 22.4 | 38.9 | 35.5 | 36.3 | 31.4 | 27.4 | 27.7 | 24.2 |
| 41 Rental income of persons[2] | 133.7 | 150.2 | 158.2 | 158.6 | 158.8 | 158.3 | 161.0 | 163.6 |
| 42 Corporate profits[1] | 672.4 | 750.4 | 817.9 | 840.9 | 820.8 | 829.2 | 820.6 | n.a. |
| 43 Profits before tax[3] | 635.6 | 680.2 | 734.4 | 758.9 | 736.4 | 719.1 | 723.5 | n.a. |
| 44 Inventory valuation adjustment | −22.6 | −1.2 | 6.9 | 4.8 | 4.3 | 25.3 | 7.8 | n.a. |
| 45 Capital consumption adjustment | 59.4 | 71.4 | 76.6 | 77.2 | 80.1 | 84.9 | 89.4 | 96.8 |
| 46 Net interest | 420.6 | 418.6 | 432.0 | 433.3 | 432.4 | 440.5 | 447.1 | n.a. |

1. With inventory valuation and capital consumption adjustments.
2. With capital consumption adjustment.
3. For after-tax profits, dividends, and the like, see table 1.48.

SOURCE. U.S. Department of Commerce, *Survey of Current Business.*

## 2.17 PERSONAL INCOME AND SAVING

Billions of current dollars except as noted; quarterly data at seasonally adjusted annual rates

| Account | 1995 | 1996 | 1997 | 1997 Q3 | 1997 Q4 | 1998 Q1 | 1998 Q2 | 1998 Q3 |
|---|---|---|---|---|---|---|---|---|
| PERSONAL INCOME AND SAVING | | | | | | | | |
| 1 **Total personal income** | **6,072.1** | **6,425.2** | **6,784.0** | **6,820.9** | **6,904.9** | **7,003.9** | **7,081.9** | **7,155.6** |
| 2 Wage and salary disbursements | 3,428.5 | 3,631.1 | 3,889.8 | 3,915.5 | 3,989.9 | 4,061.9 | 4,117.6 | 4,175.4 |
| 3 Commodity-producing industries | 863.9 | 909.0 | 975.0 | 979.4 | 1,003.7 | 1,019.0 | 1,023.2 | 1,026.8 |
| 4 Manufacturing | 647.9 | 674.6 | 719.5 | 722.3 | 741.3 | 750.4 | 750.8 | 750.3 |
| 5 Distributive industries | 782.9 | 823.3 | 879.8 | 886.3 | 904.5 | 918.9 | 932.2 | 946.0 |
| 6 Service industries | 1,158.9 | 1,257.9 | 1,370.8 | 1,383.2 | 1,410.2 | 1,444.5 | 1,476.4 | 1,510.1 |
| 7 Government and government enterprises | 622.7 | 640.9 | 664.2 | 666.7 | 671.4 | 679.5 | 685.8 | 692.4 |
| 8 Other labor income | 401.6 | 387.0 | 392.9 | 393.6 | 397.0 | 402.8 | 405.7 | 408.3 |
| 9 Proprietors' income[1] | 488.1 | 527.7 | 551.2 | 556.5 | 558.0 | 564.2 | 571.7 | 574.9 |
| 10 Business and professional[1] | 465.6 | 488.8 | 515.8 | 520.2 | 526.6 | 536.8 | 544.0 | 550.7 |
| 11 Farm[1] | 22.4 | 38.9 | 35.5 | 36.3 | 31.4 | 27.4 | 27.7 | 24.2 |
| 12 Rental income of persons[2] | 133.7 | 150.2 | 158.2 | 158.6 | 158.8 | 158.3 | 161.0 | 163.6 |
| 13 Dividends | 192.8 | 248.2 | 260.3 | 260.4 | 261.3 | 261.6 | 262.1 | 263.0 |
| 14 Personal interest income | 704.9 | 719.4 | 747.3 | 750.5 | 753.0 | 757.0 | 763.0 | 767.6 |
| 15 Transfer payments | 1,015.9 | 1,068.0 | 1,110.4 | 1,114.0 | 1,120.5 | 1,139.0 | 1,145.8 | 1,152.2 |
| 16 Old-age survivors, disability, and health insurance benefits | 507.8 | 538.0 | 565.9 | 568.3 | 572.2 | 581.6 | 585.0 | 588.7 |
| 17 LESS: Personal contributions for social insurance | 293.6 | 306.3 | 326.2 | 328.2 | 333.6 | 340.9 | 345.1 | 349.4 |
| 18 EQUALS: Personal income | 6,072.1 | 6,425.2 | 6,784.0 | 6,820.9 | 6,904.9 | 7,003.9 | 7,081.9 | 7,155.6 |
| 19 LESS: Personal tax and nontax payments | 795.0 | 890.5 | 989.0 | 999.0 | 1,025.5 | 1,066.8 | 1,092.9 | 1,113.2 |
| 20 EQUALS: Disposable personal income | 5,277.0 | 5,534.7 | 5,795.1 | 5,821.8 | 5,879.4 | 5,937.1 | 5,988.9 | 6,042.4 |
| 21 LESS: Personal outlays | 5,097.2 | 5,376.2 | 5,674.1 | 5,723.3 | 5,781.2 | 5,864.0 | 5,963.3 | 6,036.4 |
| 22 EQUALS: Personal saving | 179.8 | 158.5 | 121.0 | 98.5 | 98.2 | 73.0 | 25.6 | 5.9 |
| MEMO | | | | | | | | |
| *Per capita (chained 1992 dollars)* | | | | | | | | |
| 23 Gross domestic product | 25,690.5 | 26,335.7 | 27,136.2 | 27,260.4 | 27,398.2 | 27,718.8 | 27,783.0 | 27,946.2 |
| 24 Personal consumption expenditures | 17,498.4 | 17,893.0 | 18,340.9 | 18,445.2 | 18,530.5 | 18,771.1 | 19,007.8 | 19,147.0 |
| 25 Disposable personal income | 18,640.0 | 18,989.0 | 19,349.0 | 19,385.0 | 19,478.0 | 19,632.0 | 19,719.0 | 19,799.0 |
| 26 Saving rate (percent) | 3.4 | 2.9 | 2.1 | 1.7 | 1.7 | 1.2 | .4 | .1 |
| GROSS SAVING | | | | | | | | |
| 27 **Gross saving** | **1,187.4** | **1,274.5** | **1,406.3** | **1,427.0** | **1,428.0** | **1,482.5** | **1,448.5** | n.a. |
| 28 Gross private saving | 1,106.2 | 1,114.5 | 1,141.6 | 1,139.0 | 1,131.6 | 1,130.1 | 1,079.0 | n.a. |
| 29 Personal saving | 179.8 | 158.5 | 121.0 | 98.5 | 98.2 | 73.0 | 25.6 | 5.9 |
| 30 Undistributed corporate profits[1] | 256.1 | 262.4 | 296.7 | 311.5 | 295.0 | 312.0 | 300.9 | n.a. |
| 31 Corporate inventory valuation adjustment | −22.6 | −1.2 | 6.9 | 4.8 | 4.3 | 25.3 | 7.8 | n.a. |
| *Capital consumption allowances* | | | | | | | | |
| 32 Corporate | 431.1 | 452.0 | 477.3 | 480.8 | 487.7 | 492.5 | 497.8 | 503.1 |
| 33 Noncorporate | 225.9 | 232.3 | 242.8 | 244.4 | 247.0 | 248.6 | 250.7 | 253.6 |
| 34 Gross government saving | 81.2 | 160.0 | 264.7 | 288.0 | 296.4 | 352.4 | 369.4 | n.a. |
| 35 Federal | −103.7 | −39.6 | 49.5 | 70.0 | 72.3 | 128.7 | 143.9 | n.a. |
| 36 Consumption of fixed capital | 70.7 | 70.6 | 70.6 | 70.3 | 70.2 | 69.9 | 69.5 | 69.6 |
| 37 Current surplus or deficit (−), national accounts | −174.4 | −110.3 | −21.1 | −.3 | 2.2 | 58.8 | 74.4 | n.a. |
| 38 State and local | 184.8 | 199.7 | 215.2 | 218.0 | 224.1 | 223.7 | 225.6 | n.a. |
| 39 Consumption of fixed capital | 73.2 | 77.1 | 81.1 | 81.4 | 82.7 | 83.5 | 84.3 | 85.2 |
| 40 Current surplus or deficit (−), national accounts | 111.7 | 122.6 | 134.1 | 136.6 | 141.4 | 140.2 | 141.3 | n.a. |
| 41 **Gross investment** | **1,160.9** | **1,242.3** | **1,350.5** | **1,361.9** | **1,360.7** | **1,428.4** | **1,362.7** | n.a. |
| 42 Gross private domestic investment | 1,043.2 | 1,131.9 | 1,256.0 | 1,265.7 | 1,292.0 | 1,366.6 | 1,345.0 | 1,361.8 |
| 43 Gross government investment | 218.4 | 229.7 | 235.4 | 237.3 | 236.5 | 237.4 | 232.5 | 238.9 |
| 44 Net foreign investment | −100.6 | −119.2 | −140.9 | −141.0 | −167.8 | −175.6 | −214.8 | n.a. |
| 45 **Statistical discrepancy** | **−26.5** | **−32.2** | **−55.8** | **−65.1** | **−67.3** | **−54.1** | **−85.7** | n.a. |

1. With inventory valuation and capital consumption adjustments.
2. With capital consumption adjustment.

SOURCE. U.S. Department of Commerce, *Survey of Current Business*.

## 3.10 U.S. INTERNATIONAL TRANSACTIONS Summary

Millions of dollars; quarterly data seasonally adjusted except as noted[1]

| Item credits or debits | 1995 | 1996 | 1997 | 1997 | | | 1998 | |
|---|---|---|---|---|---|---|---|---|
| | | | | Q2 | Q3 | Q4 | Q1 | Q2[p] |
| 1 Balance on current account | −115,254 | −134,915 | −155,215 | −35,090 | −38,094 | −45,043 | −46,735 | −56,525 |
| 2 Merchandise trade balance[2] | −173,729 | −191,337 | −197,954 | −49,096 | −49,296 | −49,839 | −55,698 | −64,831 |
| 3 Merchandise exports | 575,845 | 611,983 | 679,325 | 169,240 | 172,302 | 174,284 | 171,469 | 164,666 |
| 4 Merchandise imports | −749,574 | −803,320 | −877,279 | −218,336 | −221,598 | −224,123 | −227,167 | −229,497 |
| 5 Military transactions, net | 4,769 | 4,684 | 6,781 | 2,191 | 1,945 | 1,103 | 1,527 | 1,036 |
| 6 Other service transactions, net | 69,069 | 78,079 | 80,967 | 20,390 | 20,246 | 20,277 | 19,164 | 19,842 |
| 7 Investment income, net | 19,275 | 14,236 | −5,318 | 460 | −1,544 | −4,247 | −2,248 | −3,238 |
| 8 U.S. government grants | −11,170 | −15,023 | −12,090 | −2,274 | −2,362 | −5,213 | −2,266 | −2,060 |
| 9 U.S. government pensions and other transfers | −3,433 | −4,442 | −4,193 | −1,055 | −1,056 | −1,069 | −1,126 | −1,130 |
| 10 Private remittances and other transfers | −20,035 | −21,112 | −23,408 | −5,706 | −6,027 | −6,055 | −6,088 | −6,144 |
| 11 Change in U.S. government assets other than official reserve assets, net (increase, −) | −589 | −708 | 174 | −269 | 436 | 29 | −388 | −496 |
| 12 Change in U.S. official reserve assets (increase, −) | −9,742 | 6,668 | −1,010 | −236 | −730 | −4,524 | −444 | −1,945 |
| 13 Gold | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 Special drawing rights (SDRs) | −808 | 370 | −350 | −133 | −139 | −150 | −182 | 72 |
| 15 Reserve position in International Monetary Fund | −2,466 | −1,280 | −3,575 | 54 | −463 | −4,221 | −85 | −1,031 |
| 16 Foreign currencies | −6,468 | 7,578 | 2,915 | −157 | −128 | −153 | −177 | −986 |
| 17 Change in U.S. private assets abroad (increase, −) | −317,122 | −374,761 | −477,666 | −86,101 | −123,023 | −118,946 | −44,816 | −95,049 |
| 18 Bank-reported claims[3] | −75,108 | −91,555 | −147,439 | −26,625 | −29,577 | −27,539 | 3,074 | −24,979 |
| 19 Nonbank-reported claims | −45,286 | −86,333 | −120,403 | −9,825 | −24,791 | −47,907 | −6,596 | ... |
| 20 U.S. purchases of foreign securities, net | −100,074 | −115,801 | −87,981 | −23,263 | −41,167 | −8,030 | −6,973 | −23,446 |
| 21 U.S. direct investments abroad, net | −96,654 | −81,072 | −121,843 | −26,388 | −27,488 | −35,470 | −34,321 | −40,261 |
| 22 Change in foreign official assets in United States (increase, +) | 109,768 | 127,344 | 15,817 | −5,411 | 21,258 | −26,979 | 11,324 | −10,483 |
| 23 U.S. Treasury securities | 68,977 | 115,671 | −7,270 | −11,689 | 6,686 | −24,578 | 11,336 | −20,317 |
| 24 Other U.S. government obligations | 3,735 | 5,008 | 4,334 | 827 | 2,667 | 86 | 2,610 | 254 |
| 25 Other U.S. government liabilities[4] | −217 | −362 | −2,521 | −523 | −1,167 | −244 | −1,059 | −422 |
| 26 Other U.S. liabilities reported by U.S. banks[3] | 34,008 | 5,704 | 21,928 | 5,043 | 12,439 | −3,250 | −607 | 9,170 |
| 27 Other foreign official assets[5] | 3,265 | 1,323 | −654 | 931 | 633 | 1,007 | −956 | 832 |
| 28 Change in foreign private assets in United States (increase, +) | 355,681 | 436,013 | 717,624 | 155,184 | 160,180 | 247,470 | 84,205 | 173,908 |
| 29 U.S. bank-reported liabilities[3] | 30,176 | 16,478 | 148,059 | 28,067 | 12,606 | 89,643 | −50,497 | 40,888 |
| 30 U.S. nonbank-reported liabilities | 59,637 | 39,404 | 107,779 | 5,274 | 26,275 | 47,390 | 32,707 | ... |
| 31 Foreign private purchases of U.S. Treasury securities, net | 99,548 | 154,996 | 146,710 | 42,614 | 35,432 | 35,301 | −1,701 | 25,715 |
| 32 Foreign purchases of other U.S. securities, net | 96,367 | 130,151 | 196,845 | 54,258 | 60,327 | 36,783 | 77,019 | 69,531 |
| 33 Foreign direct investments in United States, net | 57,653 | 77,622 | 93,449 | 20,149 | 18,964 | 28,453 | 25,931 | 22,036 |
| 34 Allocation of special drawing rights | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 Discrepancy | −22,742 | −59,641 | −99,724 | −28,077 | −20,027 | −52,007 | −3,146 | −9,410 |
| 36 Due to seasonal adjustment | ... | ... | ... | 685 | −10,018 | 3,528 | 6,217 | 1,562 |
| 37 Before seasonal adjustment | −22,742 | −59,641 | −99,724 | −28,762 | −10,009 | −55,535 | −9,363 | −10,972 |
| MEMO | | | | | | | | |
| *Changes in official assets* | | | | | | | | |
| 38 U.S. official reserve assets (increase, −) | −9,742 | 6,668 | −1,010 | −236 | −730 | −4,524 | −444 | −1,945 |
| 39 Foreign official assets in United States, excluding line 25 (increase, +) | 109,985 | 127,706 | 18,338 | −4,888 | 22,425 | −26,735 | 12,383 | −10,061 |
| 40 Change in Organization of Petroleum Exporting Countries official assets in United States (part of line 22) | 4,239 | 14,911 | 10,822 | 1,970 | 3,031 | −1,282 | −968 | −350 |

1. Seasonal factors are not calculated for lines 12–16, 18–20, 22–34, and 38–40.
2. Data are on an international accounts basis. The data differ from the Census basis data, shown in table 3.11, for reasons of coverage and timing. Military exports are excluded from merchandise trade data and are included in line 5.
3. Reporting banks include all types of depository institutions as well as some brokers and dealers.
4. Associated primarily with military sales contracts and other transactions arranged with or through foreign official agencies.
5. Consists of investments in U.S. corporate stocks and in debt securities of private corporations and state and local governments.

SOURCE. U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*.

## 3.11 U.S. FOREIGN TRADE[1]

Millions of dollars; monthly data seasonally adjusted

| Item | 1995 | 1996 | 1997 | 1998 Mar. | Apr. | May | June | July | Aug. | Sept.$^p$ |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Goods and services, balance | −101,857 | −111,040 | −113,684 | −13,497 | −14,148 | −15,777 | −13,639 | −14,547 | −15,899 | −14,031 |
| 2 Merchandise | −173,560 | −191,170 | −198,975 | −20,503 | −21,335 | −22,578 | −20,530 | −21,029 | −22,735 | −20,596 |
| 3 Services | 71,703 | 80,130 | 85,291 | 7,006 | 7,187 | 6,801 | 6,891 | 6,482 | 6,836 | 6,565 |
| 4 Goods and services, exports | 794,610 | 848,833 | 931,370 | 79,058 | 77,515 | 76,399 | 76,375 | 75,101 | 75,426 | 77,125 |
| 5 Merchandise | 575,871 | 612,069 | 678,150 | 57,217 | 55,335 | 54,719 | 54,767 | 53,825 | 53,862 | 55,873 |
| 6 Services | 218,739 | 236,764 | 253,220 | 21,841 | 22,180 | 21,680 | 21,608 | 21,276 | 21,564 | 21,252 |
| 7 Goods and services, imports | −896,467 | −959,873 | −1,045,054 | −92,555 | −91,663 | −92,176 | −90,014 | −89,648 | −91,325 | −91,156 |
| 8 Merchandise | −749,431 | −803,239 | −877,125 | −77,720 | −76,670 | −77,297 | −75,297 | −74,854 | −76,597 | −76,469 |
| 9 Services | −147,036 | −156,634 | −167,929 | −14,835 | −14,993 | −14,879 | −14,717 | −14,794 | −14,728 | −14,687 |

1. Data show monthly values consistent with quarterly figures in the U.S. balance of payments accounts.

SOURCE. *FT900*, U.S. Department of Commerce, Bureau of the Census and Bureau of Economic Analysis.

## 3.12 U.S. RESERVE ASSETS

Millions of dollars, end of period

| Asset | 1995 | 1996 | 1997 | 1998 Mar. | Apr. | May | June | July | Aug. | Sept.$^p$ | Oct.$^p$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 **Total** | **85,832** | **75,090** | **69,954** | **69,354** | **70,328** | **70,723** | **71,161** | **72,264** | **73,544** | **75,66** | **79,186** |
| 2 Gold stock, including Exchange Stabilization Fund[1] | 11,050 | 11,049 | 11,050 | 11,050 | 11,048 | 11,049 | 11,047 | 11,046 | 11,046 | 11,044 | 11,044 |
| 3 Special drawing rights[2,3] | 11,037 | 10,312 | 10,027 | 10,108 | 10,188 | 10,296 | 10,001 | 9,586 | 9,891 | 10,106 | 10,379 |
| 4 Reserve position in International Monetary Fund[2] | 14,649 | 15,435 | 18,071 | 17,976 | 18,218 | 18,957 | 18,945 | 20,780 | 21,161 | 21,644 | 22,278 |
| 5 Foreign currencies[4] | 49,096 | 38,294 | 30,809 | 30,220 | 30,874 | 30,421 | 31,168 | 30,852 | 31,446 | 32,882 | 35,485 |

1. Gold held "under earmark" at Federal Reserve Banks for foreign and international accounts is not included in the gold stock of the United States; see table 3.13, line 3. Gold stock is valued at $42.22 per fine troy ounce.
2. Special drawing rights (SDRs) are valued according to a technique adopted by the International Monetary Fund (IMF) in July 1974. Values are based on a weighted average of exchange rates for the currencies of member countries. From July 1974 through December 1980, sixteen currencies were used; since January 1981, five currencies have been used. U.S. SDR holdings and reserve positions in the IMF also have been valued on this basis since July 1974.
3. Includes allocations of SDRs by the International Monetary Fund on Jan. 1 of the year indicated, as follows: 1970—$867 million; 1971—$717 million; 1972—$710 million; 1979—$1,139 million; 1980—$1,152 million; 1981—$1,093 million; plus net transactions in SDRs.
4. Valued at current market exchange rates.

## 3.13 FOREIGN OFFICIAL ASSETS HELD AT FEDERAL RESERVE BANKS[1]

Millions of dollars, end of period

| Asset | 1995 | 1996 | 1997 | 1998 Mar. | Apr. | May | June | July | Aug. | Sept.$^p$ | Oct.$^p$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 **Deposits** | **386** | **167** | **457** | **167** | **162** | **156** | **200** | **161** | **161** | **347** | **154** |
| *Held in custody* | | | | | | | | | | | |
| 2 U.S. Treasury securities[2] | 522,170 | 638,049 | 620,885 | 630,602 | 622,220 | 622,557 | 616,569 | 613,893 | 588,337 | 578,403 | 588,768 |
| 3 Earmarked gold[3] | 11,702 | 11,197 | 10,763 | 10,664 | 10,651 | 10,641 | 10,617 | 10,586 | 10,510 | 10,457 | 10,403 |

1. Excludes deposits and U.S. Treasury securities held for international and regional organizations.
2. Marketable U.S. Treasury bills, notes, and bonds and nonmarketable U.S. Treasury securities, in each case measured at face (not market) value.
3. Held in foreign and international accounts and valued at $42.22 per fine troy ounce; not included in the gold stock of the United States.

## 3.15 SELECTED U.S. LIABILITIES TO FOREIGN OFFICIAL INSTITUTIONS

Millions of dollars, end of period

| Item | 1996 | 1997 | 1998 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Mar. | Apr. | May | June[r] | July[r] | Aug. | Sept.[p] |
| 1 **Total**[1] | **758,624** | **778,538** | **790,921** | **788,310** | **786,184** | **781,069** | **775,137** | **760,814** | **735,112** |
| *By type* | | | | | | | | | |
| 2 Liabilities reported by banks in the United States[2] | 113,098 | 135,326 | 134,719 | 144,929 | 142,658 | 144,099 | 142,140 | 144,070 | 131,492 |
| 3 U.S. Treasury bills and certificates[3] | 198,921 | 148,301 | 153,335 | 138,418 | 137,652 | 134,324 | 131,089 | 130,398 | 128,146 |
| U.S. Treasury bonds and notes | | | | | | | | | |
| 4 Marketable | 379,497 | 423,456 | 429,642 | 430,804 | 431,702 | 428,216 | 428,685 | 411,765 | 401,461 |
| 5 Nonmarketable[4] | 5,968 | 5,994 | 6,110 | 6,149 | 6,189 | 6,229 | 6,269 | 6,311 | 6,350 |
| 6 U.S. securities other than U.S. Treasury securities[5] | 61,140 | 65,461 | 67,115 | 68,010 | 67,983 | 68,201 | 66,954 | 68,270 | 67,663 |
| *By area* | | | | | | | | | |
| 7 Europe[1] | 257,915 | 263,103 | 259,053 | 268,848 | 269,178 | 264,657 | 270,195 | 266,625 | 258,234 |
| 8 Canada | 21,295 | 18,749 | 20,280 | 20,254 | 20,122 | 19,396 | 19,963 | 16,387 | 16,170 |
| 9 Latin America and Caribbean | 80,623 | 97,616 | 98,028 | 101,191 | 101,792 | 100,849 | 100,826 | 98,405 | 79,779 |
| 10 Asia | 385,484 | 382,423 | 397,283 | 382,027 | 379,188 | 378,113 | 367,687 | 363,902 | 365,681 |
| 11 Africa | 7,379 | 10,118 | 11,440 | 11,281 | 10,574 | 11,555 | 11,904 | 11,501 | 11,721 |
| 12 Other countries | 5,926 | 6,527 | 4,835 | 4,707 | 5,328 | 6,497 | 4,560 | 3,992 | 3,525 |

1. Includes the Bank for International Settlements.
2. Principally demand deposits, time deposits, bankers acceptances, commercial paper, negotiable time certificates of deposit, and borrowings under repurchase agreements.
3. Includes nonmarketable certificates of indebtedness and Treasury bills issued to official institutions of foreign countries.
4. Excludes notes issued to foreign official nonreserve agencies. Includes current value of zero-coupon Treasury bond issues to foreign governments as follows: Mexico, beginning March 1988, 20-year maturity issue and beginning March 1990, 30-year maturity issue; Venezuela, beginning December 1990, 30-year maturity issue; Argentina, beginning April 1993, 30-year maturity issue.
5. Debt securities of U.S. government corporations and federally sponsored agencies, and U.S. corporate stocks and bonds.

SOURCE. Based on U.S. Department of the Treasury data and on data reported to the department by banks (including Federal Reserve Banks) and securities dealers in the United States, and on the 1989 benchmark survey of foreign portfolio investment in the United States.

## 3.16 LIABILITIES TO, AND CLAIMS ON, FOREIGNERS Reported by Banks in the United States[1] Payable in Foreign Currencies

Millions of dollars, end of period

| Item | 1994 | 1995 | 1996 | 1997 | | 1998 | |
|---|---|---|---|---|---|---|---|
| | | | | Sept. | Dec. | Mar. | June |
| 1 Banks' liabilities | 89,258 | 109,713 | 103,383 | 120,105 | 117,524 | 100,342 | 90,119 |
| 2 Banks' claims | 60,711 | 74,016 | 66,018 | 91,158 | 83,038 | 81,977 | 68,095 |
| 3 Deposits | 19,661 | 22,696 | 22,467 | 32,154 | 28,661 | 27,934 | 27,213 |
| 4 Other claims | 41,050 | 51,320 | 43,551 | 59,004 | 54,377 | 54,043 | 40,882 |
| 5 Claims of banks' domestic customers[2] | 10,878 | 6,145 | 10,978 | 10,090 | 8,191 | 7,926 | 7,354 |

1. Data on claims exclude foreign currencies held by U.S. monetary authorities.
2. Assets owned by customers of the reporting bank located in the United States that represent claims on foreigners held by reporting banks for the accounts of the domestic customers.

3.17 LIABILITIES TO FOREIGNERS Reported by Banks in the United States[1]
Payable in U.S. dollars

Millions of dollars, end of period

| Item | 1995 | 1996 | 1997 | 1998 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Mar. | Apr. | May | June | July | Aug. | Sept.[p] |
| BY HOLDER AND TYPE OF LIABILITY | | | | | | | | | | |
| 1 **Total, all foreigners** | **1,099,549** | **1,162,148** | **1,283,686** | **1,255,075** | **1,270,626** | **1,260,273** | **1,288,032[r]** | **1,306,488[r]** | **1,341,622** | **1,348,596** |
| 2 Banks' own liabilities | 753,461 | 758,998 | 883,639 | 843,906 | 861,727 | 852,052 | 884,734[r] | 896,972[r] | 928,137 | 915,312 |
| 3 Demand deposits | 24,448 | 27,034 | 32,104 | 32,588 | 32,107 | 31,201 | 36,246 | 30,928 | 33,038 | 33,556 |
| 4 Time deposits[2] | 192,558 | 186,910 | 198,470 | 183,109 | 185,948 | 185,160 | 186,686[r] | 188,056[r] | 183,506 | 170,738 |
| 5 Other[3] | 140,165 | 143,510 | 168,013 | 188,425 | 204,294 | 192,167 | 183,451 | 192,536 | 190,542 | 168,609 |
| 6 Own foreign offices[4] | 396,290 | 401,544 | 485,052 | 439,784 | 439,378 | 443,524 | 478,351 | 485,452 | 521,051 | 542,409 |
| 7 Banks' custodial liabilities[5] | 346,088 | 403,150 | 400,047 | 411,169 | 408,899 | 408,221 | 403,298[r] | 409,516[r] | 413,485 | 433,284 |
| 8 U.S. Treasury bills and certificates[6] | 197,355 | 236,874 | 193,239 | 191,571 | 174,256 | 173,873 | 169,225 | 164,274 | 162,235 | 160,598 |
| 9 Other negotiable and readily transferable instruments[7] | 52,200 | 72,011 | 93,641 | 96,364 | 111,398 | 107,797 | 112,598[r] | 117,433[r] | 123,378 | 142,169 |
| 10 Other | 96,533 | 94,265 | 113,167 | 123,234 | 123,245 | 126,551 | 121,475 | 127,809 | 127,872 | 130,517 |
| 11 Nonmonetary international and regional organizations[8] | 11,039 | 13,972 | 11,690 | 15,246 | 14,894 | 14,186 | 14,103[r] | 14,314[r] | 15,188 | 15,199 |
| 12 Banks' own liabilities | 10,347 | 13,355 | 11,486 | 14,925 | 14,478 | 13,559 | 13,441 | 12,188[r] | 13,684 | 13,846 |
| 13 Demand deposits | 21 | 29 | 16 | 98 | 365 | 229 | 226 | 19 | 59 | 408 |
| 14 Time deposits[2] | 4,656 | 5,784 | 5,466 | 5,957 | 6,646 | 7,029 | 6,784 | 6,354[r] | 6,252 | 5,760 |
| 15 Other[3] | 5,670 | 7,542 | 6,004 | 8,870 | 7,467 | 6,301 | 6,431 | 5,815 | 7,373 | 7,678 |
| 16 Banks' custodial liabilities[5] | 692 | 617 | 204 | 321 | 416 | 627 | 662[r] | 2,126[r] | 1,504 | 1,353 |
| 17 U.S. Treasury bills and certificates[6] | 350 | 352 | 69 | 247 | 344 | 359 | 338 | 349 | 490 | 435 |
| 18 Other negotiable and readily transferable instruments[7] | 341 | 265 | 133 | 72 | 72 | 268 | 322[r] | 1,777[r] | 1,012 | 818 |
| 19 Other | 1 | 0 | 2 | 2 | 0 | 0 | 2 | 0 | 2 | 100 |
| 20 Official institutions[9] | 275,928 | 312,019 | 283,627 | 288,054 | 283,347 | 280,310 | 278,423[r] | 273,229[r] | 274,468 | 259,638 |
| 21 Banks' own liabilities | 83,447 | 79,406 | 101,910 | 104,006 | 105,731 | 104,358 | 102,256 | 102,040 | 101,558 | 85,251 |
| 22 Demand deposits | 2,098 | 1,511 | 2,314 | 2,051 | 2,532 | 2,052 | 2,582 | 3,560 | 3,456 | 3,607 |
| 23 Time deposits[2] | 30,717 | 33,336 | 41,420 | 40,265 | 38,865 | 36,060 | 36,068 | 36,358 | 35,603 | 28,067 |
| 24 Other[3] | 50,632 | 44,559 | 58,176 | 61,690 | 64,334 | 66,246 | 63,606 | 62,122 | 62,499 | 53,577 |
| 25 Banks' custodial liabilities[5] | 192,481 | 232,613 | 181,717 | 184,048 | 177,616 | 175,952 | 176,167[r] | 171,189[r] | 172,910 | 174,387 |
| 26 U.S. Treasury bills and certificates[6] | 168,534 | 198,921 | 148,301 | 153,335 | 138,418 | 137,652 | 134,324 | 131,089 | 130,398 | 128,146 |
| 27 Other negotiable and readily transferable instruments[7] | 23,603 | 33,266 | 33,211 | 30,183 | 38,745 | 38,010 | 41,180[r] | 39,792[r] | 41,759 | 45,684 |
| 28 Other | 344 | 426 | 205 | 530 | 453 | 290 | 663 | 308 | 753 | 557 |
| 29 Banks[10] | 691,412 | 694,835 | 816,064 | 763,349 | 776,269 | 782,828 | 809,251[r] | 825,245[r] | 853,292 | 874,621 |
| 30 Banks' own liabilities | 567,834 | 562,898 | 642,324 | 585,083 | 596,509 | 601,967 | 633,032 | 643,982 | 673,157 | 685,982 |
| 31 Unaffiliated foreign banks | 171,544 | 161,354 | 157,272 | 145,299 | 157,131 | 158,443 | 154,681 | 158,530 | 152,106 | 143,573 |
| 32 Demand deposits | 11,758 | 13,692 | 17,527 | 18,350 | 17,152 | 16,111 | 20,772 | 15,097 | 16,063 | 15,799 |
| 33 Time deposits[2] | 103,471 | 89,765 | 83,433 | 70,060 | 72,703 | 74,018 | 75,231 | 78,252 | 74,151 | 67,644 |
| 34 Other[3] | 56,315 | 57,897 | 56,312 | 56,889 | 67,276 | 68,314 | 58,678 | 65,181 | 61,892 | 60,130 |
| 35 Own foreign offices[4] | 396,290 | 401,544 | 485,052 | 439,784 | 439,378 | 443,524 | 478,351 | 485,452 | 521,051 | 542,409 |
| 36 Banks' custodial liabilities[5] | 123,578 | 131,937 | 173,740 | 178,266 | 179,760 | 180,861 | 176,219[r] | 181,263[r] | 180,135 | 188,639 |
| 37 U.S. Treasury bills and certificates[6] | 15,872 | 23,106 | 31,915 | 28,499 | 26,650 | 26,920 | 25,337 | 22,929 | 20,696 | 21,563 |
| 38 Other negotiable and readily transferable instruments[7] | 13,035 | 17,027 | 35,333 | 34,962 | 37,942 | 38,186 | 38,122[r] | 39,203[r] | 40,180 | 44,807 |
| 39 Other | 94,671 | 91,804 | 106,492 | 114,805 | 115,168 | 115,755 | 112,760 | 119,131 | 119,259 | 122,269 |
| 40 Other foreigners | 121,170 | 141,322 | 172,305 | 188,426 | 196,116 | 182,949 | 186,255[r] | 193,700[r] | 198,674 | 199,138 |
| 41 Banks' own liabilities | 91,833 | 103,339 | 127,919 | 139,892 | 145,009 | 132,168 | 136,005[r] | 138,762 | 139,738 | 130,233 |
| 42 Demand deposits | 10,571 | 11,802 | 12,247 | 12,089 | 12,058 | 12,809 | 12,666 | 12,252 | 13,460 | 13,742 |
| 43 Time deposits[2] | 53,714 | 58,025 | 68,151 | 66,827 | 67,734 | 68,053 | 68,603[r] | 67,092 | 67,500 | 69,267 |
| 44 Other[3] | 27,548 | 33,512 | 47,521 | 60,976 | 65,217 | 51,306 | 54,736 | 59,418 | 58,778 | 47,224 |
| 45 Banks' custodial liabilities[5] | 29,337 | 37,983 | 44,386 | 48,534 | 51,107 | 50,781 | 50,250 | 54,938[r] | 58,936 | 68,905 |
| 46 U.S. Treasury bills and certificates[6] | 12,599 | 14,495 | 12,954 | 9,490 | 8,844 | 8,942 | 9,226 | 9,907 | 10,651 | 10,454 |
| 47 Other negotiable and readily transferable instruments[7] | 15,221 | 21,453 | 24,964 | 31,147 | 34,639 | 31,333 | 32,974 | 36,661[r] | 40,427 | 50,860 |
| 48 Other | 1,517 | 2,035 | 6,468 | 7,897 | 7,624 | 10,506 | 8,050 | 8,370 | 7,858 | 7,591 |
| MEMO | | | | | | | | | | |
| 49 Negotiable time certificates of deposit in custody for foreigners | 9,103 | 14,573 | 16,083 | 22,416 | 22,503 | 23,440 | 21,229 | 22,847 | 25,867 | 27,391 |

1. Reporting banks include all types of depository institutions as well as some brokers and dealers. Excludes bonds and notes of maturities longer than one year.
2. Excludes negotiable time certificates of deposit, which are included in "Other negotiable and readily transferable instruments."
3. Includes borrowing under repurchase agreements.
4. For U.S. banks, includes amounts owed to own foreign branches and foreign subsidiaries consolidated in quarterly Consolidated Reports of Condition filed with bank regulatory agencies. For agencies, branches, and majority-owned subsidiaries of foreign banks, consists principally of amounts owed to the head office or parent foreign bank, and to foreign branches, agencies, or wholly owned subsidiaries of the head office or parent foreign bank.
5. Financial claims on residents of the United States, other than long-term securities, held by or through reporting banks for foreign customers.
6. Includes nonmarketable certificates of indebtedness and Treasury bills issued to official institutions of foreign countries.
7. Principally bankers acceptances, commercial paper, and negotiable time certificates of deposit.
8. Principally the International Bank for Reconstruction and Development, the Inter-American Development Bank, and the Asian Development Bank. Excludes "holdings of dollars" of the International Monetary Fund.
9. Foreign central banks, foreign central governments, and the Bank for International Settlements.
10. Excludes central banks, which are included in "Official institutions."

3.17 LIABILITIES TO FOREIGNERS Reported by Banks in the United States[1]—Continued

| Item | 1995 | 1996 | 1997 | 1998 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Mar | Apr | May | June | July | Aug. | Sept.r |
| AREA | | | | | | | | | | |
| 50 **Total, all foreigners** | **1,099,549** | **1,162,148** | **1,283,686** | **1,255,075** | **1,270,626** | **1,260,273** | **1,288,032r** | **1,306,488r** | **1,341,622r** | **1,348,596** |
| 51 **Foreign countries** | **1,088,510** | **1,148,176** | **1,271,996** | **1,239,829** | **1,255,732** | **1,246,087** | **1,273,929r** | **1,292,174r** | **1,326,434r** | **1,333,397** |
| 52 Europe | 362,819 | 376,590 | 420,438 | 390,750 | 406,391 | 405,348 | 402,103r | 431,783r | 457,487r | 450,599 |
| 53 Austria | 3,537 | 5,128 | 2,717 | 2,375 | 2,957 | 3,012 | 2,268 | 2,602 | 2,671 | 3,137 |
| 54 Belgium and Luxembourg | 24,792 | 24,084 | 41,007 | 33,244 | 38,530 | 35,518 | 35,454 | 33,845 | 35,086 | 33,936 |
| 55 Denmark | 2,921 | 2,565 | 1,514 | 1,094 | 2,588 | 1,443 | 1,989 | 2,013 | 2,128 | 1,578 |
| 56 Finland | 2,831 | 1,958 | 2,246 | 1,549 | 1,768 | 1,365 | 1,438 | 1,211 | 1,350 | 1,181 |
| 57 France | 39,218 | 35,078 | 46,607 | 44,027 | 48,468 | 47,869 | 46,162 | 47,140 | 48,328 | 50,354 |
| 58 Germany | 24,035 | 24,660 | 23,737 | 20,971 | 24,895 | 26,452 | 25,470 | 23,730 | 28,751 | 25,810 |
| 59 Greece | 2,014 | 1,835 | 1,552 | 2,020 | 2,383 | 2,610 | 2,429 | 2,784 | 2,941 | 2,544 |
| 60 Italy | 10,868 | 10,946 | 11,378 | 9,631 | 10,600 | 11,127 | 11,509 | 11,114 | 10,625 | 9,184 |
| 61 Netherlands | 13,745 | 11,110 | 7,385 | 8,208 | 8,051 | 7,265 | 6,845 | 7,097 | 9,239 | 8,066 |
| 62 Norway | 1,394 | 1,288 | 317 | 346 | 514 | 774 | 607 | 1,179 | 1,469 | 688 |
| 63 Portugal | 2,761 | 3,562 | 2,262 | 1,426 | 2,279 | 2,160 | 2,334 | 2,823 | 2,424 | 2,292 |
| 64 Russia | 7,948 | 7,623 | 7,968 | 6,466 | 5,381 | 3,952 | 4,654 | 6,398 | 2,718 | 3,085 |
| 65 Spain | 10,011 | 17,707 | 18,989 | 16,315 | 18,071 | 15,520 | 11,649 | 12,079 | 14,283 | 20,487 |
| 66 Sweden | 3,246 | 1,623 | 1,628 | 1,967 | 1,785 | 2,197 | 3,148 | 2,198 | 1,769 | 3,285 |
| 67 Switzerland | 43,625 | 44,538 | 39,172 | 35,463 | 32,341 | 33,893 | 39,071r | 44,861 | 39,362 | 48,613 |
| 68 Turkey | 4,124 | 6,738 | 4,054 | 4,154 | 4,340 | 4,467 | 4,894r | 5,077r | 4,317r | 4,264 |
| 69 United Kingdom | 139,183 | 153,420 | 181,904 | 174,198 | 172,829 | 178,185 | 176,703 | 196,859 | 219,147 | 204,843 |
| 70 Yugoslavia[11] | 177 | 206 | 239 | 236 | 246 | 270 | 234 | 322 | 242 | 253 |
| 71 Other Europe and other former U.S.S.R.[12] | 26,389 | 22,521 | 25,762 | 27,060 | 28,365 | 27,269 | 25,245r | 28,451r | 30,637r | 26,999 |
| 72 Canada | 30,468 | 38,920 | 28,341 | 27,121 | 27,398 | 26,021 | 28,864 | 29,526 | 27,844 | 28,566 |
| 73 Latin America and Caribbean | 440,213 | 467,529 | 536,365 | 529,446 | 552,896 | 550,714 | 568,228r | 564,388r | 557,071r | 560,067 |
| 74 Argentina | 12,235 | 13,877 | 20,199 | 18,835 | 17,766 | 16,938 | 18,502r | 21,010r | 21,655r | 18,384 |
| 75 Bahamas | 94,991 | 88,895 | 112,217 | 109,041 | 112,510 | 114,222 | 116,435 | 115,309 | 113,543 | 122,806 |
| 76 Bermuda | 4,897 | 5,527 | 6,911 | 8,273 | 6,657 | 7,142 | 7,769 | 7,216 | 7,332 | 7,920 |
| 77 Brazil | 23,797 | 27,701 | 31,037 | 34,017 | 36,777 | 38,463 | 35,345r | 34,292r | 27,824 | 18,496 |
| 78 British West Indies | 239,083 | 251,465 | 276,389 | 261,542 | 273,565 | 277,929 | 295,321 | 290,342r | 291,470r | 298,530 |
| 79 Chile | 2,826 | 2,915 | 4,072 | 3,975 | 4,330 | 4,230 | 4,356r | 4,987r | 4,726r | 5,725 |
| 80 Colombia | 3,659 | 3,256 | 3,652 | 4,200 | 4,212 | 4,383 | 4,805 | 4,023 | 4,102r | 4,463 |
| 81 Cuba | 8 | 21 | 66 | 55 | 57 | 59 | 63 | 63 | 62 | 62 |
| 82 Ecuador | 1,314 | 1,767 | 2,078 | 1,814 | 1,737 | 1,783 | 1,616r | 1,772r | 1,608r | 1,540 |
| 83 Guatemala | 1,276 | 1,282 | 1,494 | 1,438 | 1,478 | 1,353 | 1,363 | 1,273 | 1,237r | 1,241 |
| 84 Jamaica | 481 | 628 | 450 | 431 | 449 | 438 | 522 | 519 | 550 | 541 |
| 85 Mexico | 24,560 | 31,240 | 33,972 | 35,708 | 37,623 | 37,682 | 38,044 | 38,554 | 38,087 | 35,681 |
| 86 Netherlands Antilles | 4,673 | 6,099 | 5,085 | 11,351 | 17,569 | 7,447 | 6,861 | 8,922 | 8,340 | 8,588 |
| 87 Panama | 4,264 | 4,099 | 4,241 | 3,958 | 4,211 | 4,106 | 3,723 | 3,596 | 3,675r | 3,826 |
| 88 Peru | 974 | 834 | 893 | 878 | 878 | 964 | 925 | 984 | 900 | 843 |
| 89 Uruguay | 1,836 | 1,890 | 2,382 | 2,228 | 2,097 | 1,991 | 1,982 | 2,097 | 2,091 | 2,277 |
| 90 Venezuela | 11,808 | 17,363 | 21,601 | 21,474 | 20,696 | 21,600 | 20,442 | 19,492 | 20,125r | 19,303 |
| 91 Other | 7,531 | 8,670 | 9,626 | 10,228 | 10,284 | 9,984 | 10,154 | 9,937 | 9,744r | 9,841 |
| 92 Asia | 240,595 | 249,083 | 269,299 | 275,173 | 251,423 | 244,779 | 254,412r | 247,952r | 266,485r | 275,623 |
| China | | | | | | | | | | |
| 93 Mainland | 33,750 | 30,438 | 18,252 | 20,701 | 20,122 | 20,209 | 21,558 | 18,919 | 18,506 | 18,523 |
| 94 Taiwan | 11,714 | 15,995 | 11,760 | 13,619 | 13,776 | 12,648 | 11,619 | 11,333 | 11,290 | 12,080 |
| 95 Hong Kong | 20,197 | 18,789 | 17,722 | 17,825 | 19,762 | 18,106 | 19,720 | 15,826 | 18,349 | 16,627 |
| 96 India | 3,373 | 3,930 | 4,567 | 5,586 | 4,813 | 4,882 | 4,821 | 4,678 | 6,437 | 5,144 |
| 97 Indonesia | 2,708 | 2,298 | 3,554 | 4,015 | 4,266 | 3,197 | 3,848 | 3,938 | 5,651r | 5,470 |
| 98 Israel | 4,041 | 6,051 | 6,281 | 7,589 | 7,348 | 6,251 | 6,095 | 5,969 | 5,296 | 5,984 |
| 99 Japan | 109,193 | 117,316 | 143,401 | 137,700 | 113,283 | 111,623 | 118,669 | 123,167 | 131,376 | 142,757 |
| 100 Korea (South) | 5,749 | 5,949 | 13,060 | 11,233 | 13,711 | 14,010 | 13,269 | 12,713 | 12,498 | 12,986 |
| 101 Philippines | 3,092 | 3,378 | 3,250 | 3,009 | 2,870 | 2,802 | 3,418 | 2,609 | 2,777 | 2,712 |
| 102 Thailand | 12,279 | 10,912 | 6,501 | 9,073 | 7,928 | 8,876 | 7,148 | 6,780 | 7,869 | 6,664 |
| 103 Middle Eastern oil-exporting countries[13] | 15,582 | 16,285 | 14,959 | 16,217 | 17,095 | 15,296 | 13,829r | 13,902r | 14,532r | 16,575 |
| 104 Other | 18,917 | 17,742 | 25,992 | 28,606 | 26,449 | 26,879 | 30,418 | 28,118 | 31,904 | 30,101 |
| 105 Africa | 7,641 | 8,116 | 10,347 | 11,385 | 11,160 | 10,965 | 10,735r | 10,788r | 10,562r | 11,098 |
| 106 Egypt | 2,136 | 2,012 | 1,663 | 1,449 | 1,236 | 1,460 | 1,523 | 1,319 | 1,459 | 1,616 |
| 107 Morocco | 104 | 112 | 138 | 88 | 131 | 115 | 84 | 74 | 76 | 88 |
| 108 South Africa | 739 | 458 | 2,158 | 2,547 | 2,556 | 2,465 | 2,642 | 2,446 | 2,428 | 2,658 |
| 109 Zaire | 10 | 10 | 10 | 10 | 3 | 5 | 5 | 7 | 35 | 6 |
| 110 Oil-exporting countries[14] | 1,797 | 2,626 | 3,060 | 4,275 | 4,332 | 4,079 | 3,552 | 3,893 | 3,684 | 3,727 |
| 111 Other | 2,855 | 2,898 | 3,318 | 3,016 | 2,902 | 2,841 | 2,929r | 3,049r | 2,880r | 3,003 |
| 112 Other | 6,774 | 7,938 | 7,206 | 5,954 | 6,464 | 8,260 | 9,587 | 7,737 | 6,985 | 7,444 |
| 113 Australia | 5,647 | 6,479 | 6,304 | 4,989 | 5,450 | 7,416 | 8,510 | 6,490 | 5,931 | 6,427 |
| 114 Other | 1,127 | 1,459 | 902 | 965 | 1,014 | 844 | 1,077 | 1,247 | 1,054 | 1,017 |
| 115 Nonmonetary international and regional organizations | 11,039 | 13,972 | 11,690 | 15,246 | 14,894 | 14,186 | 14,103r | 14,314r | 15,188r | 15,199 |
| 116 International[15] | 9,300 | 12,099 | 10,517 | 14,331 | 13,431 | 12,509 | 12,548 | 11,220r | 12,825r | 12,769 |
| 117 Latin American regional[16] | 893 | 1,339 | 424 | 536 | 762 | 830 | 694r | 750r | 721r | 800 |
| 118 Other regional[17] | 846 | 534 | 749 | 379 | 701 | 847 | 861 | 2,344 | 1,642 | 1,630 |

11. Since December 1992, has excluded Bosnia, Croatia, and Slovenia.
12. Includes the Bank for International Settlements. Since December 1992, has included all parts of the former U.S.S.R. (except Russia), and Bosnia, Croatia, and Slovenia.
13. Comprises Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (Trucial States).
14. Comprises Algeria, Gabon, Libya, and Nigeria.
15. Principally the International Bank for Reconstruction and Development. Excludes "holdings of dollars" of the International Monetary Fund.
16. Principally the Inter-American Development Bank.
17. Asian, African, Middle Eastern, and European regional organizations, except the Bank for International Settlements, which is included in "Other Europe."

## 3.18 BANKS' OWN CLAIMS ON FOREIGNERS Reported by Banks in the United States[1] Payable in U.S. Dollars

Millions of dollars, end of period

| Area or country | 1995 | 1996 | 1997 | 1998 Mar. | 1998 Apr. | 1998 May | 1998 June | 1998 July | 1998 Aug. | 1998 Sept.[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 **Total, all foreigners** | **532,444** | **599,925** | **708,272** | **687,648** | **700,035** | **703,532** | **727,942[r]** | **740,236[r]** | **764,022** | **754,467** |
| 2 **Foreign countries** | **530,513** | **597,321** | **705,809** | **684,700** | **696,742** | **701,140** | **725,027[r]** | **735,826[r]** | **759,632** | **749,125** |
| 3 Europe | 132,150 | 165,769 | 199,880 | 205,528 | 207,154 | 208,567 | 223,277[r] | 229,928 | 226,823 | 231,839 |
| 4 Austria | 565 | 1,662 | 1,354 | 1,566 | 1,827 | 2,130 | 1,259 | 1,892 | 1,856 | 1,849 |
| 5 Belgium and Luxembourg | 7,624 | 6,727 | 6,641 | 6,148 | 5,482 | 6,115 | 7,782 | 8,459 | 6,779 | 8,190 |
| 6 Denmark | 403 | 492 | 980 | 895 | 968 | 1,286 | 1,198 | 933 | 1,374 | 1,059 |
| 7 Finland | 1,055 | 971 | 1,233 | 1,686 | 1,018 | 931 | 1,146 | 1,032 | 1,161 | 1,073 |
| 8 France | 15,033 | 15,246 | 16,239 | 18,206 | 17,383 | 16,276 | 15,474 | 14,421 | 17,314 | 16,783 |
| 9 Germany | 9,263 | 8,472 | 12,676 | 13,047 | 16,931 | 15,301 | 15,751 | 11,327 | 12,029 | 15,210 |
| 10 Greece | 469 | 568 | 402 | 503 | 442 | 428 | 364 | 450 | 530 | 373 |
| 11 Italy | 5,370 | 6,457 | 6,230 | 6,601 | 6,938 | 6,533 | 6,435 | 6,345 | 8,617 | 6,514 |
| 12 Netherlands | 5,346 | 7,117 | 6,141 | 6,618 | 5,851 | 3,980 | 5,763 | 5,642 | 4,321 | 4,802 |
| 13 Norway | 665 | 808 | 555 | 850 | 662 | 736 | 680 | 553 | 1,110 | 629 |
| 14 Portugal | 888 | 418 | 777 | 589 | 935 | 1,496 | 888 | 1,156 | 725 | 975 |
| 15 Russia | 660 | 1,669 | 1,248 | 1,115 | 1,133 | 1,117 | 1,057 | 1,345 | 1,209 | 920 |
| 16 Spain | 2,166 | 3,211 | 2,942 | 5,778 | 7,458 | 6,218 | 5,560 | 6,424 | 5,225 | 7,980 |
| 17 Sweden | 2,080 | 1,739 | 1,854 | 2,798 | 2,975 | 3,181 | 3,069 | 4,553 | 4,456 | 4,319 |
| 18 Switzerland | 7,474 | 19,798 | 28,846 | 31,306 | 25,069 | 29,317 | 34,970 | 49,359 | 49,258 | 55,797 |
| 19 Turkey | 803 | 1,109 | 1,558 | 1,914 | 2,324 | 2,386 | 2,414 | 2,010 | 1,990 | 1,902 |
| 20 United Kingdom | 67,784 | 85,234 | 103,143 | 97,588 | 101,772 | 102,889 | 109,755[r] | 104,397 | 98,309 | 94,921 |
| 21 Yugoslavia[2] | 147 | 115 | 52 | 61 | 59 | 19 | 53 | 79 | 53 | 53 |
| 22 Other Europe and other former U.S.S.R.[3] | 4,355 | 3,956 | 7,009 | 8,259 | 7,927 | 8,228 | 9,659 | 9,551 | 10,507 | 8,490 |
| 23 Canada | 20,874 | 26,436 | 27,176 | 29,827 | 25,785 | 24,961 | 32,703 | 36,007 | 41,402 | 41,127 |
| 24 Latin America and Caribbean | 256,944 | 274,153 | 343,820 | 338,909 | 354,302 | 361,082 | 365,814[r] | 359,277[r] | 379,383 | 362,826 |
| 25 Argentina | 6,439 | 7,400 | 8,924 | 8,726 | 8,540 | 8,207 | 8,518 | 8,421 | 8,724 | 8,777 |
| 26 Bahamas | 58,818 | 71,871 | 89,379 | 77,585 | 82,711 | 78,083 | 77,595 | 78,770 | 77,875 | 75,925 |
| 27 Bermuda | 5,741 | 4,129 | 8,782 | 8,997 | 9,462 | 8,890 | 9,452 | 10,622 | 9,629 | 10,604 |
| 28 Brazil | 13,297 | 17,259 | 21,696 | 25,283 | 26,033 | 25,354 | 24,552 | 24,187 | 23,530 | 19,089 |
| 29 British West Indies | 124,037 | 105,510 | 145,471 | 147,910 | 159,649 | 168,124 | 176,825 | 166,203 | 192,334 | 182,742 |
| 30 Chile | 4,864 | 5,136 | 7,913 | 8,171 | 8,444 | 8,482 | 8,497 | 8,434 | 8,307 | 8,345 |
| 31 Colombia | 4,550 | 6,247 | 6,945 | 6,783 | 6,772 | 7,208 | 7,102 | 6,914 | 6,905 | 6,816 |
| 32 Cuba | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 33 Ecuador | 825 | 1,031 | 1,311 | 1,476 | 1,522 | 1,498 | 1,430 | 1,649 | 1,518 | 1,456 |
| 34 Guatemala | 457 | 620 | 886 | 904 | 955 | 955 | 932 | 911 | 950 | 1,713 |
| 35 Jamaica | 323 | 345 | 424 | 364 | 373 | 385 | 320 | 335 | 318 | 305 |
| 36 Mexico | 18,024 | 18,425 | 19,518 | 20,680 | 20,913 | 21,215 | 20,371[r] | 20,062[r] | 20,078 | 20,666 |
| 37 Netherlands Antilles | 9,229 | 25,209 | 17,838 | 17,618 | 14,073 | 17,352 | 14,294 | 16,278 | 12,939 | 10,294 |
| 38 Panama | 3,008 | 2,786 | 4,364 | 4,108 | 4,422 | 4,393 | 4,233 | 4,308 | 4,157 | 4,237 |
| 39 Peru | 1,829 | 2,720 | 3,491 | 3,538 | 3,644 | 3,792 | 3,965 | 4,009 | 4,061 | 3,826 |
| 40 Uruguay | 466 | 589 | 629 | 920 | 773 | 807 | 959 | 1,154 | 1,055 | 954 |
| 41 Venezuela | 1,661 | 1,702 | 2,129 | 2,169 | 2,194 | 2,381 | 2,495 | 2,436 | 2,649 | 2,640 |
| 42 Other | 3,376 | 3,174 | 4,120 | 3,677 | 3,822 | 3,956 | 4,274 | 4,584 | 4,354 | 4,435 |
| 43 Asia | 115,336 | 122,478 | 125,063 | 101,353 | 99,183 | 96,813 | 94,804 | 100,196 | 102,391 | 104,211 |
| China | | | | | | | | | | |
| 44 Mainland | 1,023 | 1,401 | 1,579 | 2,762 | 2,921 | 2,934 | 1,989 | 1,679 | 2,703 | 1,363 |
| 45 Taiwan | 1,713 | 1,894 | 921 | 740 | 939 | 723 | 835 | 595 | 661 | 1,031 |
| 46 Hong Kong | 12,821 | 12,802 | 13,990 | 12,628 | 10,162 | 12,884 | 12,871 | 11,045 | 13,821 | 10,547 |
| 47 India | 1,846 | 1,946 | 2,200 | 1,927 | 1,807 | 1,913 | 1,972 | 1,822 | 1,878 | 1,824 |
| 48 Indonesia | 1,696 | 1,762 | 2,634 | 2,291 | 2,210 | 2,099 | 2,098 | 2,010 | 2,031 | 2,108 |
| 49 Israel | 739 | 633 | 768 | 812 | 874 | 893 | 954 | 1,116 | 898 | 941 |
| 50 Japan | 61,468 | 59,967 | 59,540 | 46,660 | 44,970 | 42,071 | 43,010 | 45,566 | 44,822 | 52,213 |
| 51 Korea (South) | 13,975 | 18,901 | 18,162 | 11,520 | 10,852 | 11,936 | 11,001 | 12,863 | 11,508 | 9,831 |
| 52 Philippines | 1,318 | 1,697 | 1,689 | 1,813 | 1,561 | 1,614 | 1,541 | 1,243 | 1,258 | 1,280 |
| 53 Thailand | 2,612 | 2,679 | 2,259 | 2,144 | 1,971 | 1,906 | 1,889 | 1,820 | 1,883 | 2,128 |
| 54 Middle Eastern oil-exporting countries[4] | 9,639 | 10,424 | 10,790 | 8,921 | 11,028 | 9,338 | 8,448 | 11,207 | 12,136 | 12,292 |
| 55 Other | 6,486 | 8,372 | 10,531 | 9,135 | 9,888 | 8,502 | 8,196 | 9,230 | 8,792 | 8,653 |
| 56 Africa | 2,742 | 2,776 | 3,530 | 3,567 | 3,337 | 3,693 | 2,484 | 3,497 | 3,262 | 3,012 |
| 57 Egypt | 210 | 247 | 247 | 289 | 294 | 281 | 283 | 294 | 279 | 272 |
| 58 Morocco | 514 | 524 | 511 | 518 | 483 | 490 | 430 | 471 | 426 | 390 |
| 59 South Africa | 465 | 584 | 805 | 559 | 490 | 859 | 653 | 630 | 653 | 694 |
| 60 Zaire | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 61 Oil-exporting countries[5] | 552 | 420 | 1,212 | 1,364 | 1,194 | 1,078 | 308 | 1,331 | 1,046 | 770 |
| 62 Other | 1,000 | 1,001 | 755 | 837 | 876 | 985 | 810 | 771 | 858 | 886 |
| 63 Other | 2,467 | 5,709 | 6,340 | 5,516 | 6,981 | 6,024 | 5,945 | 6,921 | 6,371 | 6,110 |
| 64 Australia | 1,622 | 4,577 | 5,299 | 5,011 | 6,513 | 5,704 | 5,439 | 6,067 | 5,999 | 5,783 |
| 65 Other | 845 | 1,132 | 1,041 | 505 | 468 | 320 | 506 | 854 | 372 | 327 |
| 66 Nonmonetary international and regional organizations[6] | 1,931 | 2,604 | 2,463 | 2,948 | 3,293 | 2,392 | 2,915 | 4,410 | 4,390 | 5,342 |

1. Reporting banks include all types of depository institutions as well as some brokers and dealers.
2. Since December 1992, has excluded Bosnia, Croatia, and Slovenia.
3. Includes the Bank for International Settlements. Since December 1992, has included all parts of the former U.S.S.R. (except Russia), and Bosnia, Croatia, and Slovenia.
4. Comprises Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (Trucial States).
5. Comprises Algeria, Gabon, Libya, and Nigeria.
6. Excludes the Bank for International Settlements, which is included in "Other Europe."

## 3.19 BANKS' OWN AND DOMESTIC CUSTOMERS' CLAIMS ON FOREIGNERS Reported by Banks in the United States[1] Payable in U.S. Dollars

Millions of dollars, end of period

| Type of claim | 1995 | 1996 | 1997 | 1998 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Mar. | Apr. | May | June | July[r] | Aug. | Sept.[p] |
| 1 **Total** | **655,211** | **743,919** | **852,899** | **842,461** | ... | ... | **881,218[r]** | ... | ... | . |
| 2 Banks' claims | 532,444 | 599,925 | 708,272 | 687,648 | 700,035 | 703,532 | 727,942[r] | 740,236 | 764,022 | 754,467 |
| 3 Foreign public borrowers | 22,518 | 22,216 | 20,660 | 28,232 | 32,465 | 28,986 | 27,780[r] | 35,634 | 29,757 | 26,397 |
| 4 Own foreign offices[2] | 307,427 | 341,574 | 431,685 | 402,387 | 409,955 | 415,175 | 435,201 | 446,536 | 465,154 | 472,082 |
| 5 *Unaffiliated foreign banks* | *101,595* | *113,682* | *109,224* | *107,794* | *104,622* | *105,501* | *107,525[r]* | *101,777* | *105,862* | *108,844* |
| 6 Deposits | 37,771 | 33,826 | 31,042 | 25,657 | 24,324 | 21,282 | 22,843 | 23,283 | 24,593 | 30,250 |
| 7 Other | 63,824 | 79,856 | 78,182 | 82,137 | 80,298 | 84,219 | 84,682[r] | 78,494 | 81,269 | 78,594 |
| 8 All other foreigners | 100,904 | 122,453 | 146,703 | 149,235 | 152,993 | 153,870 | 157,436 | 156,289 | 163,249 | 147,144 |
| 9 Claims of banks' domestic customers[3] | 122,767 | 143,994 | 144,627 | 154,813 | .. | .. | 153,276 | .. | ... | .. |
| 10 Deposits | 58,519 | 77,657 | 73,110 | 85,406 | ... | . | 86,408 | . | .. | ... |
| 11 Negotiable and readily transferable instruments[4] | 44,161 | 51,207 | 53,967 | 51,594 | ... | ... | 52,171 | .. | ... | ... |
| 12 Outstanding collections and other claims | 20,087 | 15,130 | 17,550 | 17,813 | .. | ... | 14,697 | .. | .. | .. |
| MEMO | | | | | | | | | | |
| 13 Customer liability on acceptances | 8,410 | 10,388 | 9,624 | 7,496 | .. | ... | 6,604 | .. | . | ... |
| 14 Dollar deposits in banks abroad, reported by nonbanking business enterprises in the United States[5] | 30,717 | 39,661 | 34,046 | 31,958 | 31,633 | 32,172 | 25,287 | 32,347 | 28,860 | 28,345 |

1. For banks' claims, data are monthly; for claims of banks' domestic customers, data are for quarter ending with month indicated.

Reporting banks include all types of depository institution as well as some brokers and dealers.

2. For U.S. banks, includes amounts due from own foreign branches and foreign subsidiaries consolidated in quarterly Consolidated Reports of Condition filed with bank regulatory agencies. For agencies, branches, and majority-owned subsidiaries of foreign banks, consists principally of amounts due from the head office or parent foreign bank, and from foreign branches, agencies, or wholly owned subsidiaries of the head office or parent foreign bank.

3. Assets held by reporting banks in the accounts of their domestic customers.

4. Principally negotiable time certificates of deposit, bankers acceptances, and commercial paper.

5. Includes demand and time deposits and negotiable and nonnegotiable certificates of deposit denominated in U.S. dollars issued by banks abroad.

## 3.20 BANKS' OWN CLAIMS ON UNAFFILIATED FOREIGNERS Reported by Banks in the United States[1] Payable in U.S. Dollars

Millions of dollars, end of period

| Maturity, by borrower and area[2] | 1994 | 1995 | 1996 | 1997 | | 1998 | |
|---|---|---|---|---|---|---|---|
| | | | | Sept. | Dec. | Mar. | June |
| 1 **Total** | **202,282** | **224,932** | **258,106** | **281,000** | **276,597** | **285,518** | **292,324** |
| *By borrower* | | | | | | | |
| 2 Maturity of one year or less | 170,411 | 178,857 | 211,859 | 217,981 | 205,859 | 214,822 | 211,029 |
| 3 Foreign public borrowers | 15,435 | 14,995 | 15,411 | 20,123 | 12,069 | 16,952 | 17,023 |
| 4 All other foreigners | 154,976 | 163,862 | 196,448 | 197,858 | 193,790 | 197,870 | 194,006 |
| 5 Maturity of more than one year | 31,871 | 46,075 | 46,247 | 63,019 | 70,738 | 70,696 | 81,295 |
| 6 Foreign public borrowers | 7,838 | 7,522 | 6,790 | 8,752 | 8,525 | 11,310 | 10,651 |
| 7 All other foreigners | 24,033 | 38,553 | 39,457 | 54,267 | 62,213 | 59,386 | 70,644 |
| *By area* | | | | | | | |
| Maturity of one year or less | | | | | | | |
| 8 Europe | 56,381 | 55,622 | 55,690 | 69,204 | 58,294 | 69,245 | 73,787 |
| 9 Canada | 6,690 | 6,751 | 8,339 | 8,460 | 9,917 | 9,304 | 8,766 |
| 10 Latin America and Caribbean | 59,583 | 72,504 | 103,254 | 99,929 | 97,277 | 101,013 | 99,294 |
| 11 Asia | 40,567 | 40,296 | 38,078 | 34,650 | 33,972 | 28,748 | 23,569 |
| 12 Africa | 1,379 | 1,295 | 1,316 | 2,157 | 2,211 | 2,228 | 1,116 |
| 13 All other[3] | 5,811 | 2,389 | 5,182 | 3,581 | 4,188 | 4,284 | 4,497 |
| Maturity of more than one year | | | | | | | |
| 14 Europe | 4,358 | 4,995 | 6,965 | 11,202 | 13,240 | 15,118 | 15,606 |
| 15 Canada | 3,505 | 2,751 | 2,645 | 3,842 | 2,512 | 2,752 | 2,573 |
| 16 Latin America and Caribbean | 15,717 | 27,681 | 24,943 | 34,988 | 42,069 | 39,337 | 47,881 |
| 17 Asia | 5,323 | 7,941 | 9,392 | 10,393 | 10,198 | 10,731 | 12,569 |
| 18 Africa | 1,583 | 1,421 | 1,361 | 1,236 | 1,236 | 1,254 | 1,259 |
| 19 All other[3] | 1,385 | 1,286 | 941 | 1,358 | 1,483 | 1,504 | 1,407 |

1. Reporting banks include all types of depository institutions as well as some brokers and dealers.

2. Maturity is time remaining until maturity.

3. Includes nonmonetary international and regional organizations.

## 3.21 CLAIMS ON FOREIGN COUNTRIES Held by U.S. and Foreign Offices of U.S. Banks[1]

Billions of dollars, end of period

| Area or country | 1994 | 1995 | 1996 | | | 1997 | | | | 1998 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | June | Sept. | Dec. | Mar. | June | Sept. | Dec. | Mar. | June |
| 1 **Total** | **499.5** | **551.9** | **612.8** | **586.2** | **645.3** | **647.5** | **678.8** | **711.0** | **725.9** | **739.2** | **746.7[r]** |
| 2 G-10 countries and Switzerland | 191.2 | 206.0 | 226.9 | 220.0 | 228.3 | 231.4 | 250.0 | 247.7 | 242.8 | 249.1 | 275.0[r] |
| 3 Belgium and Luxembourg | 7.2 | 13.6 | 11.4 | 11.3 | 11.7 | 14.1 | 9.4 | 11.4 | 11.0 | 11.2 | 13.1 |
| 4 France | 19.1 | 19.4 | 18.0 | 17.4 | 16.6 | 19.7 | 17.9 | 20.2 | 15.4 | 15.6 | 20.5 |
| 5 Germany | 24.7 | 27.3 | 31.4 | 33.9 | 29.8 | 32.1 | 34.1 | 34.7 | 28.6 | 25.5 | 28.7 |
| 6 Italy | 11.8 | 11.5 | 14.9 | 15.2 | 16.0 | 14.4 | 20.2 | 19.3 | 15.5 | 19.7 | 19.5 |
| 7 Netherlands | 3.6 | 3.7 | 4.7 | 5.9 | 4.0 | 4.5 | 6.4 | 7.2 | 6.2 | 7.3 | 8.3 |
| 8 Sweden | 2.7 | 2.7 | 2.7 | 3.0 | 2.6 | 3.4 | 3.6 | 4.1 | 3.3 | 4.8 | 3.1 |
| 9 Switzerland | 5.1 | 6.7 | 6.3 | 6.3 | 5.3 | 6.0 | 5.4 | 4.8 | 7.2 | 5.6 | 6.9 |
| 10 United Kingdom | 85.8 | 82.4 | 101.6 | 90.5 | 104.7 | 99.2 | 110.6 | 108.3 | 113.4 | 120.1 | 134.8[r] |
| 11 Canada | 10.0 | 10.3 | 12.2 | 14.8 | 14.0 | 16.3 | 15.7 | 15.1 | 13.7 | 13.5 | 16.5 |
| 12 Japan | 21.1 | 28.5 | 23.6 | 21.7 | 23.7 | 21.7 | 26.8 | 22.6 | 28.6 | 25.8 | 23.7 |
| 13 Other industrialized countries | 45.7 | 50.2 | 55.5 | 62.1 | 65.7 | 66.4 | 71.7 | 73.8 | 64.5 | 74.3 | 72.0 |
| 14 Austria | 1.1 | .9 | 1.2 | 1.0 | 1.1 | 1.9 | 1.5 | 1.7 | 1.5 | 1.7 | 1.9 |
| 15 Denmark | 1.3 | 2.6 | 3.3 | 1.7 | 1.5 | 1.7 | 2.8 | 3.7 | 2.4 | 2.0 | 2.1 |
| 16 Finland | .9 | .8 | .6 | .6 | .8 | .7 | 1.4 | 1.9 | 1.3 | 1.5 | 1.4 |
| 17 Greece | 4.5 | 5.7 | 5.6 | 6.1 | 6.7 | 6.3 | 6.1 | 6.2 | 5.1 | 6.1 | 5.8 |
| 18 Norway | 2.0 | 3.2 | 2.3 | 3.0 | 8.0 | 5.3 | 4.7 | 4.6 | 3.6 | 4.0 | 3.4 |
| 19 Portugal | 1.2 | 1.3 | 1.6 | 1.4 | .9 | 1.0 | 1.1 | 1.4 | .9 | .7 | 1.3 |
| 20 Spain | 13.6 | 11.6 | 13.6 | 16.1 | 13.2 | 14.4 | 15.4 | 13.9 | 11.7 | 16.5 | 15.1 |
| 21 Turkey | 1.6 | 1.9 | 2.3 | 2.8 | 2.7 | 2.8 | 3.4 | 4.4 | 4.5 | 4.9 | 6.5 |
| 22 Other Western Europe | 3.2 | 4.7 | 3.4 | 4.8 | 4.7 | 6.3 | 5.5 | 6.1 | 8.2 | 9.9 | 9.6 |
| 23 South Africa | 1.0 | 1.2 | 2.0 | 1.7 | 2.0 | 1.9 | 1.9 | 1.9 | 2.2 | 3.7 | 5.0 |
| 24 Australia | 15.4 | 16.4 | 19.6 | 22.8 | 24.0 | 24.4 | 27.8 | 28.1 | 23.1 | 23.2 | 20.0 |
| 25 OPEC[2] | 24.1 | 22.1 | 20.1 | 19.2 | 19.7 | 21.8 | 22.3 | 22.9 | 26.0 | 25.7 | 25.3 |
| 26 Ecuador | .5 | .7 | .9 | .9 | 1.1 | 1.1 | .9 | 1.2 | 1.3 | 1.3 | 1.2 |
| 27 Venezuela | 3.7 | 2.7 | 2.3 | 2.3 | 2.4 | 1.9 | 2.1 | 2.2 | 2.5 | 3.3 | 3.2 |
| 28 Indonesia | 3.8 | 4.8 | 4.9 | 5.4 | 5.2 | 4.9 | 5.6 | 6.5 | 6.7 | 5.5 | 5.1 |
| 29 Middle East countries | 15.3 | 13.3 | 11.5 | 10.2 | 10.7 | 13.2 | 12.5 | 11.8 | 14.4 | 14.3 | 15.5 |
| 30 African countries | .9 | .6 | .5 | .4 | .4 | .7 | 1.2 | 1.1 | 1.2 | 1.4 | .3 |
| 31 Non-OPEC developing countries | 96.0 | 112.6 | 126.5 | 124.4 | 130.3 | 128.1 | 140.6 | 137.0 | 138.7 | 147.4 | 144.4 |
| *Latin America* | | | | | | | | | | | |
| 32 Argentina | 11.2 | 12.9 | 14.1 | 15.0 | 14.3 | 14.3 | 16.4 | 17.1 | 18.4 | 19.3 | 20.2 |
| 33 Brazil | 8.4 | 13.7 | 21.7 | 17.8 | 20.7 | 22.0 | 27.3 | 26.1 | 28.6 | 32.4 | 29.9 |
| 34 Chile | 6.1 | 6.8 | 6.7 | 6.6 | 7.0 | 6.8 | 7.6 | 8.0 | 8.7 | 9.0 | 9.1 |
| 35 Colombia | 2.6 | 2.9 | 2.8 | 3.1 | 4.1 | 3.7 | 3.3 | 3.4 | 3.4 | 3.3 | 3.6 |
| 36 Mexico | 18.4 | 17.3 | 15.4 | 16.3 | 16.2 | 17.2 | 16.6 | 16.4 | 17.4 | 17.7 | 17.9 |
| 37 Peru | .5 | .8 | 1.2 | 1.3 | 1.6 | 1.6 | 1.4 | 1.8 | 2.0 | 2.1 | 2.2 |
| 38 Other | 2.7 | 2.8 | 3.0 | 3.0 | 3.3 | 3.4 | 3.4 | 3.6 | 4.1 | 4.0 | 4.4 |
| *Asia* | | | | | | | | | | | |
| China | | | | | | | | | | | |
| 39 Mainland | 1.1 | 1.8 | 2.9 | 2.6 | 2.5 | 2.7 | 3.6 | 4.3 | 3.2 | 4.2 | 3.9 |
| 40 Taiwan | 9.2 | 9.4 | 9.8 | 10.4 | 10.3 | 10.5 | 10.6 | 9.7 | 9.0 | 11.7 | 11.3 |
| 41 India | 4.2 | 4.4 | 4.2 | 3.8 | 4.3 | 4.9 | 5.3 | 4.9 | 4.9 | 5.0 | 4.9 |
| 42 Israel | .4 | .5 | .6 | .5 | .5 | .6 | .8 | 1.0 | .7 | .7 | .9 |
| 43 Korea (South) | 16.2 | 19.1 | 21.7 | 21.9 | 21.5 | 14.6 | 16.3 | 16.2 | 15.6 | 16.2 | 14.5 |
| 44 Malaysia | 3.1 | 4.4 | 5.3 | 5.5 | 6.0 | 6.5 | 6.4 | 5.6 | 5.1 | 4.5 | 4.7 |
| 45 Philippines | 3.3 | 4.1 | 4.7 | 5.4 | 5.8 | 6.0 | 7.0 | 5.7 | 5.7 | 5.0 | 5.4 |
| 46 Thailand | 2.1 | 4.9 | 5.4 | 4.8 | 5.7 | 6.8 | 7.3 | 6.2 | 5.4 | 5.5 | 4.9 |
| 47 Other Asia | 4.7 | 4.5 | 4.8 | 4.1 | 4.1 | 4.3 | 4.7 | 4.5 | 4.3 | 4.2 | 3.7 |
| *Africa* | | | | | | | | | | | |
| 48 Egypt | .3 | .4 | .5 | .6 | .7 | .9 | 1.1 | .9 | .9 | 1.0 | 1.5 |
| 49 Morocco | .6 | .7 | .8 | .7 | .7 | .6 | .7 | .7 | .6 | .6 | .6 |
| 50 Zaire | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |
| 51 Other Africa[3] | .8 | .9 | .8 | 1.0 | .9 | .9 | .9 | .9 | .8 | 1.1 | .8 |
| 52 Eastern Europe | 2.7 | 4.2 | 5.1 | 5.3 | 6.9 | 8.9 | 7.1 | 9.8 | 9.1 | 12.0 | 10.9 |
| 53 Russia[4] | .8 | 1.0 | 1.0 | 1.8 | 3.7 | 3.5 | 4.2 | 5.1 | 5.1 | 7.5 | 6.8 |
| 54 Other | 1.9 | 3.2 | 4.1 | 3.5 | 3.2 | 5.4 | 2.9 | 4.7 | 4.0 | 4.6 | 4.1 |
| 55 Offshore banking centers | 72.9 | 99.2 | 106.1 | 105.2 | 134.7 | 131.3 | 129.6 | 138.9 | 145.7 | 129.3 | 123.5 |
| 56 Bahamas | 10.2 | 11.0 | 17.3 | 14.2 | 20.3 | 20.9 | 16.1 | 19.8 | 29.9 | 29.2 | 22.7 |
| 57 Bermuda | 8.4 | 6.3 | 4.1 | 4.0 | 4.5 | 6.7 | 7.9 | 9.8 | 9.8 | 9.0 | 9.3 |
| 58 Cayman Islands and other British West Indies | 21.4 | 32.4 | 26.1 | 32.0 | 37.2 | 32.8 | 35.1 | 45.7 | 43.4 | 24.9 | 33.9 |
| 59 Netherlands Antilles | 1.6 | 10.3 | 13.2 | 11.7 | 26.1 | 19.9 | 15.8 | 21.7 | 14.6 | 14.0 | 10.5 |
| 60 Panama[5] | 1.3 | 1.4 | 1.7 | 1.7 | 2.0 | 2.0 | 2.6 | 2.1 | 3.1 | 3.2 | 3.3 |
| 61 Lebanon | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 |
| 62 Hong Kong, China | 20.0 | 25.0 | 27.6 | 26.0 | 27.9 | 30.8 | 35.2 | 27.2 | 32.2 | 33.8 | 30.0 |
| 63 Singapore | 10.1 | 13.1 | 15.9 | 15.5 | 16.7 | 17.9 | 16.7 | 12.7 | 12.7 | 15.0 | 13.5 |
| 64 Other[6] | .1 | .1 | .1 | .1 | .1 | .1 | .3 | .1 | .1 | .1 | .2 |
| 65 Miscellaneous and unallocated[7] | 66.9 | 57.6 | 72.7 | 50.0 | 59.6 | 59.6 | 57.6 | 80.8 | 99.1 | 101.3 | 95.6 |

1. The banking offices covered by these data include U.S. offices and foreign branches of U.S. banks, including U.S. banks that are subsidiaries of foreign banks. Offices not covered include U.S. agencies and branches of foreign banks. Beginning March 1994, the data include large foreign subsidiaries of U.S. banks. The data also include other types of U.S. depository institutions as well as some types of brokers and dealers. To eliminate duplication, the data are adjusted to exclude the claims on foreign branches held by a U.S. office or another foreign branch of the same banking institution.

These data are on a gross claims basis and do not necessarily reflect the ultimate country risk or exposure of U.S. banks. More complete data on the country risk exposure of U.S. banks are available in the quarterly Country Exposure Lending Survey published by the Federal Financial Institutions Examination Council.

2. Organization of Petroleum Exporting Countries, shown individually; other members of OPEC (Algeria, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, and United Arab Emirates); and Bahrain and Oman (not formally members of OPEC).

3. Excludes Liberia. Beginning March 1994 includes Namibia.

4. As of December 1992, excludes other republics of the former Soviet Union.

5. Includes Canal Zone.

6. Foreign branch claims only.

7. Includes New Zealand, Liberia, and international and regional organizations.

## 3.22 LIABILITIES TO UNAFFILIATED FOREIGNERS Reported by Nonbanking Business Enterprises in the United States

Millions of dollars, end of period

| | Type of liability, and area or country | 1994 | 1995 | 1996 | 1997 | | | | 1998 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Mar | June | Sept. | Dec. | Mar. | June[p] |
| 1 | **Total** | **54,309** | **46,448** | **54,798** | **58,667** | **56,501** | **55,891** | **59,618** | **56,741** | **52,022** |
| 2 | Payable in dollars | 38,298 | 33,903 | 38,956 | 39,861 | 38,651 | 39,746 | 41,888 | 42,237 | 40,914 |
| 3 | Payable in foreign currencies | 16,011 | 12,545 | 15,842 | 18,806 | 17,850 | 16,145 | 17,730 | 14,504 | 11,108 |
| | *By type* | | | | | | | | | |
| 4 | Financial liabilities | 32,954 | 24,241 | 26,065 | 29,633 | 28,263 | 26,461 | 29,113 | 26,751 | 22,669 |
| 5 | Payable in dollars | 18,818 | 12,903 | 11,327 | 11,847 | 11,442 | 11,487 | 12,975 | 13,547 | 12,634 |
| 6 | Payable in foreign currencies | 14,136 | 11,338 | 14,738 | 17,786 | 16,821 | 14,974 | 16,138 | 13,204 | 10,035 |
| 7 | Commercial liabilities | 21,355 | 22,207 | 28,733 | 29,034 | 28,238 | 29,430 | 30,505 | 29,990 | 29,353 |
| 8 | Trade payables | 10,005 | 11,013 | 12,720 | 11,432 | 11,040 | 10,885 | 10,904 | 10,107 | 9,842 |
| 9 | Advance receipts and other liabilities | 11,350 | 11,194 | 16,013 | 17,602 | 17,198 | 18,545 | 19,601 | 19,883 | 19,511 |
| 10 | Payable in dollars | 19,480 | 21,000 | 27,629 | 28,014 | 27,209 | 28,259 | 28,913 | 28,690 | 28,280 |
| 11 | Payable in foreign currencies | 1,875 | 1,207 | 1,104 | 1,020 | 1,029 | 1,171 | 1,592 | 1,300 | 1,073 |
| | *By area or country* | | | | | | | | | |
| | Financial liabilities | | | | | | | | | |
| 12 | Europe | 21,703 | 15,622 | 16,195 | 20,081 | 18,530 | 18,019 | 19,238 | 19,008 | 15,722 |
| 13 | Belgium and Luxembourg | 495 | 369 | 632 | 769 | 238 | 89 | 186 | 127 | 75 |
| 14 | France | 1,727 | 999 | 1,091 | 1,205 | 1,280 | 1,334 | 1,684 | 1,795 | 1,965 |
| 15 | Germany | 1,961 | 1,974 | 1,834 | 1,589 | 1,765 | 1,730 | 2,018 | 2,578 | 2,441 |
| 16 | Netherlands | 552 | 466 | 556 | 507 | 466 | 507 | 494 | 472 | 484 |
| 17 | Switzerland | 688 | 895 | 699 | 694 | 591 | 645 | 776 | 345 | 189 |
| 18 | United Kingdom | 15,543 | 10,138 | 10,177 | 13,863 | 12,968 | 12,165 | 12,318 | 11,846 | 8,463 |
| 19 | Canada | 629 | 632 | 1,401 | 602 | 1,616 | 651 | 2,392 | 1,045 | 539 |
| 20 | Latin America and Caribbean | 2,034 | 1,783 | 1,668 | 1,876 | 1,285 | 1,067 | 1,386 | 965 | 1,320 |
| 21 | Bahamas | 101 | 59 | 236 | 293 | 124 | 10 | 141 | 17 | 6 |
| 22 | Bermuda | 80 | 147 | 50 | 27 | 55 | 64 | 229 | 86 | 49 |
| 23 | Brazil | 207 | 57 | 78 | 75 | 97 | 52 | 143 | 91 | 76 |
| 24 | British West Indies | 998 | 866 | 1,030 | 965 | 775 | 669 | 604 | 517 | 845 |
| 25 | Mexico | 0 | 12 | 17 | 16 | 15 | 76 | 26 | 21 | 51 |
| 26 | Venezuela | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | Asia | 8,403 | 5,988 | 6,423 | 6,370 | 6,248 | 6,239 | 5,394 | 5,024 | 4,408 |
| 28 | Japan | 7,314 | 5,436 | 5,869 | 5,794 | 5,668 | 5,725 | 5,085 | 4,767 | 3,869 |
| 29 | Middle Eastern oil-exporting countries[1] | 35 | 27 | 25 | 72 | 39 | 23 | 32 | 23 | 0 |
| 30 | Africa | 135 | 150 | 38 | 29 | 29 | 33 | 60 | 33 | 29 |
| 31 | Oil-exporting countries[2] | 123 | 122 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | All other[3] | 50 | 66 | 340 | 675 | 555 | 452 | 643 | 676 | 651 |
| | Commercial liabilities | | | | | | | | | |
| 33 | Europe | 6,773 | 7,700 | 9,767 | 9,524 | 8,683 | 9,343 | 10,228 | 9,951 | 9,924 |
| 34 | Belgium and Luxembourg | 241 | 331 | 479 | 639 | 736 | 703 | 666 | 565 | 557 |
| 35 | France | 728 | 481 | 680 | 679 | 708 | 782 | 764 | 840 | 612 |
| 36 | Germany | 604 | 767 | 1,002 | 1,043 | 845 | 945 | 1,274 | 1,068 | 1,219 |
| 37 | Netherlands | 722 | 500 | 766 | 551 | 288 | 452 | 439 | 443 | 485 |
| 38 | Switzerland | 327 | 413 | 624 | 480 | 429 | 400 | 375 | 407 | 349 |
| 39 | United Kingdom | 2,444 | 3,568 | 4,303 | 4,158 | 3,818 | 3,829 | 4,086 | 4,041 | 3,743 |
| 40 | Canada | 1,037 | 1,040 | 1,090 | 1,068 | 1,136 | 1,150 | 1,175 | 1,347 | 1,511 |
| 41 | Latin America and Caribbean | 1,857 | 1,740 | 2,574 | 2,562 | 2,500 | 2,224 | 2,176 | 2,051 | 2,285 |
| 42 | Bahamas | 19 | 1 | 63 | 43 | 33 | 38 | 16 | 27 | 14 |
| 43 | Bermuda | 345 | 205 | 297 | 479 | 397 | 180 | 203 | 174 | 209 |
| 44 | Brazil | 161 | 98 | 196 | 200 | 225 | 233 | 220 | 249 | 246 |
| 45 | British West Indies | 23 | 56 | 14 | 14 | 26 | 23 | 12 | 5 | 27 |
| 46 | Mexico | 574 | 416 | 665 | 633 | 594 | 562 | 565 | 520 | 557 |
| 47 | Venezuela | 276 | 221 | 328 | 318 | 304 | 322 | 261 | 219 | 196 |
| 48 | Asia | 10,741 | 10,421 | 13,422 | 13,915 | 13,875 | 14,628 | 14,966 | 14,672 | 13,611 |
| 49 | Japan | 4,555 | 3,315 | 4,614 | 4,465 | 4,430 | 4,553 | 4,500 | 4,372 | 3,995 |
| 50 | Middle Eastern oil-exporting countries[1] | 1,576 | 1,912 | 2,168 | 2,495 | 2,420 | 2,984 | 3,111 | 3,138 | 3,194 |
| 51 | Africa | 428 | 619 | 1,040 | 1,037 | 941 | 929 | 874 | 833 | 921 |
| 52 | Oil-exporting countries[2] | 256 | 254 | 532 | 479 | 423 | 504 | 408 | 376 | 354 |
| 53 | Other[3] | 519 | 687 | 840 | 928 | 1,103 | 1,156 | 1,086 | 1,136 | 1,101 |

1. Comprises Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (Trucial States).
2. Comprises Algeria, Gabon, Libya, and Nigeria.
3. Includes nonmonetary international and regional organizations.

3.23 CLAIMS ON UNAFFILIATED FOREIGNERS Reported by Nonbanking Business Enterprises in the United States

Millions of dollars, end of period

| Type of claim, and area or country | 1994 | 1995 | 1996 | 1997 | | | | 1998 | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Mar. | June | Sept. | Dec. | Mar. | June[p] |
| 1 **Total** | **57,888** | **52,509** | **63,642** | **68,102** | **68,266** | **70,760** | **70,077** | **72,837** | **64,020** |
| 2 Payable in dollars | 53,805 | 48,711 | 58,630 | 62,126 | 62,082 | 64,144 | 62,173 | 65,359 | 58,463 |
| 3 Payable in foreign currencies | 4,083 | 3,798 | 5,012 | 5,976 | 6,184 | 6,616 | 7,904 | 7,478 | 5,557 |
| *By type* | | | | | | | | | |
| 4 Financial claims | 33,897 | 27,398 | 35,268 | 40,547 | 40,717 | 42,059 | 38,908 | 42,134 | 33,120 |
| 5 Deposits | 18,507 | 15,133 | 21,404 | 22,150 | 24,308 | 24,125 | 23,139 | 21,030 | 15,922 |
| 6 Payable in dollars | 18,026 | 14,654 | 20,631 | 20,499 | 22,817 | 22,566 | 21,290 | 19,322 | 14,244 |
| 7 Payable in foreign currencies | 481 | 479 | 773 | 1,651 | 1,491 | 1,559 | 1,849 | 1,708 | 1,678 |
| 8 Other financial claims | 15,390 | 12,265 | 13,864 | 18,397 | 16,409 | 17,934 | 15,769 | 21,104 | 17,198 |
| 9 Payable in dollars | 14,306 | 10,976 | 12,069 | 15,381 | 13,152 | 14,621 | 11,576 | 16,814 | 14,567 |
| 10 Payable in foreign currencies | 1,084 | 1,289 | 1,795 | 3,016 | 3,257 | 3,313 | 4,193 | 4,290 | 2,631 |
| 11 Commercial claims | 23,991 | 25,111 | 28,374 | 27,555 | 27,549 | 28,701 | 31,169 | 30,703 | 30,900 |
| 12 Trade receivables | 21,158 | 22,998 | 25,751 | 24,801 | 24,858 | 25,110 | 27,536 | 26,888 | 26,817 |
| 13 Advance payments and other claims | 2,833 | 2,113 | 2,623 | 2,754 | 2,691 | 3,591 | 3,633 | 3,815 | 4,083 |
| 14 Payable in dollars | 21,473 | 23,081 | 25,930 | 26,246 | 26,113 | 26,957 | 29,307 | 29,223 | 29,652 |
| 15 Payable in foreign currencies | 2,518 | 2,030 | 2,444 | 1,309 | 1,436 | 1,744 | 1,862 | 1,480 | 1,248 |
| *By area or country* | | | | | | | | | |
| Financial claims | | | | | | | | | |
| 16 Europe | 7,936 | 7,609 | 9,282 | 13,076 | 12,904 | 15,862 | 16,948 | 16,020 | 14,047 |
| 17 Belgium and Luxembourg | 86 | 193 | 185 | 119 | 203 | 360 | 406 | 378 | 518 |
| 18 France | 800 | 803 | 694 | 760 | 680 | 1,112 | 1,015 | 902 | 796 |
| 19 Germany | 540 | 436 | 276 | 324 | 281 | 352 | 427 | 393 | 290 |
| 20 Netherlands | 429 | 517 | 493 | 567 | 519 | 764 | 677 | 911 | 975 |
| 21 Switzerland | 523 | 498 | 474 | 570 | 447 | 448 | 434 | 401 | 403 |
| 22 United Kingdom | 4,649 | 4,303 | 6,119 | 9,837 | 9,814 | 11,254 | 12,286 | 11,122 | 9,595 |
| 23 Canada | 3,581 | 2,851 | 3,445 | 4,917 | 6,422 | 4,279 | 3,313 | 4,688 | 3,035 |
| 24 Latin America and Caribbean | 19,536 | 14,500 | 19,577 | 19,742 | 18,725 | 19,176 | 15,543 | 18,207 | 12,775 |
| 25 Bahamas | 2,424 | 1,965 | 1,452 | 1,894 | 2,064 | 2,442 | 2,459 | 1,316 | 1,310 |
| 26 Bermuda | 27 | 81 | 140 | 157 | 188 | 190 | 108 | 66 | 48 |
| 27 Brazil | 520 | 830 | 1,468 | 1,404 | 1,617 | 1,501 | 1,313 | 1,408 | 1,394 |
| 28 British West Indies | 15,228 | 10,393 | 15,182 | 15,176 | 13,553 | 12,957 | 10,311 | 13,551 | 8,153 |
| 29 Mexico | 723 | 554 | 457 | 517 | 497 | 508 | 537 | 967 | 1,089 |
| 30 Venezuela | 35 | 32 | 31 | 22 | 21 | 15 | 36 | 47 | 57 |
| 31 Asia | 1,871 | 1,579 | 2,221 | 2,068 | 1,934 | 2,015 | 2,133 | 2,174 | 2,376 |
| 32 Japan | 953 | 871 | 1,035 | 831 | 766 | 999 | 823 | 791 | 886 |
| 33 Middle Eastern oil-exporting countries[1] | 141 | 3 | 22 | 12 | 20 | 15 | 11 | 9 | 12 |
| 34 Africa | 373 | 276 | 174 | 182 | 179 | 174 | 319 | 325 | 155 |
| 35 Oil-exporting countries[2] | 0 | 5 | 14 | 14 | 15 | 16 | 15 | 16 | 15 |
| 36 All other[3] | 600 | 583 | 569 | 562 | 553 | 553 | 652 | 720 | 732 |
| Commercial claims | | | | | | | | | |
| 37 Europe | 9,540 | 9,824 | 10,443 | 9,863 | 9,603 | 10,486 | 12,120 | 12,854 | 12,935 |
| 38 Belgium and Luxembourg | 213 | 231 | 226 | 364 | 327 | 331 | 328 | 232 | 216 |
| 39 France | 1,881 | 1,830 | 1,644 | 1,514 | 1,377 | 1,642 | 1,796 | 1,939 | 1,955 |
| 40 Germany | 1,027 | 1,070 | 1,337 | 1,364 | 1,229 | 1,395 | 1,614 | 1,670 | 1,757 |
| 41 Netherlands | 311 | 452 | 562 | 582 | 613 | 573 | 597 | 534 | 492 |
| 42 Switzerland | 557 | 520 | 642 | 418 | 389 | 381 | 554 | 476 | 418 |
| 43 United Kingdom | 2,556 | 2,656 | 2,946 | 2,626 | 2,836 | 2,904 | 3,660 | 4,828 | 4,654 |
| 44 Canada | 1,988 | 1,951 | 2,165 | 2,381 | 2,464 | 2,649 | 2,660 | 2,882 | 2,779 |
| 45 Latin America and Caribbean | 4,117 | 4,364 | 5,276 | 5,067 | 5,241 | 5,028 | 5,750 | 5,481 | 6,082 |
| 46 Bahamas | 9 | 30 | 35 | 40 | 29 | 22 | 27 | 13 | 12 |
| 47 Bermuda | 234 | 272 | 275 | 159 | 197 | 128 | 244 | 238 | 359 |
| 48 Brazil | 612 | 898 | 1,303 | 1,216 | 1,136 | 1,101 | 1,162 | 1,128 | 1,183 |
| 49 British West Indies | 83 | 79 | 190 | 127 | 98 | 98 | 109 | 88 | 110 |
| 50 Mexico | 1,243 | 993 | 1,128 | 1,102 | 1,140 | 1,219 | 1,392 | 1,302 | 1,462 |
| 51 Venezuela | 348 | 285 | 357 | 330 | 451 | 418 | 576 | 441 | 585 |
| 52 Asia | 6,982 | 7,312 | 8,376 | 8,348 | 8,460 | 8,576 | 8,713 | 7,638 | 7,367 |
| 53 Japan | 2,655 | 1,870 | 2,003 | 2,065 | 2,079 | 2,048 | 1,976 | 1,713 | 1,757 |
| 54 Middle Eastern oil-exporting countries[1] | 708 | 974 | 971 | 1,078 | 1,014 | 987 | 1,107 | 987 | 1,127 |
| 55 Africa | 454 | 654 | 746 | 718 | 618 | 764 | 680 | 613 | 657 |
| 56 Oil-exporting countries[2] | 67 | 87 | 166 | 100 | 81 | 207 | 119 | 122 | 116 |
| 57 Other[3] | 910 | 1,006 | 1,368 | 1,178 | 1,163 | 1,198 | 1,246 | 1,235 | 1,080 |

1. Comprises Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (Trucial States).

2. Comprises Algeria, Gabon, Libya, and Nigeria.

3. Includes nonmonetary international and regional organizations.

## 3.24 FOREIGN TRANSACTIONS IN SECURITIES

Millions of dollars

| Transaction, and area or country | 1996 | 1997 | 1998 Jan.– Sept. | 1998 Mar. | Apr. | May | June | July | Aug. | Sept.[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | U.S. corporate securities | | | | | |
| STOCKS | | | | | | | | | | |
| 1 Foreign purchases | 590,714 | 1,097,958 | 1,186,876 | 136,184 | 134,177 | 129,528 | 146,147 | 152,833 | 141,566 | 139,171 |
| 2 Foreign sales | 578,203 | 1,028,361 | 1,147,565 | 122,769 | 130,628 | 121,355 | 142,591 | 150,308 | 139,722 | 149,535 |
| **3 Net purchases, or sales (−)** | **12,511** | **69,597** | **39,311** | **13,415** | **3,549** | **8,173** | **3,556** | **2,525** | **1,844** | **−10,364** |
| **4 Foreign countries** | **12,585** | **69,754** | **39,679** | **13,419** | **3,570** | **8,193** | **3,581** | **2,739** | **1,843** | **−10,321** |
| 5 Europe | 5,367 | 62,688 | 65,795 | 11,144 | 5,511 | 10,670 | 7,227 | 6,983 | 5,459 | 2,226 |
| 6 France | −2,402 | 6,641 | 6,046 | 1,480 | −260 | 650 | 1,734 | 199 | 988 | −172 |
| 7 Germany | 1,104 | 9,059 | 10,417 | 627 | 1,453 | 1,834 | 1,020 | 1,503 | 1,326 | 1,340 |
| 8 Netherlands | 1,415 | 3,831 | 5,195 | 557 | 161 | 564 | 830 | 1,265 | 163 | 902 |
| 9 Switzerland | 2,715 | 7,848 | 9,023 | 1,956 | 974 | 2,234 | 1,490 | 1,092 | −277 | −261 |
| 10 United Kingdom | 4,478 | 22,478 | 18,736 | 3,402 | 595 | 2,968 | 695 | 1,154 | 1,740 | 788 |
| 11 Canada | 2,226 | −1,406 | −3,072 | 566 | 55 | −506 | −1,600 | −443 | −276 | −153 |
| 12 Latin America and Caribbean | 5,816 | 5,203 | −8,025 | 2,110 | −3,689 | −1,333 | 1,798 | −614 | 610 | −11,735 |
| 13 Middle East[1] | −1,600 | 383 | −354 | −170 | 346 | −234 | 286 | −134 | −157 | 146 |
| 14 Other Asia | 918 | 2,072 | −14,530 | −202 | 1,563 | −611 | −3,949 | −2,905 | −4,112 | −684 |
| 15 Japan | −372 | 4,787 | −3,017 | −1,422 | 555 | −208 | −540 | −306 | 214 | 469 |
| 16 Africa | −85 | 472 | 784 | 83 | 128 | 275 | 204 | −14 | 159 | −98 |
| 17 Other countries | −57 | 342 | −919 | −112 | −344 | −68 | −385 | −134 | 160 | −23 |
| **18 Nonmonetary international and regional organizations** | **−74** | **−157** | **−368** | **−4** | **−21** | **−20** | **−25** | **−214** | **1** | **−43** |
| BONDS[2] | | | | | | | | | | |
| 19 Foreign purchases | 393,953 | 610,116 | 654,469 | 70,079 | 76,452 | 65,495 | 74,100 | 73,772[r] | 67,229[r] | 102,374 |
| 20 Foreign sales | 268,487 | 475,958 | 516,206 | 50,208 | 52,225 | 52,584 | 53,167 | 62,213 | 58,678 | 92,746 |
| **21 Net purchases, or sales (−)** | **125,466** | **134,158** | **138,263** | **19,871** | **24,227** | **12,911** | **20,933** | **11,559[r]** | **8,551[r]** | **9,628** |
| **22 Foreign countries** | **125,295** | **133,595** | **137,725** | **19,732** | **24,097** | **12,853** | **20,834** | **11,636[r]** | **8,513[r]** | **9,578** |
| 23 Europe | 77,570 | 71,631 | 92,413 | 12,669 | 19,024 | 5,555 | 12,117 | 9,411[r] | 5,513[r] | 14,446 |
| 24 France | 4,460 | 3,300 | 2,532 | 727 | 33 | −17 | 667 | 451 | 233 | 92 |
| 25 Germany | 4,439 | 2,742 | 4,068 | 249 | 1,727 | −133 | 302 | 812 | 139 | 264 |
| 26 Netherlands | 2,107 | 3,576 | 1,944 | 364 | 523 | 532 | 344 | 108 | 32 | 275 |
| 27 Switzerland | 1,170 | 187 | 4,693 | 358 | 772 | 794 | 404 | 234 | 100 | 1,005 |
| 28 United Kingdom | 60,509 | 54,134 | 68,826 | 9,833 | 14,346 | 4,585 | 8,696 | 5,411[r] | 3,624[r] | 11,965 |
| 29 Canada | 4,486 | 6,264 | 5,041 | 400 | 363 | 628 | 607 | 640 | 439 | 441 |
| 30 Latin America and Caribbean | 17,737 | 34,733 | 31,691 | 4,835 | 2,256 | 6,703 | 6,371 | 2,029 | 1,592 | −2,948 |
| 31 Middle East[1] | 1,679 | 2,155 | 1,685 | 522 | 69 | 109 | 162 | 171 | −188 | −58 |
| 32 Other Asia | 23,762 | 16,996 | 6,596 | 1,166 | 2,078 | −106 | 1,266 | −588 | 1,709 | −1,842 |
| 33 Japan | 14,173 | 9,357 | 3,327 | 742 | 2,904 | 460 | 527 | −511 | −10 | −713 |
| 34 Africa | 624 | 1,005 | 76 | −72 | 45 | −31 | 82 | −48 | −17 | −61 |
| 35 Other countries | −563 | 811 | 223 | 212 | 262 | −5 | 229 | 21 | −535 | −400 |
| **36 Nonmonetary international and regional organizations** | **171** | **563** | **538** | **139** | **130** | **58** | **99** | **−77** | **38** | **50** |
| | | | | | Foreign securities | | | | | |
| 37 Stocks, net purchases, or sales (−) | −59,268 | −40,942 | 4,305 | −1,689 | −137 | −3,393 | 2,535 | −3,516[r] | 5,552 | 6,074 |
| 38 Foreign purchases | 450,365 | 756,015 | 709,964 | 81,360 | 80,736 | 80,941 | 88,508 | 82,130[r] | 74,358 | 89,467 |
| 39 Foreign sales | 509,633 | 796,957 | 705,659 | 83,049 | 80,873 | 84,334 | 85,973 | 85,646[r] | 68,806 | 83,393 |
| 40 Bonds, net purchases, or sales (−) | −51,369 | −48,171 | −29,007 | −4,559 | −12,158 | −1,882 | −12,355 | 3,065 | 1,018 | 2,966 |
| 41 Foreign purchases | 1,114,035 | 1,451,704 | 1,120,208 | 128,396 | 118,296 | 110,403 | 151,477 | 118,890 | 139,341 | 152,650 |
| 42 Foreign sales | 1,165,404 | 1,499,875 | 1,149,215 | 132,955 | 130,454 | 112,285 | 163,832 | 115,825 | 138,323 | 149,684 |
| **43 Net purchases, or sales (−), of stocks and bonds** | **−110,637** | **−89,113** | **−24,702** | **−6,248** | **−12,295** | **−5,275** | **−9,820** | **−451[r]** | **6,570** | **9,040** |
| **44 Foreign countries** | **−109,766** | **−88,921** | **−24,632** | **−6,220** | **−12,331** | **−5,443** | **−9,794** | **−380[r]** | **6,587** | **9,041** |
| 45 Europe | −57,139 | −29,874 | −5,196 | 2,898 | −1,457 | −2,035 | −7,240 | 2,328[r] | 1,211 | 5,755 |
| 46 Canada | −7,685 | −3,085 | 2,061 | −1,783 | −475 | −1,335 | 214 | 2,195 | 2,631 | −1,158 |
| 47 Latin America and Caribbean | −11,507 | −25,258 | −12,591 | 618 | −6,108 | −1,092 | −2,548 | −4,864 | −1,205 | 1,206 |
| 48 Asia | −27,831 | −25,123 | −6,634 | −7,902 | −3,520 | −779 | 516 | −64 | 4,227 | 3,399 |
| 49 Japan | −5,887 | −10,001 | −3,682 | −7,118 | 1,265 | −681 | −38 | −316 | 1,741 | 2,088 |
| 50 Africa | −1,517 | −3,293 | −1,364 | −152 | −302 | −79 | −32 | −269 | −122 | −163 |
| 51 Other countries | −4,087 | −2,288 | −908 | 101 | −469 | −123 | −704 | 294 | −155 | 2 |
| **52 Nonmonetary international and regional organizations** | **−871** | **−192** | **−70** | **−28** | **36** | **168** | **−26** | **−71** | **−17** | **−1** |

1. Comprises oil-exporting countries as follows: Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (Trucial States).

2. Includes state and local government securities and securities of U.S. government agencies and corporations. Also includes issues of new debt securities sold abroad by U.S. corporations organized to finance direct investments abroad.

## 3.25 MARKETABLE U.S. TREASURY BONDS AND NOTES Foreign Transactions[1]

Millions of dollars; net purchases, or sales (−) during period

| Area or country | 1996 | 1997 | 1998 Jan.–Sept. | 1998 Mar. | Apr. | May | June | July | Aug. | Sept.[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 **Total estimated** | **232,241** | **184,171** | **16,061** | **−4,091** | **6,078** | **21,267** | **1,674** | **−3,578** | **−15,776** | **−4,984** |
| 2 Foreign countries | 234,083 | 183,688 | 15,277 | −5,287 | 6,769 | 21,116 | 1,978 | −3,631 | −15,776 | −4,975 |
| 3 Europe | 118,781 | 144,921 | 21,025 | −857 | 6,530 | 788 | 715 | −5,903 | −2,804 | −2,457 |
| 4 Belgium and Luxembourg | 1,429 | 3,427 | 1,744 | 704 | −165 | 176 | −513 | 215 | 667 | 104 |
| 5 Germany | 17,980 | 22,471 | −1,058 | 1,897 | −829 | −143 | −1,181 | 82 | −1,799 | 904 |
| 6 Netherlands | −582 | 1,746 | −4,845 | −1,733 | 130 | 341 | 731 | −265 | −3,081 | −579 |
| 7 Sweden | 2,242 | −465 | 126 | 400 | −202 | 184 | 335 | 239 | −152 | −330 |
| 8 Switzerland | 328 | 6,028 | 1,722 | 170 | −483 | 44 | −973 | −827 | −680 | 362 |
| 9 United Kingdom | 65,658 | 98,253 | 20,523 | −3,705 | 5,785 | −2,720 | −1,426 | −5,769 | 8,019 | 2,585 |
| 10 Other Europe and former U.S.S.R. | 31,726 | 13,461 | 2,813 | 1,410 | 2,294 | 2,906 | 3,742 | 422 | −5,778 | −5,503 |
| 11 Canada | 2,331 | −811 | −2,432 | −517 | 1,457 | −223 | −66 | −569 | −2,088 | −691 |
| 12 Latin America and Caribbean | 20,785 | −2,554 | −1,471 | −8,383 | −7,981 | 20,033 | 2,578 | 949 | −5,940 | −1,233 |
| 13 Venezuela | −69 | 655 | −509 | −128 | 14 | −339 | 693 | 450 | −1,308 | 6 |
| 14 Other Latin America and Caribbean | 8,439 | −549 | 16,396 | −11 | −632 | −335 | 3,513 | 2,305 | 3,914 | 2,982 |
| 15 Netherlands Antilles | 12,415 | −2,660 | −17,358 | −8,244 | −7,363 | 20,707 | −1,628 | −1,806 | −8,546 | −4,221 |
| 16 Asia | 89,735 | 39,567 | 1,645 | 3,522 | 7,966 | 1,455 | −1,153 | 1,327 | −3,856 | −207 |
| 17 Japan | 41,366 | 20,360 | 754 | −168 | 6,301 | 1,582 | −2,442 | 774 | 299 | 128 |
| 18 Africa | 1,083 | 1,524 | 547 | 154 | −18 | 13 | 145 | −23 | 62 | 81 |
| 19 Other | 1,368 | 1,041 | −4,037 | 794 | −1,185 | −950 | −241 | 588 | −1,150 | −468 |
| 20 Nonmonetary international and regional organizations | −1,842 | 483 | 784 | 1,196 | −691 | 151 | −304 | 53 | 0 | −9 |
| 21 International | −1,390 | 621 | −116 | 900 | −715 | 136 | −226 | −135[r] | −10 | −288 |
| 22 Latin American regional | −779 | 170 | 203 | 10 | −4 | −1 | 0 | 192 | 8 | −5 |
| MEMO | | | | | | | | | | |
| 23 Foreign countries | 234,083 | 183,688 | 15,277 | −5,287 | 6,769 | 21,116 | 1,978 | −3,631 | −15,776 | −4,975 |
| 24 Official institutions | 85,807 | 43,959 | −21,995 | 6,133 | 1,162 | 898 | −3,486 | 469 | −16,920 | −10,304 |
| 25 Other foreign | 148,276 | 139,729 | 37,272 | −11,420 | 5,607 | 20,218 | 5,464 | −4,100 | 1,144 | 5,329 |
| *Oil-exporting countries* | | | | | | | | | | |
| 26 Middle East[2] | 10,232 | 7,636 | −14,069 | 1,325 | −380 | 951 | −1,388 | −2,578 | −4,160 | −5,837 |
| 27 Africa[3] | 1 | −12 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

1. Official and private transactions in marketable U.S. Treasury securities having an original maturity of more than one year. Data are based on monthly transactions reports. Excludes nonmarketable U.S. Treasury bonds and notes held by official institutions of foreign countries.
2. Comprises Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (Trucial States).
3. Comprises Algeria, Gabon, Libya, and Nigeria.

## 3.26 DISCOUNT RATES OF FOREIGN CENTRAL BANKS[1]

Percent per year, averages of daily figures

| Country | Rate on Nov. 30, 1998: Percent | Month effective | Country | Rate on Nov. 30, 1998: Percent | Month effective |
|---|---|---|---|---|---|
| Austria | 2.5 | Apr. 1996 | Germany | 2.5 | Apr. 1996 |
| Belgium | 2.75 | Oct. 1997 | Italy | 4.0 | Oct. 1998 |
| Canada | 5.25 | Nov. 1998 | Japan | .5 | Sept. 1995 |
| Denmark | 4.25 | Sept. 1998 | Netherlands | 2.5 | Apr. 1996 |
| France[2] | 3.3 | Oct. 1997 | Switzerland | 1.0 | Sept. 1996 |

1. Rates shown are mainly those at which the central bank either discounts or makes advances against eligible commercial paper or government securities for commercial banks or brokers. For countries with more than one rate applicable to such discounts or advances, the rate shown is the one at which it is understood that the central bank transacts the largest proportion of its credit operations.
2. Since February 1981, the rate has been that at which the Bank of France discounts Treasury bills for seven to ten days.

## 3.27 FOREIGN SHORT-TERM INTEREST RATES[1]

Percent per year, averages of daily figures

| Type or country | 1995 | 1996 | 1997 | 1998 May | June | July | Aug. | Sept. | Oct. | Nov. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Eurodollars | 5.93 | 5.38 | 5.61 | 5.57 | 5.57 | 5.57 | 5.56 | 5.39 | 5.17 | 5.21 |
| 2 United Kingdom | 6.63 | 5.99 | 6.81 | 7.37 | 7.61 | 7.67 | 7.61 | 7.35 | 7.11 | 6.84 |
| 3 Canada | 7.14 | 4.49 | 3.59 | 5.09 | 5.10 | 5.10 | 5.35 | 5.66 | 5.43 | 5.42 |
| 4 Germany | 4.43 | 3.21 | 3.24 | 3.55 | 3.49 | 3.46 | 3.42 | 3.40 | 3.50 | 3.56 |
| 5 Switzerland | 2.94 | 1.92 | 1.58 | 1.52 | 1.81 | 1.98 | 1.68 | 1.43 | 1.20 | 1.44 |
| 6 Netherlands | 4.30 | 2.91 | 3.25 | 3.53 | 3.51 | 3.46 | 3.43 | 3.33 | 3.28 | 3.48 |
| 7 France | 6.43 | 3.81 | 3.35 | 3.50 | 3.47 | 3.44 | 3.44 | 3.43 | 3.45 | 3.49 |
| 8 Italy | 10.43 | 8.79 | 6.86 | 4.98 | 4.99 | 4.75 | 4.78 | 4.86 | 4.40 | 3.82 |
| 9 Belgium | 4.73 | 3.19 | 3.40 | 3.67 | 3.62 | 3.59 | 3.48 | 3.42 | 3.41 | 3.47 |
| 10 Japan | 1.20 | .58 | .58 | .56 | .57 | .67 | .69 | .45 | .49 | .52 |

1. Rates are for three-month interbank loans, with the following exceptions: Canada, finance company paper; Belgium, three-month Treasury bills; and Japan, CD rate.

## 3.28 FOREIGN EXCHANGE RATES AND INDEXES OF THE FOREIGN EXCHANGE VALUE OF THE U.S. DOLLAR[1]

Currency units per dollar except as noted

| Item | 1995 | 1996 | 1997 | 1998 June | 1998 July | 1998 Aug. | 1998 Sept. | 1998 Oct. | 1998 Nov.[r] |
|---|---|---|---|---|---|---|---|---|---|
| | Exchange Rates | | | | | | | | |
| COUNTRY/CURRENCY UNIT | | | | | | | | | |
| 1 Australia/dollar[2] | 74.07 | 78.28 | 74.37 | 60.46 | 61.80 | 58.88 | 58.89 | 61.79 | 63.49 |
| 2 Austria/schilling | 10.076 | 10.589 | 12.206 | 12.615 | 12.650 | 12.574 | 11.955 | 11.524 | 11.840 |
| 3 Belgium/franc | 29.47 | 30.97 | 35.81 | 36.98 | 37.07 | 36.85 | 35.05 | 33.81 | 34.71 |
| 4 Brazil/real | 0.9162 | 1.0051 | 1.0779 | 1.1543 | 1.1614 | 1.1717 | 1.1805 | 1.1889 | 1.1932 |
| 5 Canada/dollar | 1.3725 | 1.3638 | 1.3849 | 1.4655 | 1.4869 | 1.5346 | 1.5218 | 1.5452 | 1.5404 |
| 6 China, P.R./yuan | 8.3700 | 8.3389 | 8.3193 | 8.3100 | 8.3100 | 8.3100 | 8.3055 | 8.2778 | 8.2778 |
| 7 Denmark/krone | 5.5999 | 5.8003 | 6.6092 | 6.8294 | 6.8499 | 6.8067 | 6.4717 | 6.2294 | 6.3960 |
| 8 Finland/markka | 4.3763 | 4.5948 | 5.1956 | 5.4503 | 5.4653 | 5.4340 | 5.1734 | 4.9845 | 5.1163 |
| 9 France/franc | 4.9864 | 5.1158 | 5.8393 | 6.0118 | 6.0280 | 5.9912 | 5.6969 | 5.4925 | 5.6422 |
| 10 Germany/deutsche mark | 1.4321 | 1.5049 | 1.7348 | 1.7928 | 1.7976 | 1.7869 | 1.6990 | 1.6381 | 1.6827 |
| 11 Greece/drachma | 231.68 | 240.82 | 273.28 | 304.24 | 299.35 | 301.21 | 292.47 | 281.64 | 282.64 |
| 12 Hong Kong/dollar | 7.7357 | 7.7345 | 7.7431 | 7.7471 | 7.7483 | 7.7494 | 7.7480 | 7.7483 | 7.7432 |
| 13 India/rupee | 32.42 | 35.51 | 36.36 | 42.37 | 42.61 | 42.84 | 42.58 | 42.39 | 42.43 |
| 14 Ireland/pound[2] | 160.35 | 159.95 | 151.63 | 140.51 | 139.88 | 140.37 | 147.24 | 152.21 | 147.77 |
| 15 Italy/lira | 1,629.45 | 1,542.76 | 1,703.81 | 1,766.32 | 1,772.42 | 1,763.01 | 1,678.92 | 1,620.96 | 1,664.91 |
| 16 Japan/yen | 93.96 | 108.78 | 121.06 | 140.33 | 140.79 | 144.68 | 134.48 | 121.05 | 120.29 |
| 17 Malaysia/ringgit | 2.5073 | 2.5154 | 2.8173 | 4.0006 | 4.1591 | 4.2036 | 3.8050 | 3.8000 | 3.8000 |
| 18 Mexico/peso | 6.447 | 7.600 | 7.918 | 8.920 | 8.899 | 9.371 | 10.219 | 10.159 | 9.969 |
| 19 Netherlands/guilder | 1.6044 | 1.6863 | 1.9525 | 2.0208 | 2.0267 | 2.0148 | 1.9169 | 1.8479 | 1.8969 |
| 20 New Zealand/dollar[2] | 65.63 | 68.77 | 66.25 | 51.23 | 51.85 | 50.11 | 50.44 | 52.13 | 53.40 |
| 21 Norway/krone | 6.3355 | 6.4594 | 7.0857 | 7.5785 | 7.6246 | 7.7248 | 7.5564 | 7.4294 | 7.4562 |
| 22 Portugal/escudo | 149.88 | 154.28 | 175.44 | 183.58 | 183.93 | 182.99 | 174.19 | 168.01 | 172.52 |
| 23 Singapore/dollar | 1.4171 | 1.4100 | 1.4857 | 1.6941 | 1.7085 | 1.7571 | 1.7226 | 1.6378 | 1.6378 |
| 24 South Africa/rand | 3.6284 | 4.3011 | 4.6072 | 5.3910 | 6.2285 | 6.3198 | 6.0966 | 5.7991 | 5.6511 |
| 25 South Korea/won | 772.69 | 805.00 | 950.77 | 1,397.77 | 1,295.76 | 1,314.29 | 1,375.54 | 1,344.14 | 1,294.01 |
| 26 Spain/peseta | 124.64 | 126.68 | 146.53 | 152.18 | 152.58 | 151.72 | 144.33 | 139.23 | 143.05 |
| 27 Sri Lanka/rupee | 51.047 | 55.289 | 59.026 | 65.150 | 65.908 | 66.642 | 66.260 | 66.345 | 67.578 |
| 28 Sweden/krona | 7.1406 | 6.7082 | 7.6446 | 7.9174 | 7.9942 | 8.1282 | 7.8816 | 7.8395 | 8.0140 |
| 29 Switzerland/franc | 1.1812 | 1.2361 | 1.4514 | 1.4949 | 1.5136 | 1.4933 | 1.4000 | 1.3373 | 1.3852 |
| 30 Taiwan/dollar | 26.496 | 27.468 | 28.775 | 34.553 | 34.387 | 34.731 | 34.646 | 33.121 | 32.603 |
| 31 Thailand/baht | 24.921 | 25.359 | 31.072 | 42.332 | 41.300 | 41.720 | 40.402 | 38.118 | 36.527 |
| 32 United Kingdom/pound[2] | 157.85 | 156.07 | 163.76 | 165.04 | 164.37 | 163.42 | 168.23 | 169.44 | 166.11 |
| 33 Venezuela/bolivar | 174.85 | 417.19 | 488.39 | 543.82 | 558.47 | 571.88 | 583.85 | 570.68 | 569.66 |
| | Indexes[3] | | | | | | | | |
| NOMINAL | | | | | | | | | |
| 34 G-10 (March 1973=100)[4] | 84.25 | 87.34 | 96.38[r] | 100.90 | 101.38 | 101.80 | 97.17 | 93.69 | 95.46 |
| 35 Broad (January 1997=100)[5] | 92.52 | 97.43 | 104.47 | 117.87 | 118.17 | 120.14 | 118.85 | 115.46 | 115.34 |
| 36 Major currencies (March 1973=100)[6] | 81.39 | 85.23 | 91.85 | 98.68 | 99.31 | 100.96 | 96.99 | 93.46 | 94.23 |
| 37 Other important trading partners (January 1997=100)[7] | 92.51 | 98.25 | 104.67 | 125.97 | 125.64 | 127.77 | 131.38 | 129.02 | 127.31 |
| REAL | | | | | | | | | |
| 38 Broad (March 1973=100)[5] | 83.95 | 85.89 | 90.49 | 99.89 | 100.25 | 101.76 | 100.05 | 97.06 | 96.66 |
| 39 Major currencies (March 1973=100)[6] | 80.78 | 85.83 | 93.20 | 100.42[r] | 101.41 | 103.21 | 99.05 | 95.47[r] | 96.27 |
| 40 Other important trading partners (March 1973=100)[7] | 109.80 | 106.57 | 106.51 | 106.42 | 105.91 | 107.14 | 108.77 | 106.42 | 104.24 |

1. Averages of certified noon buying rates in New York for cable transfers. Data in this table also appear in the Board's G.5 (405) monthly statistical release. For ordering address, see inside front cover.

2. Value in U.S. cents.

3. For more information on the indexes of the foreign exchange value of the dollar, see *Federal Reserve Bulletin*, vol. 84 (October 1998), pp. 811–18.

4. Weighted average of the foreign exchange value of the U.S. dollar against the currencies of the other G-10 countries. The weight for each of the ten countries is the 1972–76 average world trade of that country divided by the average world trade of all ten countries combined. Series revised as of August 1978 (see *Federal Reserve Bulletin*, vol. 64 (August 1978), p. 700)

5. Weighted average of the foreign exchange value of the U.S. dollar against the currencies of a broad group of U.S. trading partners. The weight for each currency is computed as an average of U.S. bilateral import shares from and export shares to the issuing country and of a measure of the importance to U.S. exporters of that country's trade in third country markets.

6. Weighted average of the foreign exchange value of the U.S. dollar against a subset of broad index currencies that circulate widely outside the country of issue. The weight for each currency is its broad index weight scaled so that the weights of the subset of currencies in the index sum to one.

7. Weighted average of the foreign exchange value of the U.S. dollar against a subset of broad index currencies that do not circulate widely outside the country of issue. The weight for each currency is its broad index weight scaled so that the weights of the subset of currencies in the index sum to one.

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## 4.31 PRO FORMA FINANCIAL STATEMENTS FOR FEDERAL RESERVE PRICED SERVICES

### A. Pro forma balance sheet

Millions of dollars

| Item | Sept. 30, 1998 | | Sept. 30, 1997 | |
|---|---|---|---|---|
| *Short-term assets* (Note 1) | | | | |
| Imputed reserve requirement on clearing balances | 655.7 | | 646.3 | |
| Investment in marketable securities | 5,901.3 | | 5,816.7 | |
| Receivables | 68.8 | | 66.2 | |
| Materials and supplies | 4.5 | | 2.9 | |
| Prepaid expenses | 17.1 | | 28.7 | |
| Items in process of collection | 4,169.0 | | 5,238.6 | |
| Total short-term assets | | 10,816.4 | | 11,799.4 |
| *Long-term assets* (Note 2) | | | | |
| Premises | 396.4 | | 389.1 | |
| Furniture and equipment | 126.0 | | 132.5 | |
| Leases and leasehold improvements | 22.9 | | 33.7 | |
| Prepaid pension costs | 415.5 | | 334.5 | |
| Total long-term assets | | 960.9 | | 889.8 |
| **Total assets** | | **11,777.3** | | **12,689.1** |
| *Short-term liabilities* | | | | |
| Clearing balances and balances arising from early credit of uncollected items | 6,146.8 | | 6,974.7 | |
| Deferred-availability items | 4,579.2 | | 4,726.8 | |
| Short-term debt | 90.4 | | 97.8 | |
| Total short-term liabilities | | 10.816.4 | | 11,799.4 |
| *Long-term liabilities* | | | | |
| Obligations under capital leases | 0.0 | | .7 | |
| Long-term debt | 190.9 | | 187.8 | |
| Postretirement/postemployment benefits obligation | 214.6 | | 203.8 | |
| Total long-term liabilities | | 405.5 | | 392.3 |
| **Total liabilities** | | **11,221.9** | | **12,191.6** |
| Equity | | 555.5 | | 497.5 |
| **Total liabilities and equity (Note 3)** | | **11,777.3** | | **12,689.1** |

NOTE. Components may not sum to totals because of rounding. The priced services financial statements consist of these tables and the accompanying notes.

(1) SHORT-TERM ASSETS

The imputed reserve requirement on clearing balances held at Reserve Banks by depository institutions reflects a treatment comparable to that of compensating balances held at correspondent banks by respondent institutions. The reserve requirement imposed on respondent balances must be held as vault cash or as nonearning balances maintained at a Reserve Bank; thus, a portion of priced services clearing balances held with the Federal Reserve is shown as required reserves on the asset side of the balance sheet. The remainder of clearing balances is assumed to be invested in three-month Treasury bills, shown as investment in marketable securities.

Receivables are (1) amounts due the Reserve Banks for priced services and (2) the share of suspense-account and difference-account balances related to priced services.

Materials and supplies are the inventory value of short-term assets.

Prepaid expenses include salary advances and travel advances for priced-service personnel.

Items in process of collection is gross Federal Reserve cash items in process of collection (CIPC) stated on a basis comparable to that of a commercial bank. It reflects adjustments for intra-System items that would otherwise be double-counted on a consolidated Federal Reserve balance sheet; adjustments for items associated with non-priced items, such as those collected for government agencies; and adjustments for items associated with providing fixed availability or credit before items are received and processed. Among the costs to be recovered under the Monetary Control Act is the cost of float, or net CIPC during the period (the difference between gross CIPC and deferred-availability items which is the portion of gross CIPC that involves a financing cost), valued at the federal funds rate.

(2) LONG-TERM ASSETS

Consists of long-term assets used solely in priced services, the priced-services portion of long-term assets shared with nonpriced services, and an estimate of the assets of the Board of Governors used in the development of priced services. Effective Jan. 1, 1987, the Reserve Banks implemented the Financial Accounting Standards Board's Statement of Financial Accounting Standards No. 87, *Employers' Accounting for Pensions* (SFAS 87). Accordingly, the Federal Reserve Banks recognized credits to expenses of $20.4 million in the third quarter of 1998, $28.7 million in the second quarter of 1998, $16.2 million in the first quarter of 1998, $15.8 million in the third quarter of 1997, $15.6 million in the second quarter of 1997, $15.6 million in the first quarter of 1997, and corresponding increases in this asset account.

(3) LIABILITIES AND EQUITY

Under the matched-book capital structure for assets that are not "self-financing," short-term assets are financed with short-term debt. Long-term assets are financed with long-term debt and equity in a proportion equal to the ratio of long-term debt to equity for the fifty largest bank holding companies, which are used in the model for the private-sector adjustment factor (PSAF). The PSAF consists of the taxes that would have been paid and the return on capital that would have been provided had priced services been furnished by a private-sector firm. Other short-term liabilities include clearing balances maintained at Reserve Banks and deposit balances arising from float. Other long-term liabilities consist of obligations on capital leases.

## 4.31 PRO FORMA FINANCIAL STATEMENTS FOR FEDERAL RESERVE PRICED SERVICES

### B. Pro forma income statement

Millions of dollars

| Item | Quarter ending Sept. 30, 1998 | | Quarter ending Sept. 30, 1997 | |
|---|---|---|---|---|
| Revenue from services provided to depository institutions (Note 4) | | 205.5 | | 197.8 |
| Operating expenses (Note 5) | | 167.0 | | 166.6 |
| Income from operations | | 38.4 | | 31.1 |
| Inputed costs (Note 6) | | | | |
| Interest on float | 1.8 | | 2.8 | |
| Interest on debt | 4.3 | | 4.4 | |
| Sales taxes | 2.4 | | 2.1 | |
| FDIC insurance | 0.7 | 9.1 | 2.9 | 12.3 |
| Income from operations after imputed costs | | 29.3 | | 18.9 |
| Other income and expenses (Note 7) | | | | |
| Investment income on clearing balances | 89.8 | | 93.5 | |
| Earnings credits | (85.6) | 4.2 | 85.9 | 7.6 |
| Income before income taxes | | 33.5 | | 26.5 |
| Inputed income taxes (Note 8) | | 10.7 | | 8.5 |
| **Net income** | | **22.7** | | **18.0** |
| MEMO | | | | |
| Targeted return on equity (Note 9) | | 17.1 | | 13.5 |
| | **Nine months ending Sept. 30, 1998** | | **Nine months ending Sept. 30, 1997** | |
| Revenue from services provided to depository institutions (Note 4) | | 602.5 | | 586.6 |
| Operating expenses (Note 5) | | 483.9 | | 494.8 |
| Income from operations | | 118.6 | | 91.9 |
| Imputed costs (Note 6) | | | | |
| Interest on float | 11.1 | | 8.9 | |
| Interest on debt | 12.8 | | 13.1 | |
| Sales taxes | 6.1 | | 7.1 | |
| FDIC insurance | 0.7 | 30.7 | 4.0 | 33.1 |
| Income from operations after imputed costs | | 88.0 | | 58.8 |
| Other income and expenses (Note 7) | | | | |
| Investment income on clearing balances | 271.3 | | 273.6 | |
| Earnings credits | (251.2) | 20.2 | (251.6) | 22.0 |
| Income before income taxes | | 108.1 | | 80.8 |
| Imputed income taxes (Note 8) | | 34.7 | | 25.9 |
| **Net income** | | **73.4** | | **54.9** |
| MEMO | | | | |
| Targeted return on equity (Note 9) | | 49.9 | | 40.5 |

NOTE. Components may not sum to totals because of rounding. The priced services financial statements consist of these tables and the accompanying notes.

(4) REVENUE

Revenue represents charges to depository institutions for priced services and is realized from each institution through one of two methods, direct charges to an institution's account or charges against its accumulated earnings credits.

(5) OPERATING EXPENSES

Operating expenses consist of the direct, indirect, and other general administrative expenses of the Reserve Banks for priced services plus the expenses for staff members of the Board of Governors working directly on the development of priced services. The expenses for Board staff members were $.7 million per quarter in the first three quarters of 1998 and 1997. The credit to expenses under SFAS 87 (see note 2) is reflected in operating expenses.

(6) IMPUTED COSTS

Imputed costs consist of interest on float, interest on debt, sales taxes, and the FDIC assessment. Interest on float is derived from the value of float to be recovered, either explicitly or through per-item fees, during the period. Float costs include costs for checks, book-entry securities, noncash collection, ACH, and funds transfers.

Interest is imputed on the debt assumed necessary to finance priced-service assets. The sales taxes and FDIC assessment that the Federal Reserve would have paid had it been a private-sector firm are among the components of the PSAF (see note 3).

The following list shows the daily average recovery of float by the Reserve Banks for the third quarter of 1998 and 1997 in millions of dollars:

| | 1998 | 1997 |
|---|---|---|
| Total float | 386.2 | 480.8 |
| Unrecovered float | 19.7 | 39.1 |
| Float subject to recovery | 366.5 | 441.7 |
| Sources of float recovery | | |
| Income on clearing balances | 36.6 | 44.4 |
| As-of adjustments | 240.2 | 242.2 |
| Direct charges | 113.7 | 99.6 |
| Per-item fees | (23.9) | 55.5 |

Unrecovered float includes float generated by services to government agencies and by other central bank services. Float recovered through income on clearing balances is the result of the increase in investable clearing balances; the increase is produced by a deduction for float for cash items in process of collection, which reduces imputed reserve requirements. The income on clearing balances reduces the float to be recovered through other means. As-of adjustments and direct charges are mid-week closing float and interterritory check float, which may be recovered from depositing institutions through adjustments to the institution's reserve or clearing balance or by valuing the float at the federal funds rate and billing the institution directly. Float recovered through per-item fees is valued at the federal funds rate and has been added to the cost base subject to recovery in the third quarters of 1998 and 1997.

(7) OTHER INCOME AND EXPENSES

Consists of investment income on clearing balances and the cost of earnings credits. Investment income on clearing balances represents the average coupon-equivalent yield on three-month Treasury bills applied to the *total* clearing balance maintained, adjusted for the effect of reserve requirements on clearing balances. Expenses for earnings credits granted to depository institutions on their clearing balances are derived by applying the average federal funds rate to the *required* portion of the clearing balances, adjusted for the net effect of reserve requirements on clearing balances.

(8) INCOME TAXES

Imputed income taxes are calculated at the effective tax rate derived from the PSAF model (see note 3).

(9) RETURN ON EQUITY

Represents the after-tax rate of return on equity that the Federal Reserve would have earned had it been a private business firm, as derived from the PSAF model (see note 3). This amount is adjusted to reflect the recovery of automation consolidation costs of $4.0 million for the third quarter of 1998, $4.1 million for the second quarter of 1998, $2.6 million for the first quarter of 1998, $2.0 million for the third quarter of 1997, $1.9 million for the second quarter of 1997, and $2.3 million for the first quarter of 1997. The Reserve Banks plan to recover these amounts, along with a finance charge, by the end of the year 2001.

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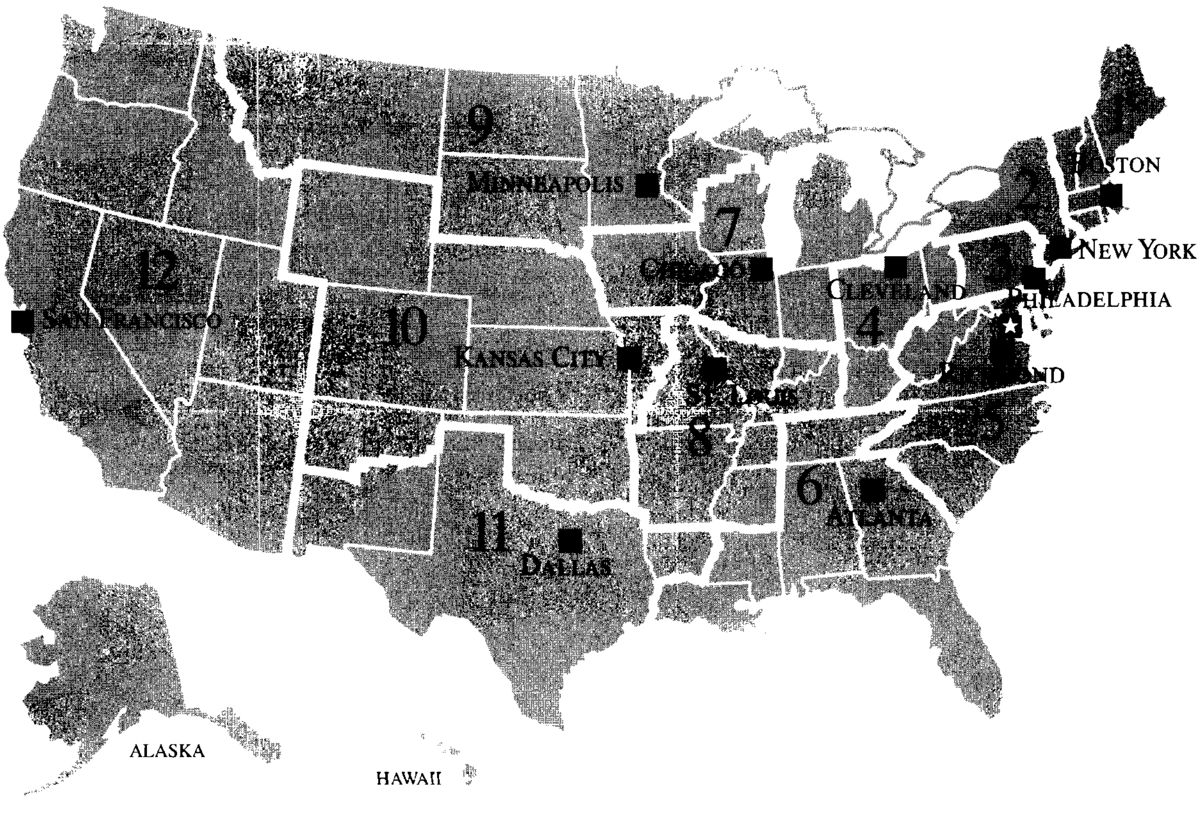


## LEGEND

*Both pages*

■ Federal Reserve Bank city

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*Facing page*

• Federal Reserve Branch city

— Branch boundary

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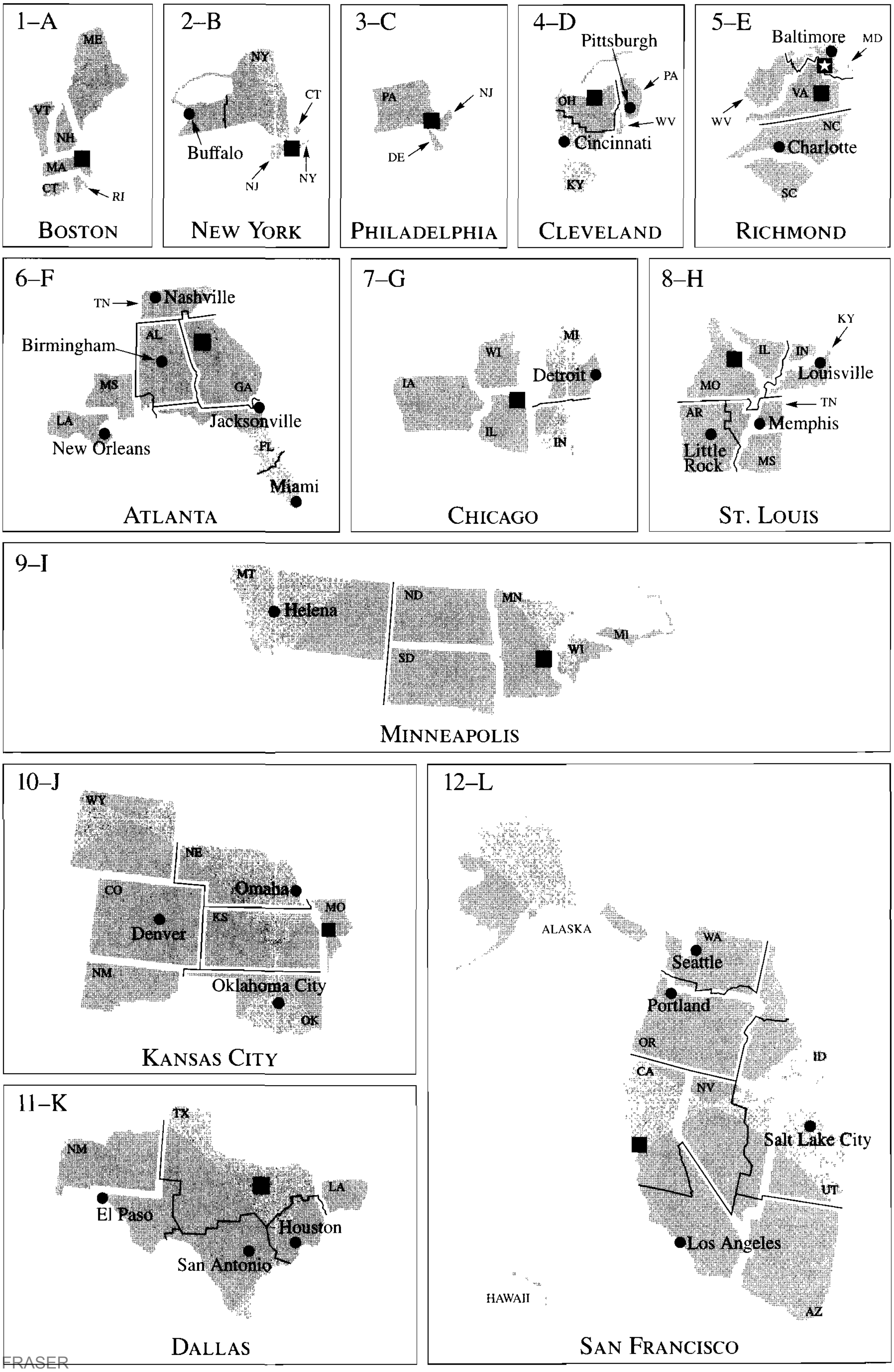
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