Volume 85 □ Number 1 □ January 1999

Federal Reserve BULLETIN

Board of Governors of the Federal Reserve System, Washington, D.C.

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The *Federal Reserve Bulletin* is issued monthly under the direction of the staff publications committee. This committee is responsible for opinions expressed except in official statements and signed articles. It is assisted by the Economic Editing Section headed by S. Ellen Dykes, the Multimedia Technologies Center under the direction of Christine S. Griffith, and Publications Services supervised by Linda C. Kyles.

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

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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, ω_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, φ_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, θ 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, θ, 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 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.

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.

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.

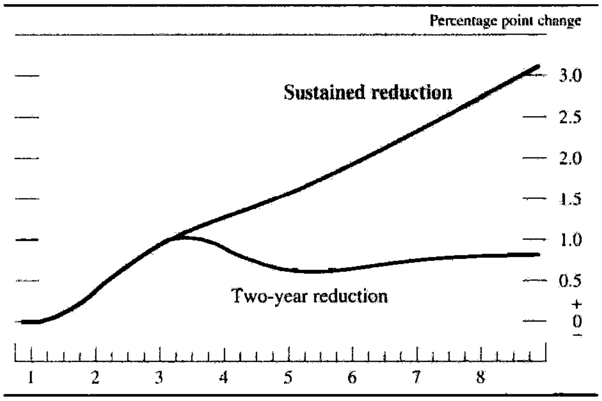
itself in the response of capital stocks to the permanent rise in aggregate income and sales: As in the previous example of a change in financial conditions, investment spending responds quickly. Because private investment spending is a major component of aggregate demand, composing almost one-quarter 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.

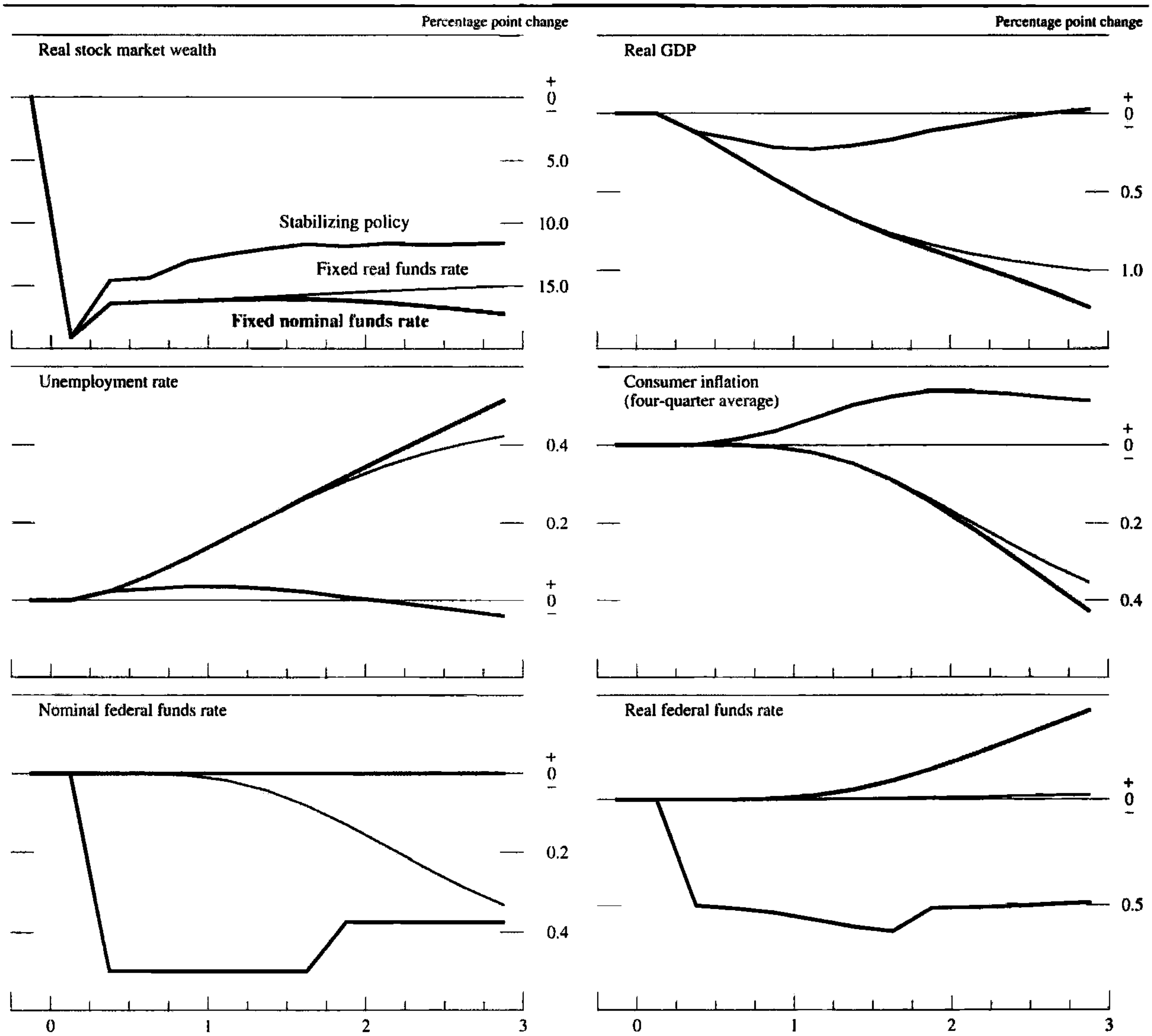
4. For an introduction to DSGE models, see Edward Prescott, "Theory ahead of Business Cycle Measurement," *Federal Reserve Bank of Minneapolis Quarterly Review*, vol. 10 (Fall 1986), pp. 9–21.

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.

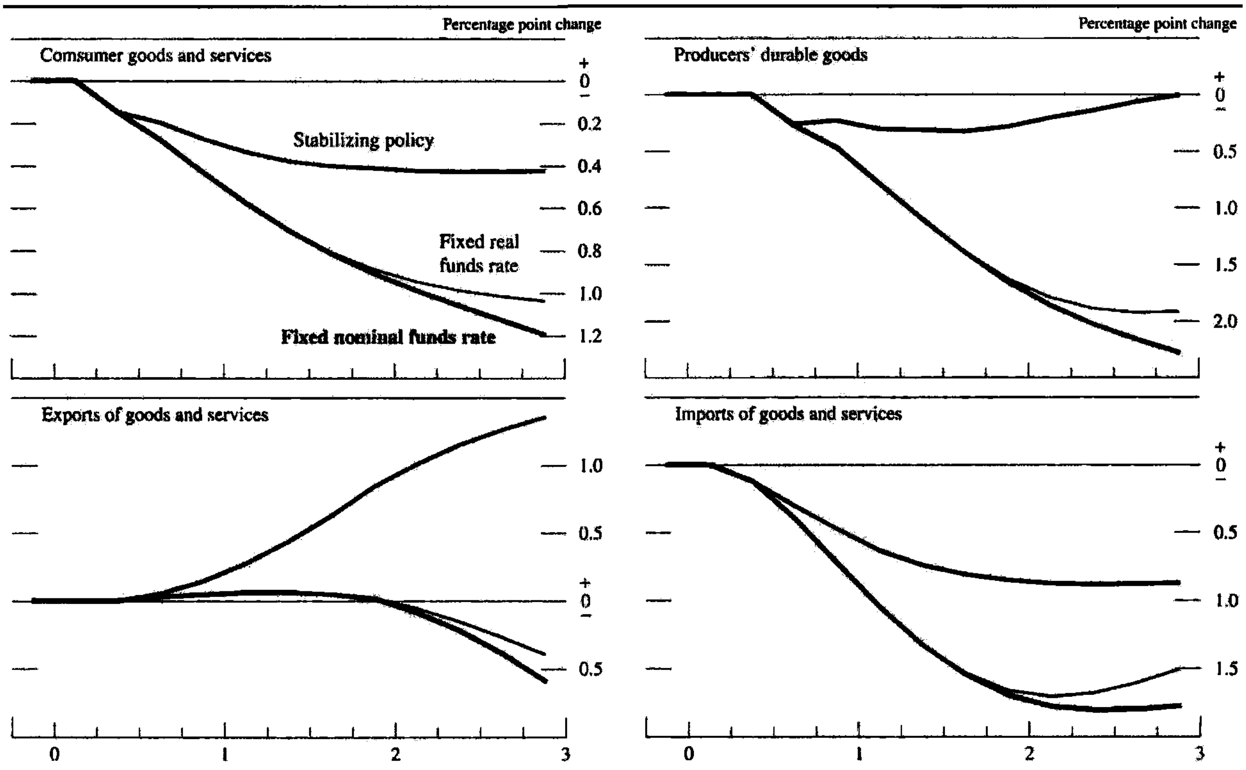
An alternative policy is to fix the real interest rate at its initial level. The lower-left panel of diagram 2 shows a substantial decline in the nominal funds rate associated with this policy (curve for fixed real funds rate). As already noted, however, a recovery in aggregate demand requires that the 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.

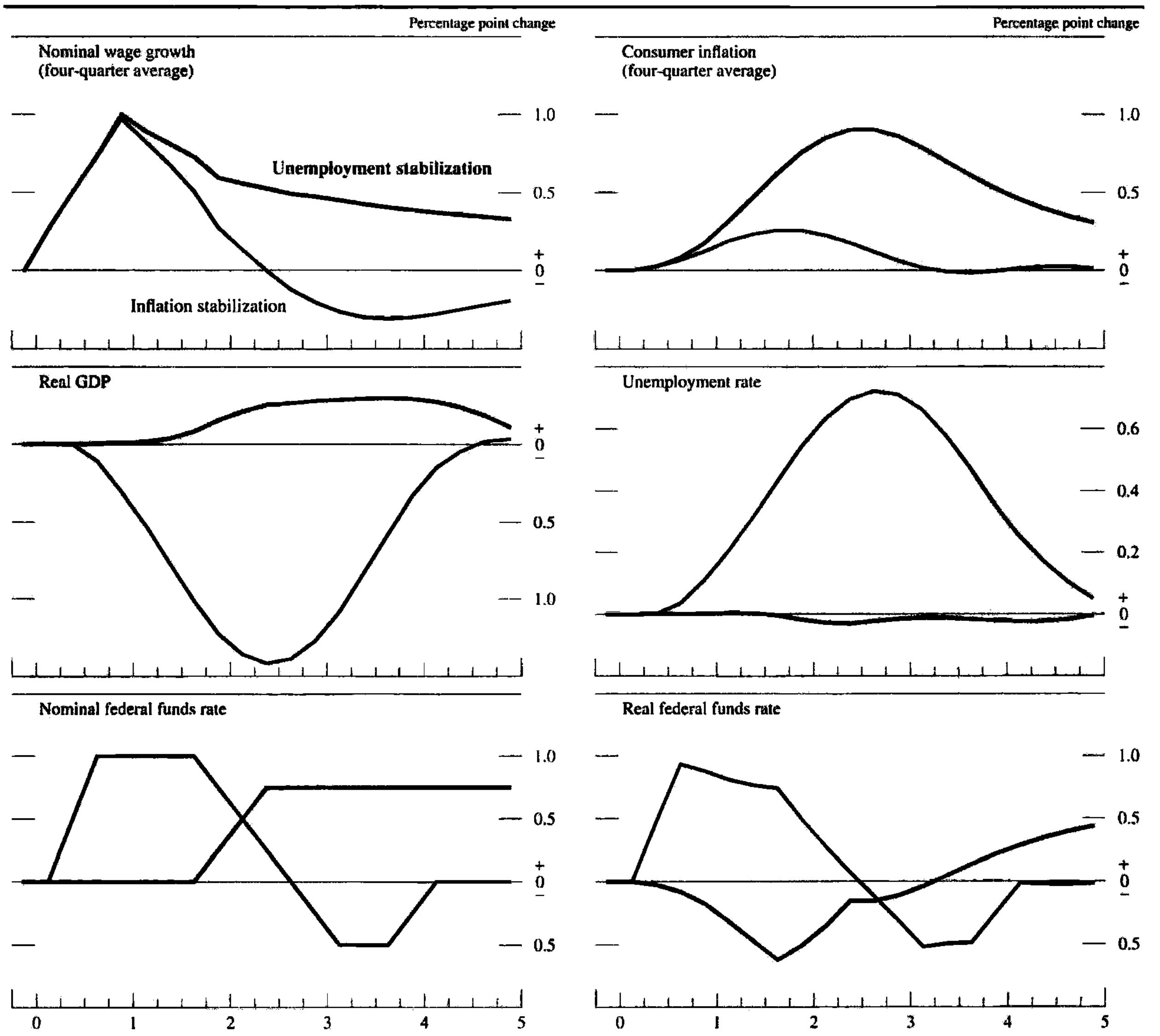
An Acceleration in Wage Compensation

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]

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.

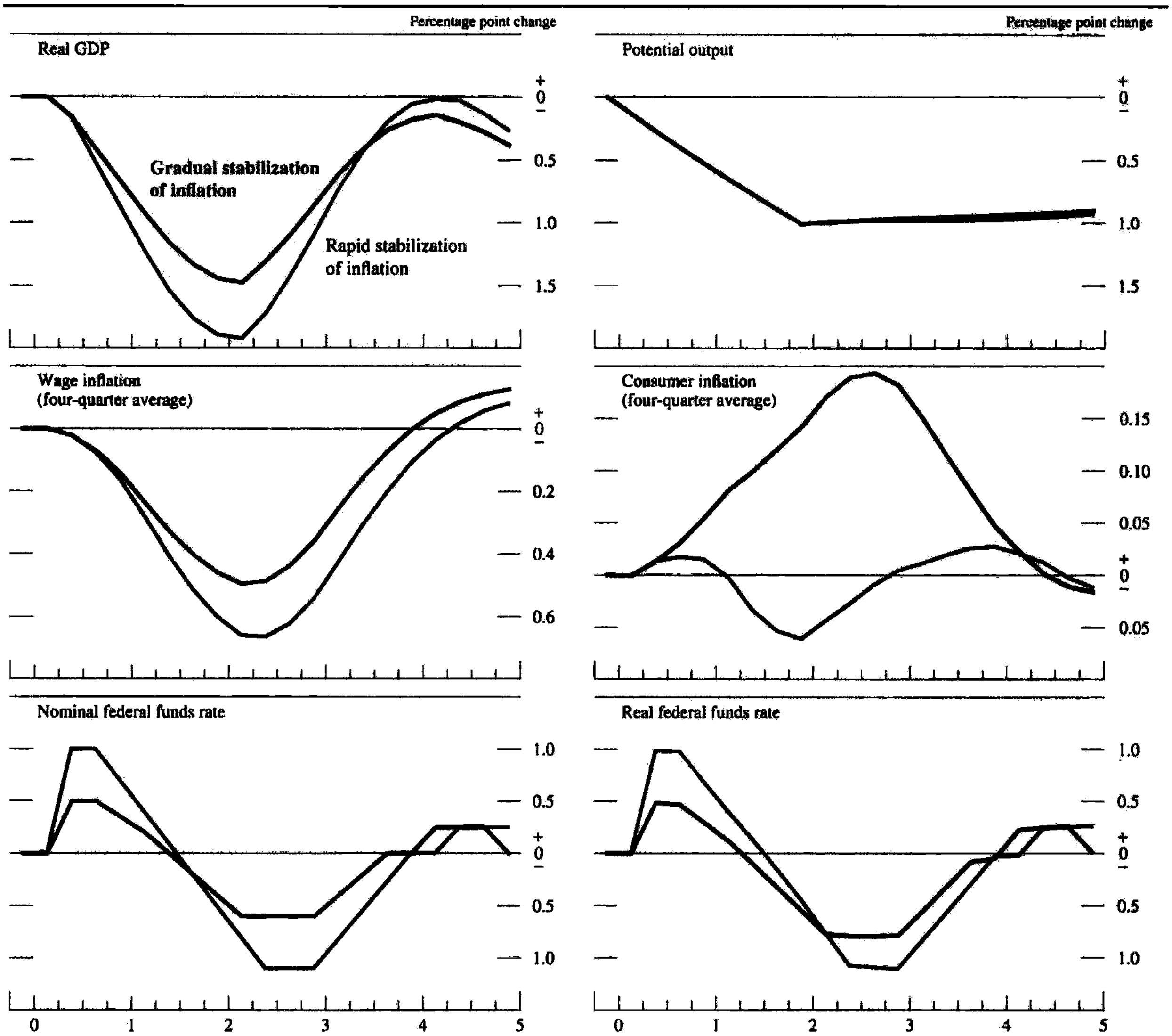
On the price side, the fall in productivity reduces the equilibrium real wage by 1 percent. Re-establishment of labor market equilibrium requires that the real wage fall to this new equilibrium level; monetary policy influences whether the reduction in the real wage occurs through a period of low wage 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

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).

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, π 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.

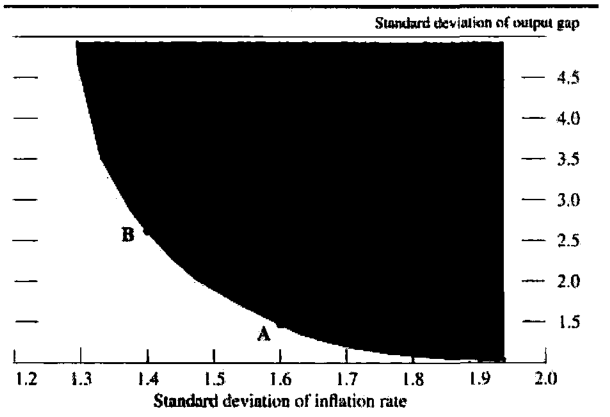
16. For the Taylor rule, $b = 0$, $c = 1.5$, $d = 0.5$, and the intercept a depends on the economy's equilibrium real interest rate and the long-run rate of inflation sought by policymakers.

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).

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.

REVISIONS TO PRODUCTION, CAPACITY, AND UTILIZATION

Production

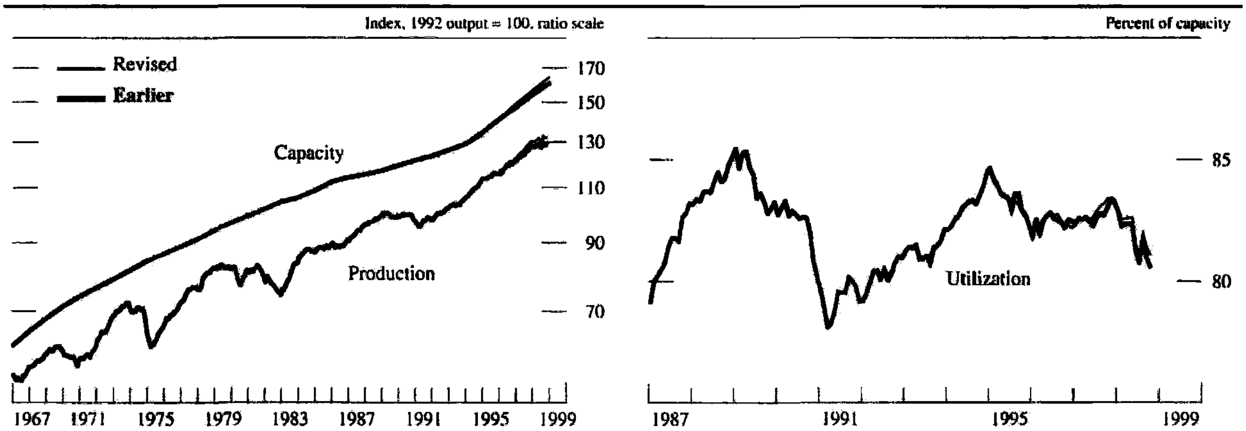
The revised increases in the total IP index are about the same as those shown previously for 1993 and 1994 but are faster for 1995–98 (table A.3). The revised annual rate of growth has averaged 4.5 percent since 1994, 0.8 percentage point higher than previously shown; the upward revision for 1996 forward 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.

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

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).

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.

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.

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 1	Quarter 2	Quarter 3	Quarter 4	Annual avg.[1]
	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.

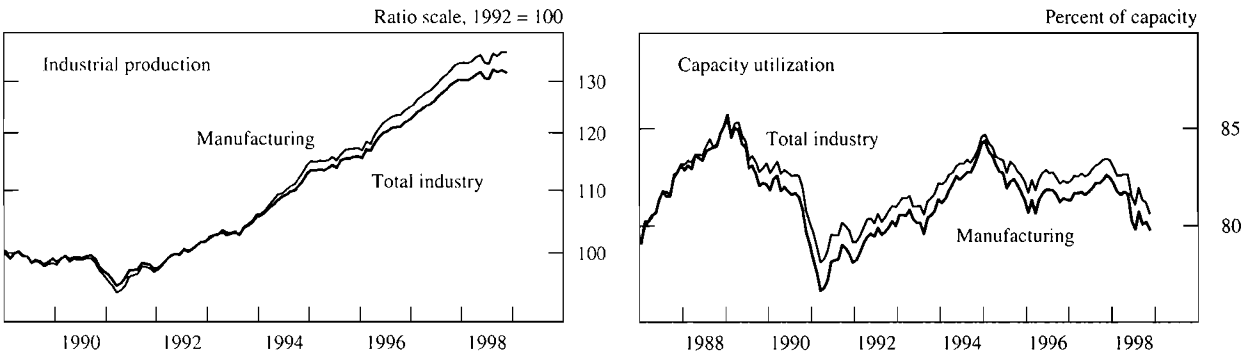
1. Standard Industrial Classification; see table A.4, note 1.

Industrial Production and Capacity Utilization for November 1998

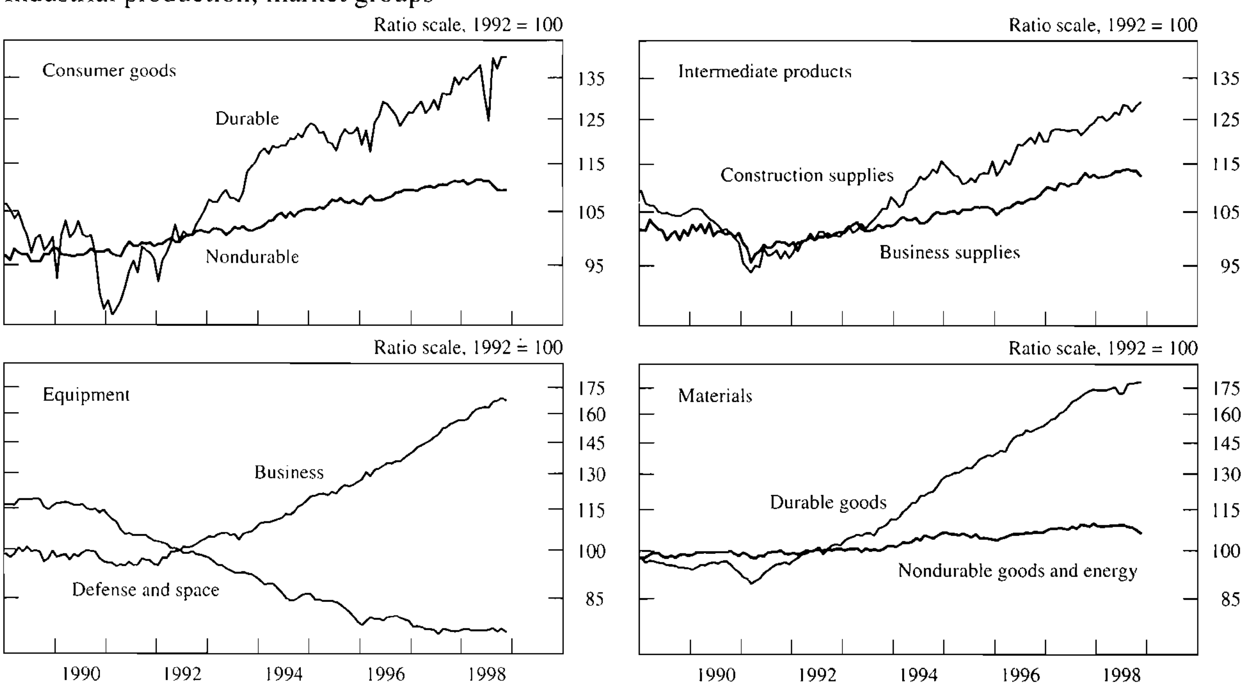
Released for publication December 16

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.

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

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

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 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 NationsBank (DE) Corporation, Charlotte, North Carolina	BankAmerica Corporation, San Francisco, California Bank of America National Trust and Savings Association, San Francisco, California Bank of America, FSB, Portland, Oregon	August 17, 1998	84,858

Index of Orders Issued—Continued

Applicant	Merged or Acquired Bank or Activity	Date of Approval	*Bulletin* Volume and Page
Norwest Corporation, Minneapolis, Minnesota	Star Bancshares, Inc., Austin, Texas Star Bancshares of Nevada, Inc., Carson City, Nevada 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 Scotland Savings Bank, SSB, Laurinburg, North Carolina	November 5, 1998
Wells Fargo & Company, San Francisco, California	Franklin Bancshares, Inc., Franklin, Texas 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 Beulah Bancorporation, Inc., Sioux Falls, South Dakota	Robinson Bank Holding Company, Robinson, North Dakota 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 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 First Missouri Bancshares, Inc., Brookfield, Missouri 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 Evergreen Bank, N.A., Glens Falls, New York	Boston	October 22, 1998
Belvedere Capital Partners, Inc., San Francisco, California California Community Financial Institutions Fund Limited Partnership, San Francisco, California California Financial Bancorp, Newport Beach, California	Downey Bancorp, Downey, California Downey National Bank, Downey, California 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 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 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 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 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 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 Whatcom State Bank, Ferndale, Washington	San Francisco	October 22, 1998
Greene County Bancorp, MHC, Catskill, New York 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 Kent Bank, Kent, Illinois	Chicago	November 2, 1998

Section 3—Continued

Applicant(s)	Bank(s)	Reserve Bank	Effective Date
Machias Bancorp, MHC, Machias, Maine 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 The Bank of Sussex and Surry, Wakefield, Virginia The Bank of Franklin, Franklin, Virginia	Richmond	October 29, 1998
Mt. Sterling Bancorp, Inc., Mt. Sterling, Illinois	Mt. Sterling Bancshares, Inc., Mt. Sterling, Illinois 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 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 Meigs County Bank, Decatur, Tennessee Saint James Bancorporation, Inc., Lutcher, Louisiana Saint James Bank and Trust Company, Lutcher, Louisiana Bullsboro Bancshares, Inc., Newnan, Georgia The Bank of Newnan, Newnan, Georgia VB&T Bancshares Corp., Valdosta, Georgia Valdosta Bank and Trust, Valdosta, Georgia	Atlanta	November 3, 1998
Ridgewood Financial MHC, Ridgewood, New Jersey 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 First National Bank of Central California, Salinas, California 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 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 National Bank of Commerce, Berkeley, Illinois	Chicago	November 2, 1998
Synovus Financial Corp., Columbus, Georgia 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 Independent Bancshares, Inc., Red Bay, Alabama	Community Spirit Bancshares, Inc., Belmont, Mississippi 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 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 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 Community Financial Centers, Inc., Venice, Florida Community Investment Centers Inc., Venice, Florida	Atlanta	October 28, 1998
Dresdner Bank AG, Frankfurt, Germany 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 Machias Bancorp, Inc., Machias, Maine MSB Leasing, Inc., Machias, Maine	M&M Consulting, LLC, Bangor, Maine	Boston	November 2, 1998
Mutual Bancorp of the Berkshires, Inc., Pittsfield, Massachusetts United Financial Group, Inc. Pittsfield, Massachusetts	Lenox Savings Bank, Lenox, Massachusetts 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 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 Citizens Bank, National Association, Shawano, Wisconsin Wisconsin Finance Corporation, Shawano, Wisconsin 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.

Financial and Business Statistics

Guide to Tabular Presentation

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

Reserve classification	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 Sept. 30	Oct. 7	Oct. 14	Oct. 21	Oct. 28	End of month 1998 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.
	Seasonally adjusted											
ADJUSTED FOR CHANGES IN RESERVE REQUIREMENTS[2]												
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	Aug.	Sept.	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.	1998 Mar.	1998 Apr.	1998 May	1998 June	1998 July	1998 Aug.	1998 Sept.	1998 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		Calendar year						
	1997	1998	1996	1997		1998	1998		
			H2	H1	H2	H1	Aug.	Sept.	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	137,256r	141,855r	187,521r	120,894r	151,592	141,650	130,825	143,434	151,181	114,620	124,634
3 More than five years	59,741	77,455r	85,071r	105,015r	74,135r	85,936	84,597	85,452	118,793	105,846	84,090	77,072
4 Inflation-indexed	1,205	717r	1,173r	862r	1,212r	1,657	817	1,140	2,373	1,269	1,631	949
Federal agency												
5 Discount notes	35,439	37,530	46,151r	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	1,127r	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	89,908r	77,327	111,619r	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	112,136r	117,747r	159,536r	101,700r	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	59,243r	52,272	79,753r	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	1,984r	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	6,152r	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.	May	June	July	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.	Apr.	May	June	July	Aug.	Sept.	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.	Mar.	Apr.	May	June	July	Aug.[r]	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 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 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 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 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.	1998 May	1998 June	1998 July	1998 Aug.	1998 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.	May	June	July	Aug.	Sept.	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 Q2	1997 Q3	1997 Q4	1998 Q1	1998 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 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2[r]	1998 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**	**13,013.7r**	**13,714.1r**	**14,440.8r**	**15,208.8r**	**14,608.2r**	**14,727.5r**	**14,931.5r**	**15,208.8r**	**15,440.4r**	**15,636.0r**	**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	3,830.8r	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	3,804.8r	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	9,521.4r	10,077.3r	10,659.0r	11,403.9r	10,778.4r	10,966.9r	11,160.2	11,403.9r	11,609.7r	11,887.1r	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	1,429.3r	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	1,035.6r	964.5	1,000.2	1,000.1	1,035.6r	1,051.6r	1,097.0r	1,123.9
10 Other loans and advances	669.6	736.9	770.6	839.3r	784.4	788.5r	802.9r	839.3r	865.6r	873.8r	887.6
11 Mortgages	4,374.1r	4,578.4r	4,897.2r	5,239.3	4,950.6r	5,026.8r	5,142.7	5,239.3	5,337.4r	5,458.6r	5,596.9
12 Home	3,355.5r	3,529.4r	3,761.0r	4,029.3	3,805.7r	3,860.6r	3,956.8	4,029.3	4,101.3r	4,192.4r	4,297.6
13 Multifamily residential	265.6	273.6r	289.9r	301.4	290.9r	294.2	295.8	301.4	306.4	312.0	317.7
14 Commercial	670.0r	690.8r	759.1r	818.3	766.3r	783.4r	800.3r	818.3	838.3	861.2r	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	1,236.1r	1,256.9r	1,288.7
By borrowing sector											
17 Household	4,452.5r	4,801.1r	5,142.7r	5,500.9r	5,177.1r	5,268.6r	5,379.0r	5,500.9r	5,558.5r	5,683.7r	5,823.5
18 Nonfinancial business	3,947.3r	4,206.0r	4,452.9r	4,783.5r	4,532.3r	4,612.2r	4,685.7r	4,783.5r	4,906.9r	5,032.5r	5,142.7
19 Corporate	2,683.2r	2,915.1r	3,115.3r	3,376.1r	3,184.3r	3,241.9r	3,297.4r	3,376.1r	3,479.9r	3,575.5r	3,656.7
20 Nonfarm noncorporate	1,121.8	1,145.8	1,187.7r	1,251.2r	1,199.7r	1,216.8r	1,232.9r	1,251.2r	1,271.6r	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	1,170.8r	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**	**606.6r**	**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	424.9r	416.2
26 Bank loans n.e.c.	26.1	34.6	43.7	52.1	43.5	46.4	48.2	52.1	53.4r	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**	**13,384.5r**	**14,156.0r**	**14,959.6r**	**15,778.4r**	**15,132.5r**	**15,266.7r**	**15,489.2r**	**15,778.4r**	**16,024.5r**	**16,242.6r**	**16,465.5**
	Financial sectors										
29 **Total credit market debt owed by financial sectors**	**3,822.2**	**4,281.2**	**4,837.3**	**5,448.6r**	**4,916.5**	**5,084.9r**	**5,205.3r**	**5,448.6r**	**5,653.5r**	**5,911.5r**	**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	2,627.5r	2,281.8	2,378.6r	2,458.8r	2,627.5r	2,775.6r	2,930.3r	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	1,560.0r	1,396.5	1,457.6r	1,478.1r	1,560.0r	1,634.7r	1,732.5r	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	159.6r	169.6
41 Bank holding companies	133.6	148.0	150.0	168.6	151.6	160.5	164.0	168.6	181.2	190.5r	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	1,089.3r	889.9	917.9r	989.0r	1,089.3r	1,147.2r	1,236.7r	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	413.0r	413.1
	All sectors										
53 **Total credit market debt, domestic and foreign**	**17,206.8r**	**18,437.2r**	**19,797.0r**	**21,227.0**	**20,049.0r**	**20,351.5r**	**20,694.5**	**21,227.0**	**21,678.0r**	**22,154.1r**	**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	6,708.6r	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	1,429.3r	1,440.0
57 Corporate and foreign bonds	2,504.0	2,823.6	3,131.7	3,444.0r	3,166.8	3,259.1r	3,335.3r	3,444.0r	3,561.5r	3,726.4r	3,784.5
58 Bank loans n.e.c.	834.9	949.6	1,041.7	1,171.0r	1,078.6	1,115.8	1,123.1	1,171.0r	1,192.3r	1,241.8r	1,279.6
59 Other loans and advances	860.9	931.1	993.6	1,095.8r	1,002.3	1,022.5r	1,044.9r	1,095.8r	1,128.2r	1,154.3r	1,187.5
60 Mortgages	4,392.8r	4,602.7r	4,929.4r	5,279.3	4,984.3r	5,062.5r	5,180.9	5,279.3	5,379.4r	5,502.6r	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	1,236.1r	1,256.9r	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.	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 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	1998[r]			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	.1[r]	.4	−.4	.4	.4	135.5
9 Consumer energy	−1.9	−10.1	−5.7	−27.0	−1.1	−10.2	−1.2[r]	−.3[r]	−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	−.1[r]	.1	−.3	.4	.0	138.0
Intermediate materials												
12 Excluding foods and feeds	−.2	−2.3	−.6	−4.4	−1.3	−1.9	−.3[r]	−.1[r]	−.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	.6[r]	−3.4[r]	−1.1	−1.9	4.0	103.4
15 Energy	12.2	−29.5	5.4	−53.5	−14.6	−15.2	−8.0[r]	2.8[r]	−5.1	−1.7	1.9	65.4
16 Other	1.8	−13.7	−8.2	−13.6	−5.6	−18.3	−.4[r]	−1.7[r]	−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		1998		
				Q3	Q4	Q1	Q2	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	1998 Apr	1998 May	1998 June	1998 July	1998 Aug.	1998 Sept.[p]
AREA										
50 **Total, all foreigners**	**1,099,549**	**1,162,148**	**1,283,686**	**1,255,075**	**1,270,626**	**1,260,273**	**1,288,032[r]**	**1,306,488[r]**	**1,341,622[r]**	**1,348,596**
51 **Foreign countries**	**1,088,510**	**1,148,176**	**1,271,996**	**1,239,829**	**1,255,732**	**1,246,087**	**1,273,929[r]**	**1,292,174[r]**	**1,326,434[r]**	**1,333,397**
52 Europe	362,819	376,590	420,438	390,750	406,391	405,348	402,103[r]	431,783[r]	457,487[r]	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	39,071[r]	44,861	39,362	48,613
68 Turkey	4,124	6,738	4,054	4,154	4,340	4,467	4,894[r]	5,077[r]	4,317[r]	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	25,245[r]	28,451[r]	30,637[r]	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	568,228[r]	564,388[r]	557,071[r]	560,067
74 Argentina	12,235	13,877	20,199	18,835	17,766	16,938	18,502[r]	21,010[r]	21,655[r]	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	35,345[r]	34,292[r]	27,824	18,496
78 British West Indies	239,083	251,465	276,389	261,542	273,565	277,929	295,321	290,342[r]	291,470[r]	298,530
79 Chile	2,826	2,915	4,072	3,975	4,330	4,230	4,356[r]	4,987[r]	4,726[r]	5,725
80 Colombia	3,659	3,256	3,652	4,200	4,212	4,383	4,805	4,023	4,102[r]	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	1,616[r]	1,772[r]	1,608[r]	1,540
83 Guatemala	1,276	1,282	1,494	1,438	1,478	1,353	1,363	1,273	1,237[r]	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	3,675[r]	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	20,125[r]	19,303
91 Other	7,531	8,670	9,626	10,228	10,284	9,984	10,154	9,937	9,744[r]	9,841
92 Asia	240,595	249,083	269,299	275,173	251,423	244,779	254,412[r]	247,952[r]	266,485[r]	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	5,651[r]	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	13,829[r]	13,902[r]	14,532[r]	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	10,735[r]	10,788[r]	10,562[r]	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	2,929[r]	3,049[r]	2,880[r]	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	14,103[r]	14,314[r]	15,188[r]	15,199
116 International[15]	9,300	12,099	10,517	14,331	13,431	12,509	12,548	11,220[r]	12,825[r]	12,769
117 Latin American regional[16]	893	1,339	424	536	762	830	694[r]	750[r]	721[r]	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.	Apr.	May	June	July	Aug.	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.	1998 Apr.	1998 May	1998 June	1998 July[r]	1998 Aug.	1998 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 Sept.	1997 Dec.	1998 Mar.	1998 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 June	1996 Sept.	1996 Dec.	1997 Mar.	1997 June	1997 Sept.	1997 Dec.	1998 Mar.	1998 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.

Guide to Statistical Releases and Special Tables

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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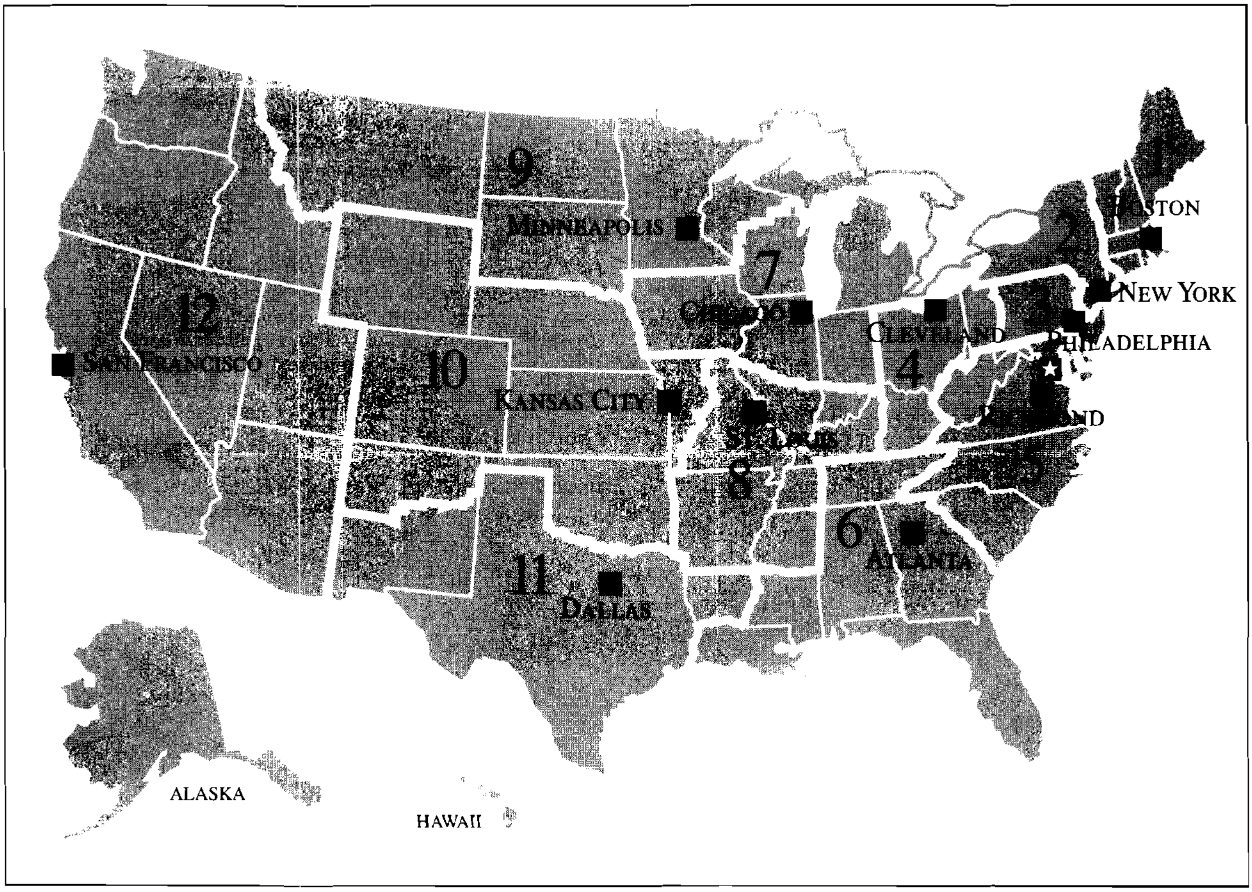

LEGEND

Both pages

■ Federal Reserve Bank city

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Facing page

• Federal Reserve Branch city

— Branch boundary

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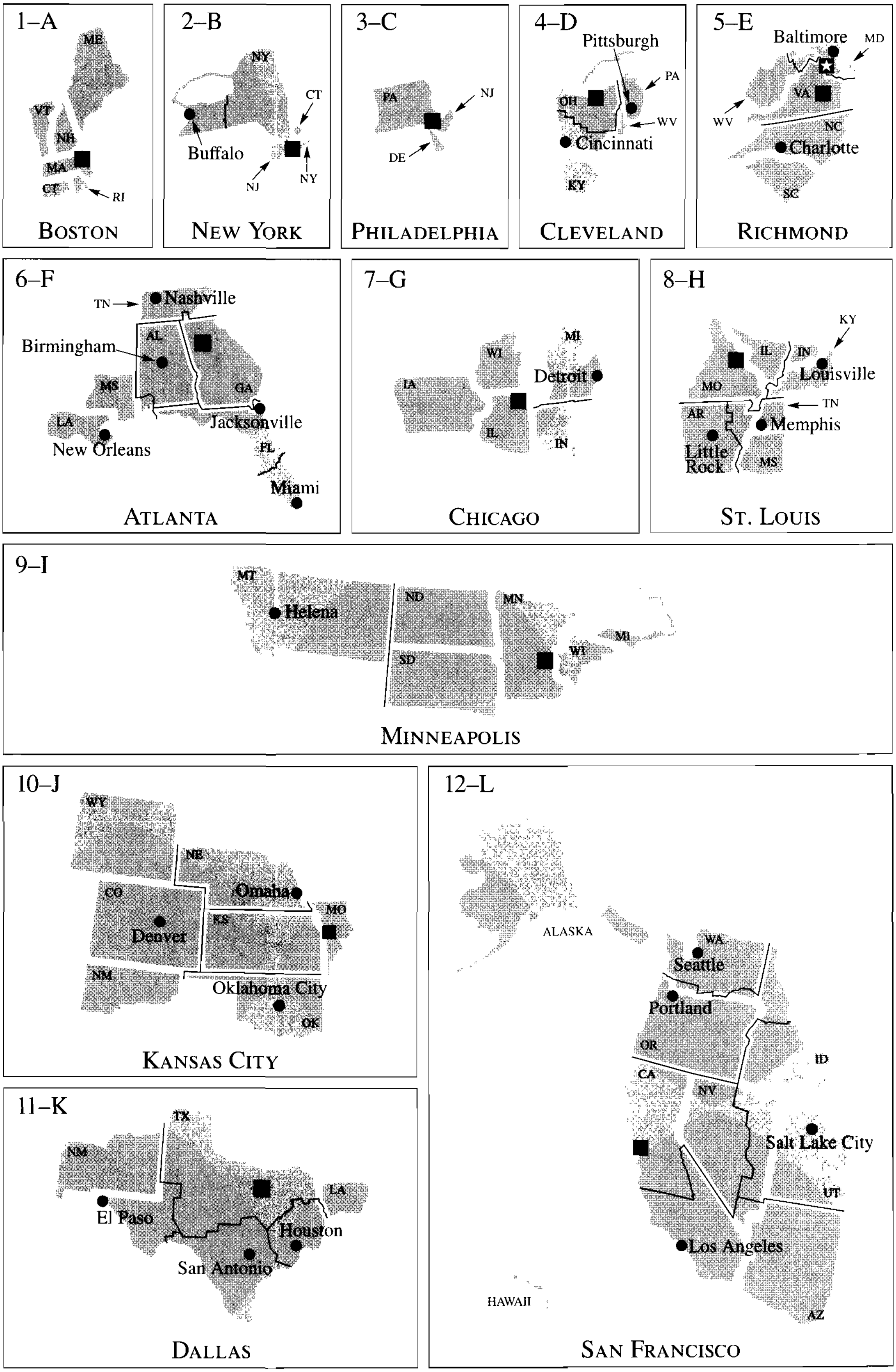
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