

The Economy in Perspective

*Someday, perhaps, remembering even this
Will be a pleasure.*

—Virgil, *The Aeneid*

The Federal Reserve Bank of Cleveland moved to its present location 75 years ago, in September 1923. The date holds special significance because we have just completed a substantial renovation of our building, making it a safer, more efficient working environment than it has been in decades. At the same time, thanks to careful historic restoration, some portions of the building once again reveal the magnificent craftsmanship devoted to them three-quarters of a century ago.

It seems particularly fitting that a Federal Reserve Bank should occupy an updated, but still historic, building. Monetary policy requires a keen understanding of current economic conditions and, equally important, the ability to operate from a solid foundation and with a perspective on the past. The economy of 1998 clearly differs from that of 1923, but not in every respect. Recognizing the similarities may prove just as important for fashioning successful monetary policy as appreciating the differences.

Our economy's infrastructure has changed enormously since 1923. Comparing jet planes, interstate highways, and wireless telecommunications to their predecessors leaves little doubt about the relative productivity and safety levels of the two economies. Seventy-five years ago, our nation used a much greater share of its land, labor, and capital for agricultural and mining industries; the phrase "service economy" would have drawn blank stares. Women were seen less in the workplace, and the workweek was much longer. This is just the beginning of the list we could compile.

Policymaking was different as well. In 1923, the federal government's role in the economy was much smaller than it is today, in terms of both fiscal size and regulatory presence. Budgets were balanced, and private property rights were very strong. Although the Federal Reserve System had been created in 1914, the value of the dollar in 1923 was still keyed to the gold standard. Activist monetary and fiscal policies were more than

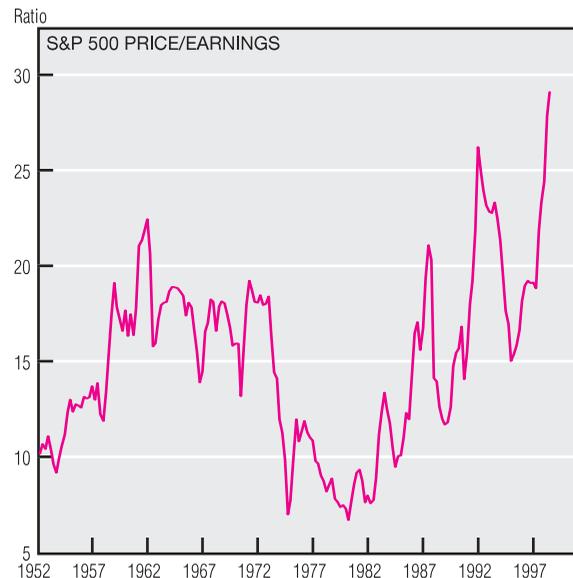
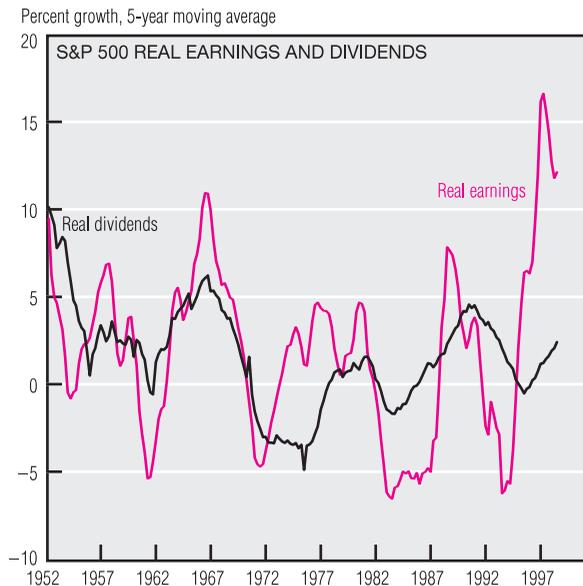
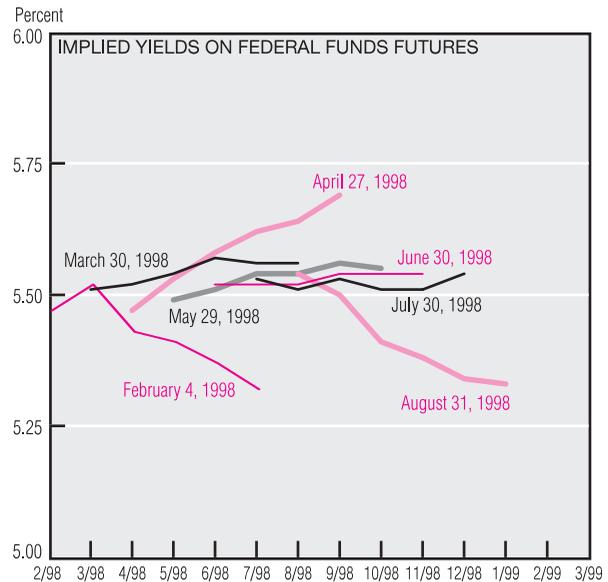
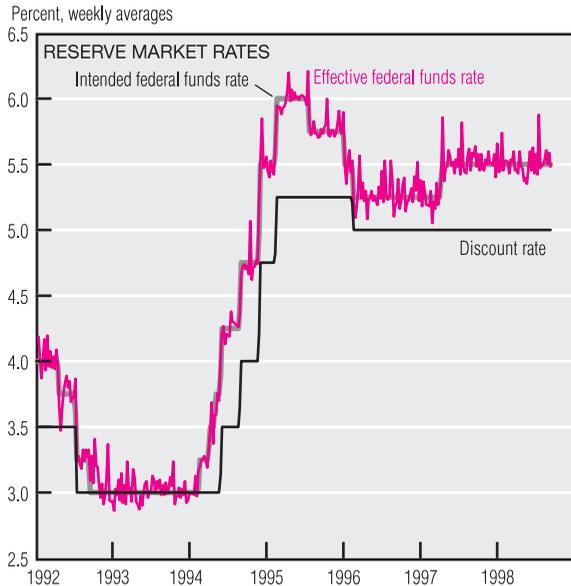
three decades away. In fact, Congress would not establish the Federal Open Market Committee for 10 more years; the Federal Reserve Banks were just beginning to comprehend the effect of their individual open market operations on banking and credit conditions.

But what about the similarities? How could we possibly liken today's economy to that of the early 1920s? Let's begin with people and the human condition. As the United States became industrialized, it developed a large middle class and with it a consumer-oriented economy. Then, as now, whatever our standard of living, Americans have always wanted to consume more. Fortunately, our desire for a higher standard of living is matched by our resolve to create wealth and an unshakable belief in the notion of human progress. Accompanying this "can-do" attitude is a culture that encourages risk-taking. But the world is a risky place, and our successes in hedging against some of its perils tempt us to imagine that we can avoid them all.

Economists have learned a great deal since 1923 about how economic systems work and how policies affect their operation. Nevertheless, our opinions should be rendered with humility, for even the wisest among us can claim only an imperfect understanding of our economy's workings. Who among the officials present at the dedication ceremony of the Cleveland Federal Reserve Bank in September 1923 could have foreseen the economy's trajectory over the ensuing decade? Who among them could have suspected that history would revile them as shortsighted—or worse? They undoubtedly had critics among their contemporaries as well, as do today's policymakers. And we try, as they did, to do our best with what we know and what we think we know.

Confidence in our nation's future abounded when the Federal Reserve Bank of Cleveland opened its new doors in 1923. Seventy-five years later, we can see that this confidence was justified, despite the Great Depression, despite World War II, despite the Cold War, and despite the stagflation and malaise of the 1970s. All the reasons that justified this confidence then still justify it today.

Monetary Policy



SOURCES: Board of Governors of the Federal Reserve System; Chicago Board of Trade; and DRI/McGraw-Hill.

Over the past several years, the Federal Open Market Committee (FOMC) collectively has seen little basis for taking action. The FOMC last changed the fed funds rate objective in March 1997, increasing it a scant 25 basis points. This increase was preceded by a rate cut of the same magnitude in February 1996. Thus, for almost three years, the FOMC has instructed its Trading Desk to add or drain base money in order to maintain the fed funds rate at or just under 5½%. As recently as the end of August, fed funds futures prices suggested that the outlook for the funds rate was more of the same.

Such a long period of passive policy tactics, rare by historical standards, largely reflects the unusual combination of a long economic expansion and a moderately declining inflation rate. These favorable circumstances are in part the fruit of a deliberate policy strategy that recognizes price stability as essential for a healthy economy.

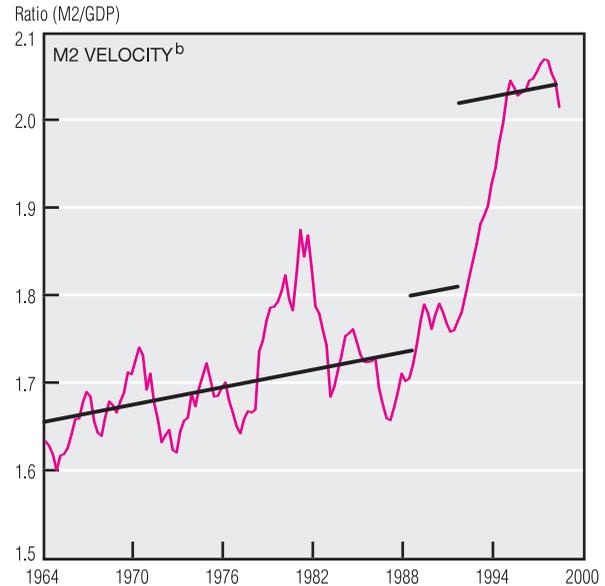
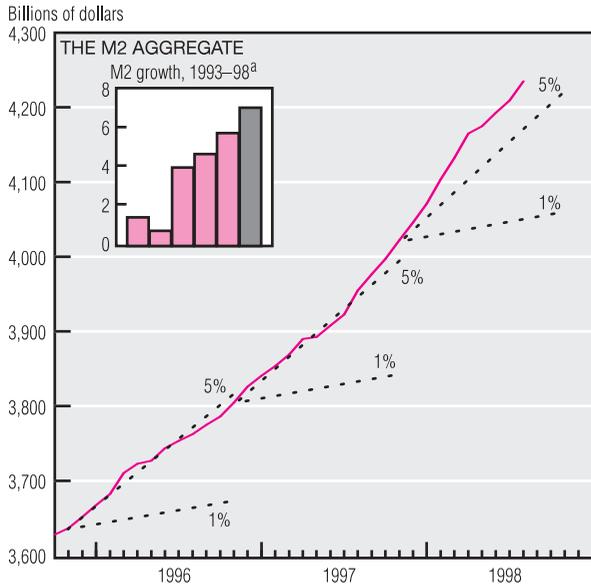
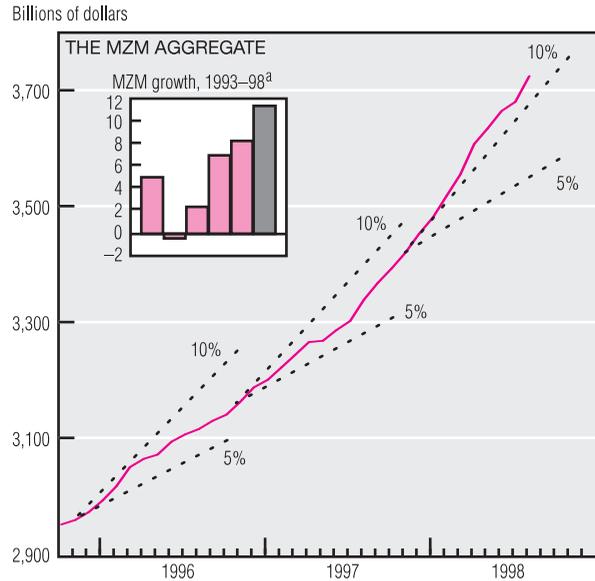
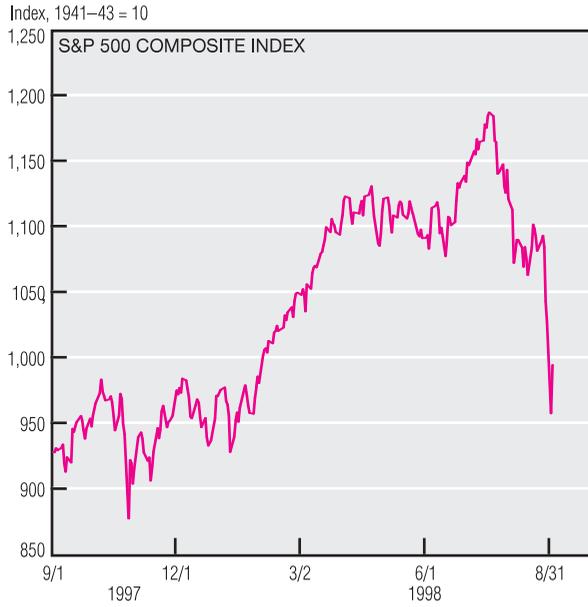
The FOMC's strategy for achieving price stability has yielded an environment in which private investment decisions are made on the basis of economic merit, not as a hedge against inflation. As a consequence, corporate profits have been

extraordinary in recent years. The earnings for Standard and Poors (S&P) 500 companies, for example, have grown at double-digit rates over most of the current expansion. This strong earnings growth provided the fundamental impetus for the stock market's favorable performance in recent years.

While much of the stock market increase was based on improved earnings, a good part was based on expectations of a sustained continuation of extraordinary earnings growth enabled by a robust economy. This optimism was evident in

(continued on next page)

Monetary Policy (cont.)



a. Growth rates are percentage rates calculated on a fourth-quarter over fourth-quarter basis. Annualized growth rate for 1998 is calculated on an estimated August over 1997:IVQ basis.
 b. Straight lines represent levels and breaks estimated using the opportunity cost of M2, time, and M2 velocity lagged one quarter as regressors with fixed coefficients.
 NOTE: Data are seasonally adjusted. Last plots for M2 and MZM are estimated for August 1998. For M2, dotted lines are FOMC-determined provisional ranges. For MZM, dotted lines represent growth levels and are for reference only.
 SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; Board of Governors of the Federal Reserve System; Federal Reserve Bank of Cleveland; and DRI/McGraw-Hill.

the price-earnings ratio, which reached historical highs. A belief that the strong domestic economy could continue to be insulated from the turmoil occurring in Asia was reinforced by output growth that showed no signs of slowing through 1998:Q1.

Recent weeks, however, have produced other concerns. Stock markets in Russia and elsewhere in Eastern Europe have fallen precipitously. The markets of Asia continue to slide. The drop of nearly 20% in

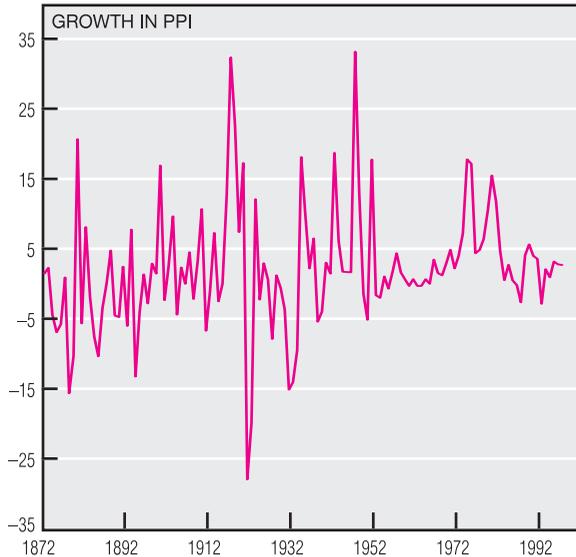
the S&P 500 stock index since its peak in July suggests that investors have begun to doubt the continued insularity of the U.S. economy in the face of world financial crises. Stock market corrections of around 20% are rare, but three of them have occurred in the past 11 years. Little is known about the mechanisms that precipitate such large corrections. Moreover, they are not identifiable until after they have occurred.

One potential problem would be an accelerating world financial crisis

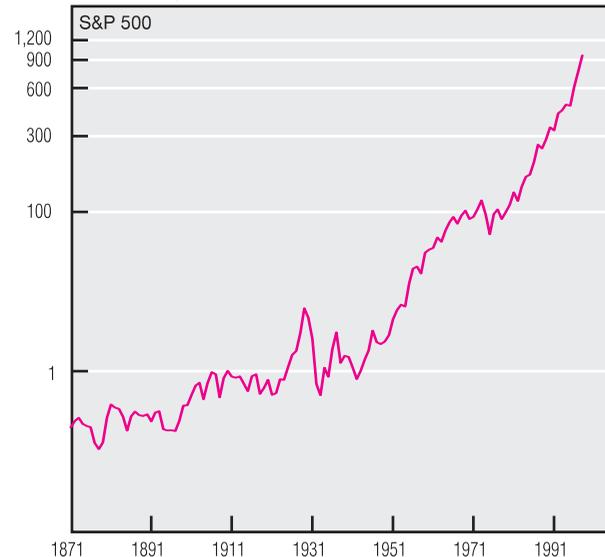
that leads to extraordinary demands for liquidity within the U.S. When such circumstances have occurred before (as in 1987), the Fed has stood ready to supply all legitimate needs. At this point, however, liquidity appears to be sufficient. MZM measures domestic asset holdings which have zero maturity and hence are available on short notice. MZM has grown more than 10% in 1998. The broader M2 money measure has increased more than 7% for the year.

Monetary Policy, 1923

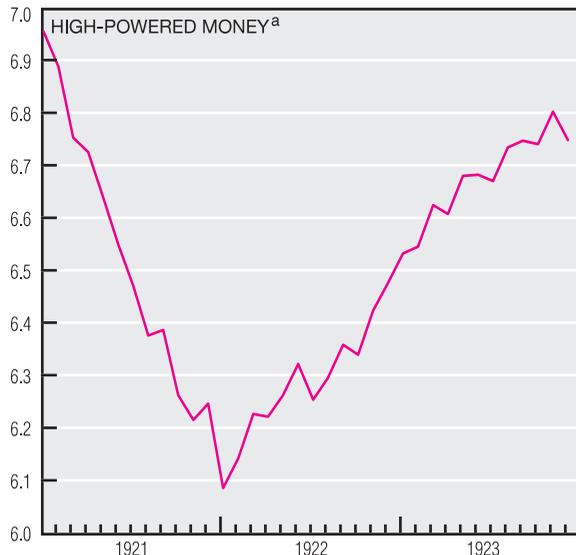
Percent, annual rate



Index, 1941-43 = 10, logarithmic scale



Billions of dollars, seasonally adjusted



Ratio



a. Currency held by the public plus bank vault cash.

b. Money income divided by money stock (currency plus demand deposits).

SOURCE: Robert Shiller, *Market Volatility*. Cambridge, MA: MIT Press, 1989; Standard and Poors *Security Price Index Record*; and Milton Friedman and Anna Schwartz, *A Monetary History of the United States 1867-1960*. Princeton, N.J.: Princeton University Press, 1963, pp. 774-802.

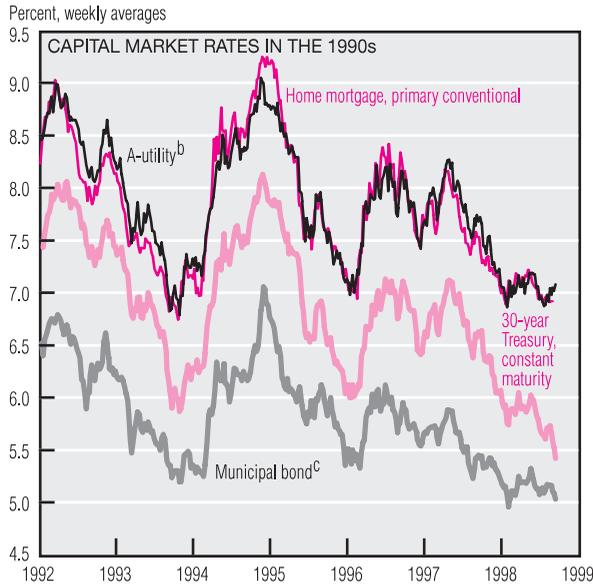
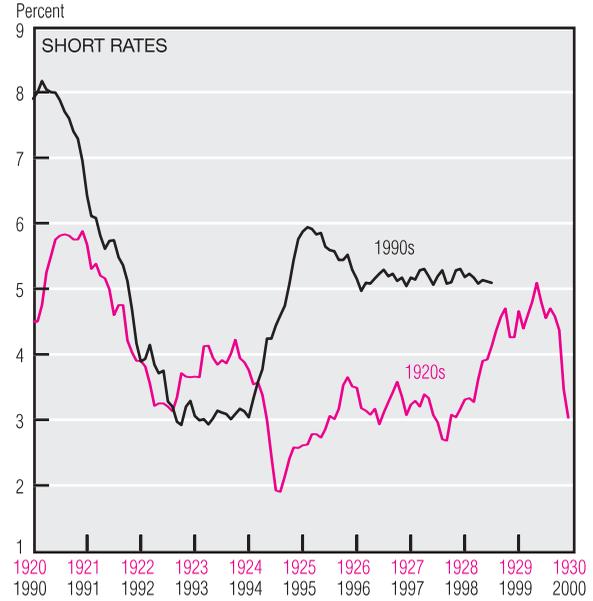
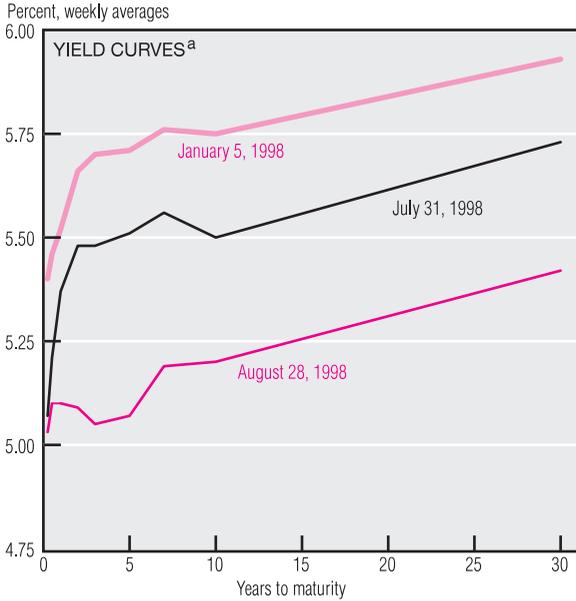
In 1923, the staff of the Federal Reserve Bank of Cleveland moved into a newly dedicated building with fresh responsibilities, for in the spring of that year the Federal Reserve Board had officially recognized the Banks' Open Market Committee. For the first time, Reserve Bank officials had a forum in which they could collectively exert a definite, conscious influence on economic developments. The tactics by which the Committee could affect credit conditions had only recently been developed.

The celebrated economist Irving

Fisher later recounted how these powers were accidentally discovered: In an effort to increase earning assets in the early 1920s, the 12 Reserve Banks began to purchase government securities in the open market. To their surprise, profits declined. They soon realized that these purchases lowered the volume of rediscounting and increased the level of member bank deposits, depressing Reserve Bank income by more than the income earned on purchased securities. Most importantly, they recognized that the consequence of increased reserve deposits was an expansion in credit.

The strategy of policy then sought to mitigate the inflationary effects of excessive gold imports. Milton Friedman and Anna Schwartz noted, in their *Monetary History of the United States, 1867-1960*, that great emphasis was placed on the distinction between "productive" and "speculative" uses of credit. There was concern that credit expansion might finance a "speculative accumulation of commodity stocks, which in turn would produce a disequilibrium between production and consumption and subsequently a contraction in prices and economic activity."

Interest Rates



a. All instruments are constant-maturity series.

b. Estimate of the yield on a recently offered, A-rated utility bond with a maturity of 30 years and call protection of five years.

c. Bond Buyer Index, general obligation, 20 years to maturity, mixed quality.

SOURCES: Board of Governors of the Federal Reserve System; and historical data from Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics*. Washington, D.C.: National Capital Press, 1943.

All along the maturity spectrum, interest rates have moved lower in the past month. Longer rates fell the most, however, producing a noticeable flattening of the yield curve. The 3-year, 3-month spread, for example, dropped from 41 basis points to 2 basis points because the 3-year rate fell 43 basis points and the 3-month rate dropped only 4 basis points. Likewise, the 10-year, 3-month spread dropped from 43 to 17 basis points. Some analysts have ascribed these lower rates to a flight to quality, as investors became

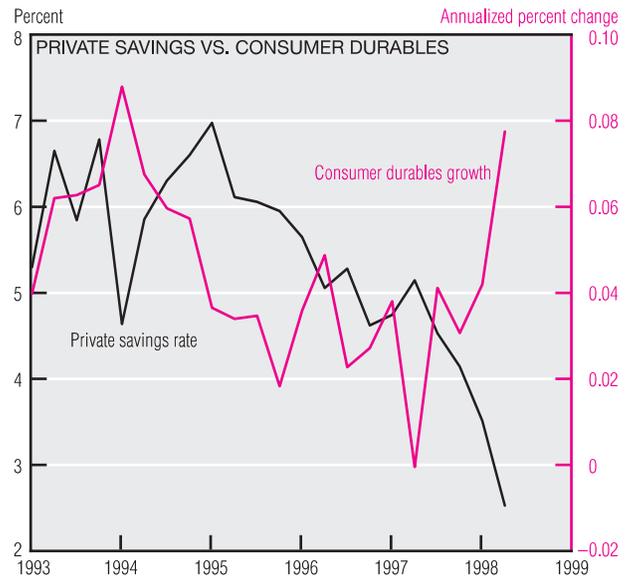
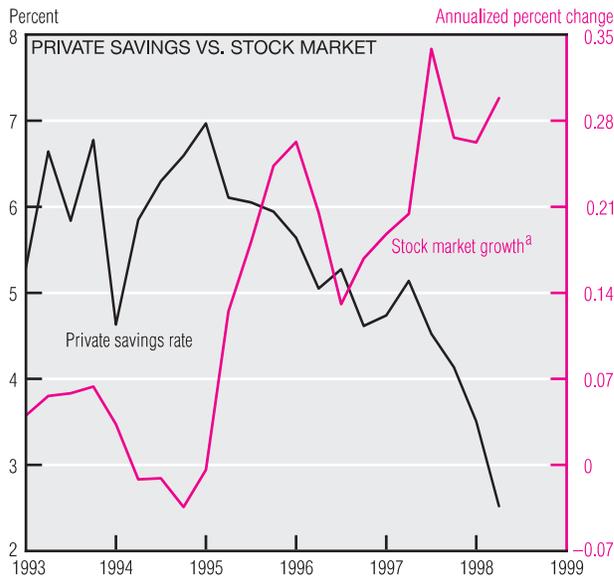
worried about both domestic and foreign investments.

The geopolitical nature of such risks—think of East Asia, Russia, and the effects of counter-terrorist strikes—virtually demands a historical perspective, one befitting the 75th anniversary of the Federal Reserve Bank of Cleveland's building. When this Italianate palazzo was first dedicated in 1923, interest rates had seen a long downward trend as the inflationary disruption of World War I gave way to the relative normalcy of the Roaring Twenties. In September 1923, the *Monthly Business Review*, a

Federal Reserve Bank of Cleveland publication, noted "slightly firmer tendencies in money rates." But short-term rates on U.S. government bills still had plenty of ups and downs left in them; indeed, from the historical perspective of those days, recent shifts look rather tame.

Longer-term capital market rates show intriguing similarities and differences across the years. Long-term Treasury bonds now yield more than municipal bonds, while public utility bond rates remain much higher than either of them, most likely indicating a continuing risk difference.

Savings Rates



NOTE: All data are quarterly and extend through 1998:IIQ.

a. S&P 500 stock index.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; and DRI/McGraw-Hill.

Since the beginning of the 1980s, the personal savings rate (the ratio of personal savings to disposable personal income) has steadily declined. Monthly estimates show this seemingly alarming trend continuing, with the personal savings rate falling to 0.1% in June, the lowest level on record. July's number (0.8%), though slightly better, is still paltry.

Before becoming too alarmed, however, we should consider how useful a measure the personal savings rate really is. People save, after all, to increase the stock of resources from which they or their heirs can enjoy future consumption. We tradi-

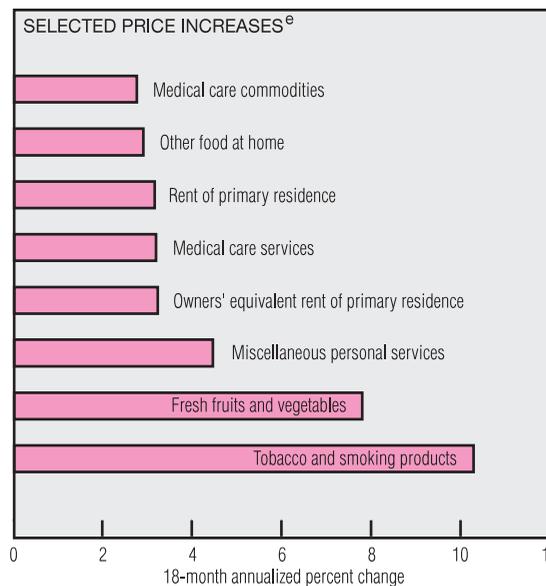
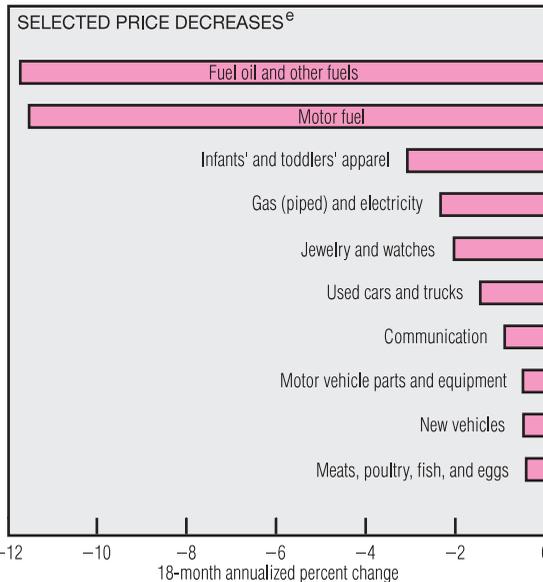
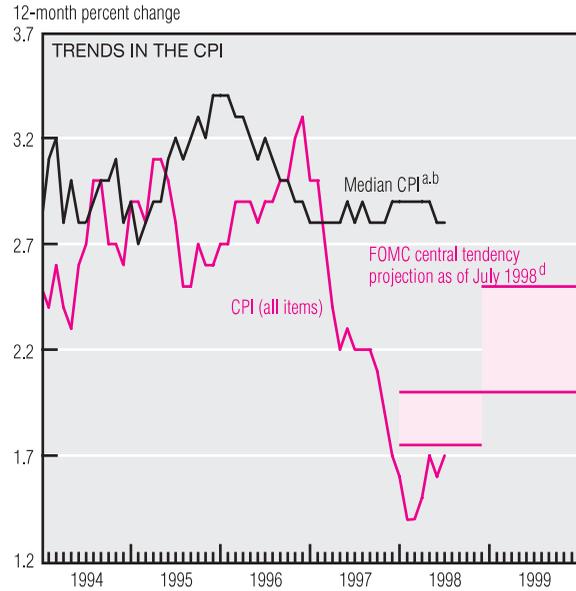
tionally think of this as setting aside a portion of money income in financial assets. There are other ways to save, however; one is to purchase durable goods. In fact, there has been a sharp rise recently in consumer expenditures on durable goods. These are counted as consumption in the official measure; therefore, to correctly account for savings, a fraction of durable goods purchased using disposable personal income should be added to the personal savings rate. Another way to save is to enjoy capital gains on existing assets. These gains, made greater (at least until recently) by the strength

of the stock market, should be added to both income and savings, which would also raise the savings rate.

More fundamentally, the personal savings rate is just too narrow a measure to capture the source of capital accumulation in the U.S. A more relevant statistic is net national savings, which combines the savings behavior of households, businesses, and governments. In this case, the news is better, with the second quarter net national savings number maintaining a level comparable to what has been observed over the past 15 years.

Inflation and Prices, 1998 and 1923

July Price Statistics	Annualized percent change, last:				1997 avg.
	1 mo.	3 mo.	12 mo.	5 yr.	
Consumer Prices					
All items	2.2	2.2	1.7	2.5	1.7
Less food and energy	2.1	2.1	2.2	2.6	2.2
Median ^{a,b}	3.0	2.8	2.8	3.0	2.9
Producer Prices					
Finished goods	2.8	1.2	-0.3	0.9	-1.2
Less food and energy	1.7	2.3	1.1	1.0	0.0
Commodity futures prices^c					
	-36.5	-30.4	-16.2	-1.4	-3.5



a. Calculated by the Federal Reserve Bank of Cleveland.
 b. The median CPI component structure and market basket were updated in May 1998, and the weighting scheme was revised.
 c. As measured by the KR-CRB composite futures index, all commodities. Data reprinted with permission of the Commodity Research Bureau, a Knight-Ridder Business Information Service.
 d. Upper and lower bounds for CPI inflation path as implied by the central tendency growth ranges issued by the FOMC and nonvoting Reserve Bank presidents.
 e. January 1997-July 1998.
 SOURCES: U.S. Department of Labor, Bureau of Labor Statistics; the Federal Reserve Bank of Cleveland; and the Commodity Research Bureau.

Consumer prices continue to hover just under the lower bound of the FOMC central tendency established in July 1998, with the Consumer Price Index (CPI) rising an annualized 2.2% in July. The median CPI, an alternative measure of core inflation, continues to hold around the 2.8% (annualized) mark. Shifting focus to wholesale prices, recent Producer Price Index (PPI) data show some upward pressure, rising at a 2.8% annualized rate in July.

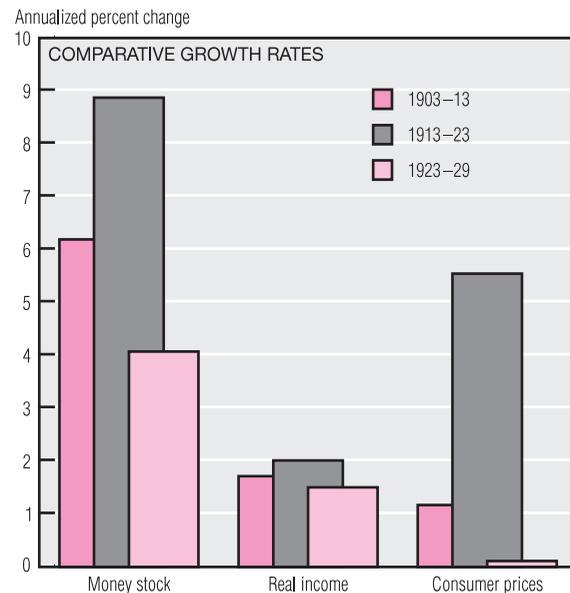
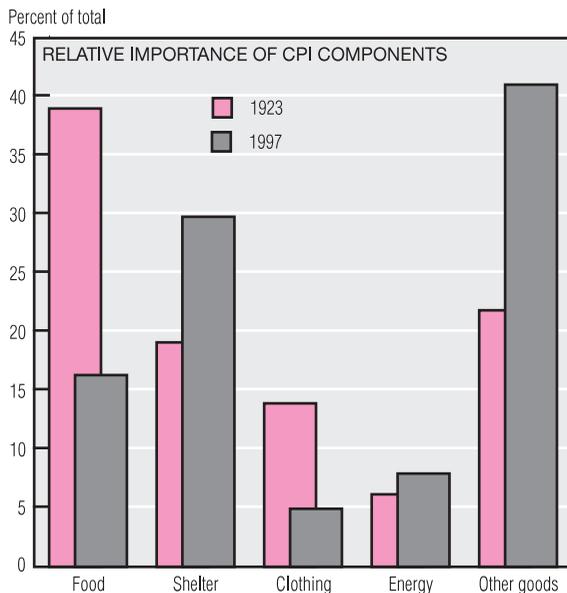
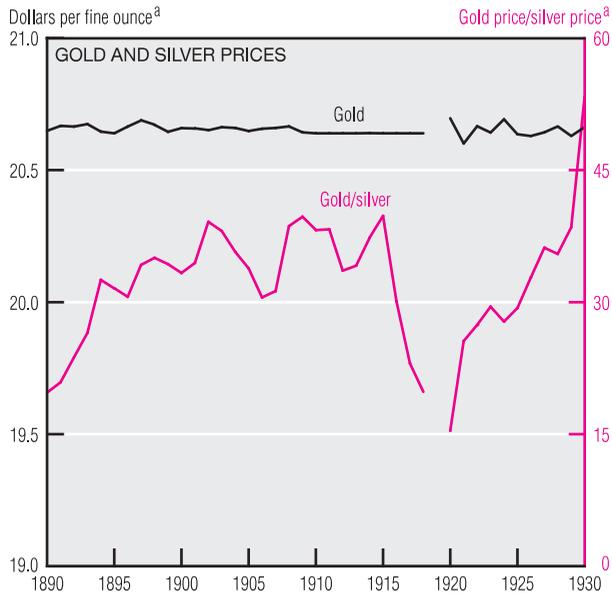
Several components used to calculate the CPI have shown relatively

large price movements over the last 18 months. By and large, these have offset one another, although the extreme price declines have generally represented a greater share of the market basket than have the extreme increases. In the first category, the energy components have plummeted more than 11% (annual rate). In the second, prices for many foods, such as fresh fruits and vegetables, have moved sharply higher over the last 18 months.

Before the Federal Reserve was established in 1913, and cer-

tainly before it achieved any well-orchestrated management of credit markets (which occurred about 10 years later), "monetary policy" was based on the establishment of a single price-level objective—the price of gold. Money stocks were adjusted to keep the price of gold at a nearly constant \$20.64 per ounce. Indeed, students of money and banking are often surprised by the stability in gold prices over the period economists call "the gold standard," until they understand that gold "defined" *(continued on next page)*

Inflation and Prices, 1998 and 1923 (cont.)



a. The lines break in 1919 due to a change in the definition of the gold series.

SOURCES: Office of the Director of the Mint, Annual Report, 1944; U.S. Department of Labor, Bureau of Labor Statistics; National Industrial Conference Board, Inc., *The Cost of Living in the United States, 1914-26*. New York: National Industrial Conference Board, Inc., 1927, pp. 158-59; U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*, part 2. Washington, D.C.: 1975, p. 164; and Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States, 1867-1960*. Princeton, N.J.: Princeton University Press, 1963, pp. 704-22.

a dollar. But it was only the price of gold that was stabilized, as is suggested by wide swings in the price of gold relative to the price of another precious metal, silver.

But stabilizing the stock of money relative to gold does not necessarily stabilize money's power to purchase other goods and services, particularly over short time horizons. Of course, during the early years of the Federal Reserve System, the market basket purchased by most households was more limited than it is today. In 1923, food accounted for roughly

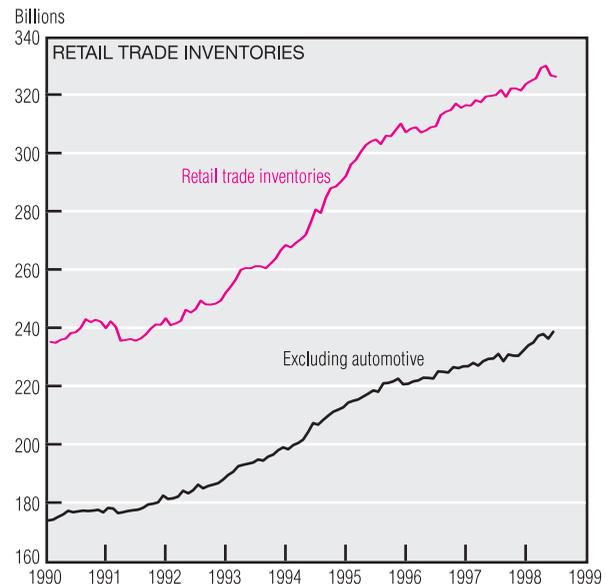
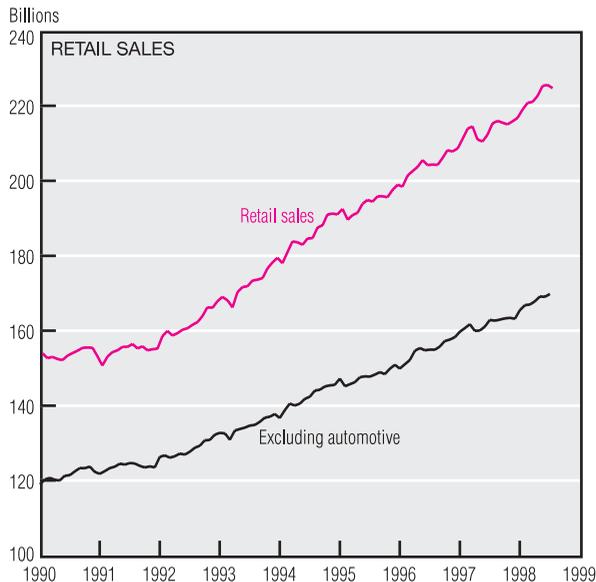
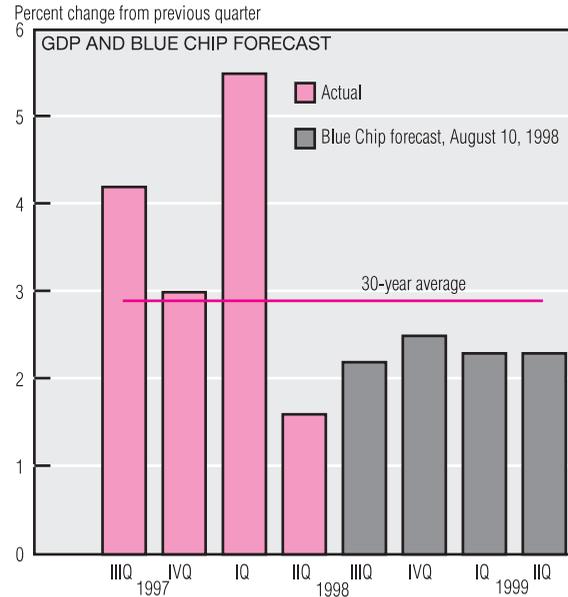
40% of the CPI market basket, compared with only about 15% today. Still, the dollar cost of a representative market basket fluctuated widely during those years. Some analysts, like the noted economist Irving Fisher, urged the Fed to stabilize an index for the price of a broadly defined basket of goods and services.

It was also around this time that the Federal Reserve System began to fully appreciate the impact it could have on national credit markets—and, presumably, on industry and trade—through open market operations. Between 1913 and 1923, the System allowed the growth rate of

the money stock to rise at twice the pace of the previous 10-year period, and this expansion appears to have been accompanied by a stronger pace of real income growth. But the period also saw a sharp rise in prices (which averaged about a 5½% annual rate during the first 10 years of the Federal Reserve System, compared with only about a 1% pace during the previous 10-year period). Cutting back on the expansion of money in the 1923-29 period, the System witnessed a falloff in the growth of business activity, along with a flattening of prices.

Economic Activity—Past and Present

	Change, billions of 1992 \$	Percent change, last:	
		Quarter	Four quarters
Real GDP	30.2	1.6	3.6
Consumer spending	72.2	5.8	5.2
Durables	18.8	11.0	11.5
Nondurables	18.5	5.0	4.2
Services	36.0	5.2	4.4
Business fixed investment	28.0	12.6	13.2
Equipment	31.4	18.1	17.8
Structures	-2.3	-4.5	0.8
Residential investment	10.5	14.8	9.4
Government spending	11.6	3.7	0.8
National defense	6.8	9.6	-3.7
Net exports	-47.8	—	—
Exports	-19.0	-7.4	1.0
Imports	28.8	10.0	11.3
Change in business inventories	-52.3	—	—



a. Chain-weighted data in billions of 1992 dollars.

NOTE: All data are seasonally adjusted.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census; and *Blue Chip Economic Indicators*, August 10, 1998.

New estimates of gross domestic product for 1998:IIQ revealed nothing new about the economy. Preliminary real GDP growth was 0.2% higher than in the advance estimate. This reflected slight upward adjustments in a number of components, largely offset by small downward adjustments to imports and inventory investment. It remains the case that GDP growth declined sharply from the 5.5% pace of the first quarter to 1.6% in the second. Two-thirds of this reduction can be attributed to slower inventory accumulation, which increased less than half the

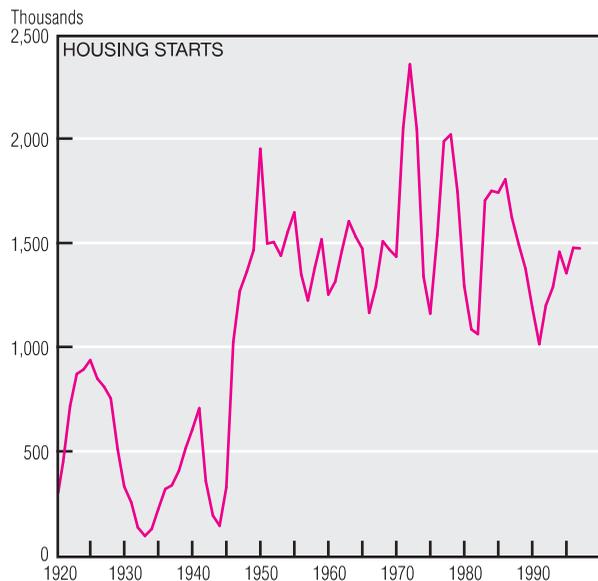
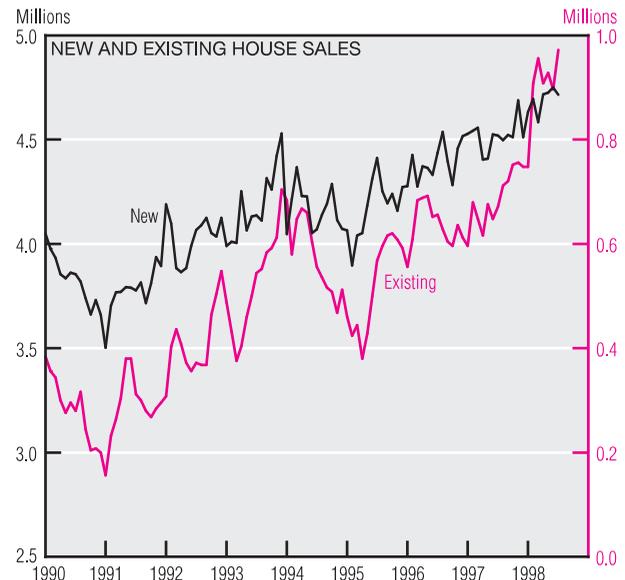
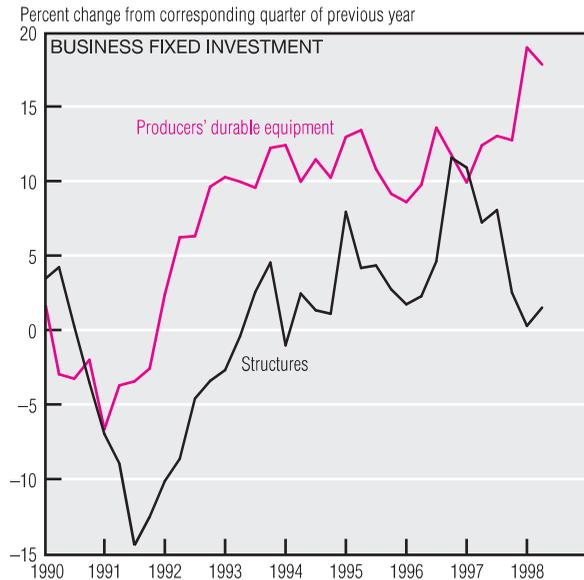
first-quarter amount. The rest of the slowing in GDP can be traced to less rapid increases in investment spending for producers' durable equipment, including information-processing equipment. Forecasters expect some pickup in GDP growth through this year and next, but only at a subdued pace.

Consistent with these forecasts, real final demand (GDP minus inventories) remained strong, growing 0.1% more than the 4.3% first-quarter annual rate, despite the drop in GDP growth. More recently, both retail sales and retail trade inventories

have declined, but this probably reflects the influence on the automotive sector of the now-settled General Motors strike, not any slowing in consumer demand. For the third consecutive quarter, business investment in structures grew more slowly than final demand. While producers' durable equipment expenditures increased less rapidly than in the first quarter, they remain quite strong at four times the growth rate of final demand. Residential construction showed a similar pattern, increasing more than three times more rapidly than final demand.

(continued on next page)

Economic Activity—Past and Present (cont.)



NOTE: All data are seasonally adjusted.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census; U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*, part 2. Washington, D.C., 1975; and National Association of Realtors.

Sales of new houses remained strong in July. Moreover, exuberant sales (and purchases) of existing homes continued to show evidence of shifts in housing asset portfolios analogous to those evident in financial markets. In July, sales of existing homes reached a new all-time peak.

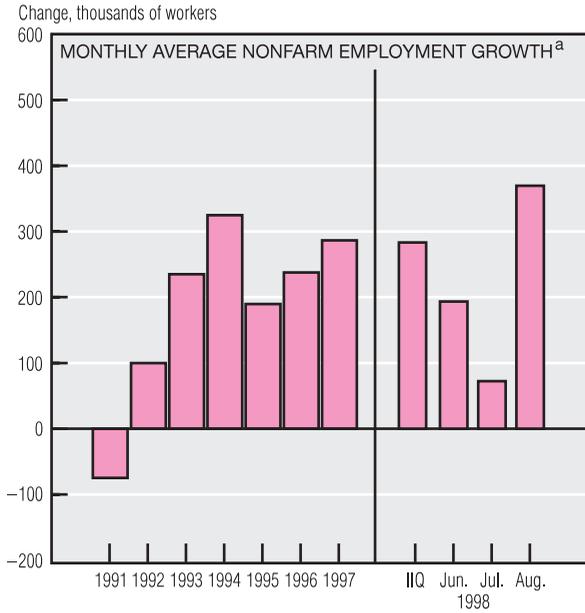
The U.S. economy hit a business-cycle peak in May of 1923, the year this Bank's main building was dedicated. That peak was followed by a short, mild contraction that ended in July of the next year. Still, the U.S. was in the midst of a construction boom. Downtown areas of many

cities were undergoing major expansion of office space. Cleveland was in the forefront of U.S. industrial development, building on a base of petroleum refining, iron and steel production, automobiles and parts, and machine tools.

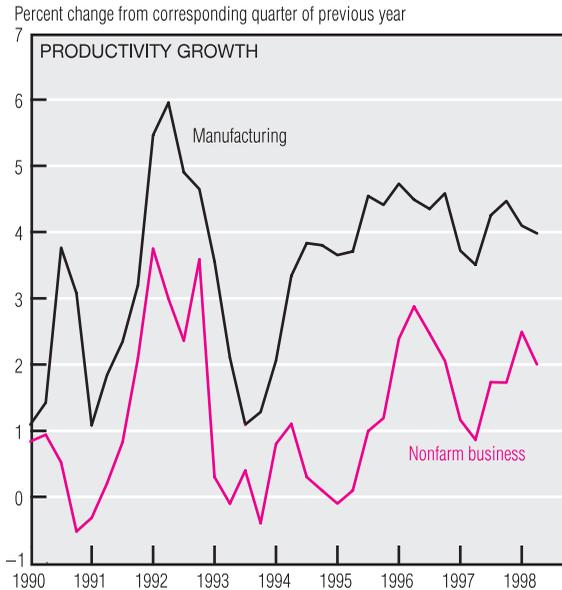
The site chosen for the Cleveland Bank adjoined a massive planned development of splendid governmental structures grouped around a huge public esplanade. Nearby was the Terminal Tower project, a gigantic complex that included large office buildings, a hotel, and a department store, all atop the new railroad and interurban trolley terminal.

In the mid-1920s, housing starts in the nation shot up to levels that were unequaled until the release of pent-up demand created by the Great Depression and World War II. Suburban housing developments like Shaker Heights epitomized inner-ring suburbs, catering to a growing upper-middle class that appreciated third-floor maid's quarters and two-car garages. The economic contraction of 1924 produced a slight dip in the level of GNP, but the "new era" of "permanent prosperity" soon seemed to have resumed.

Labor Markets



	Monthly average change (thousands of employees)				
	1995	1996	1997	1998	
				Year to August date	
Payroll employment	185	233	282	237	365
Goods-producing	8	31	42	4	109
Manufacturing	-1	3	21	-15	95
Motor vehicles	2	0	3	-2	117
Construction	10	28	20	22	16
Service-producing	178	202	240	233	256
Services	112	117	142	115	135
Government	9	9	20	26	57
Household employment	32	232	240	49	101
	Average for period				
Civilian unemployment rate (%)	5.6	5.4	5.0	4.5	4.5
Diffusion index (3 month)	57.8	64.0	65.8	62.5	58.0



a. Seasonally adjusted.
 b. Vertical line indicates break in data series due to survey redesign.
 SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

August's nonfarm employment growth was exceptional (365,000), partly because of workers' return after the General Motors strike. Despite this headline statistic, however, there is increasing evidence that labor market growth is slowing. Removing the effects of the GM strike, the goods-producing sector has added only 4,000 jobs over the last eight months. In recent months, the number of industries showing employment growth has declined markedly. The current diffusion

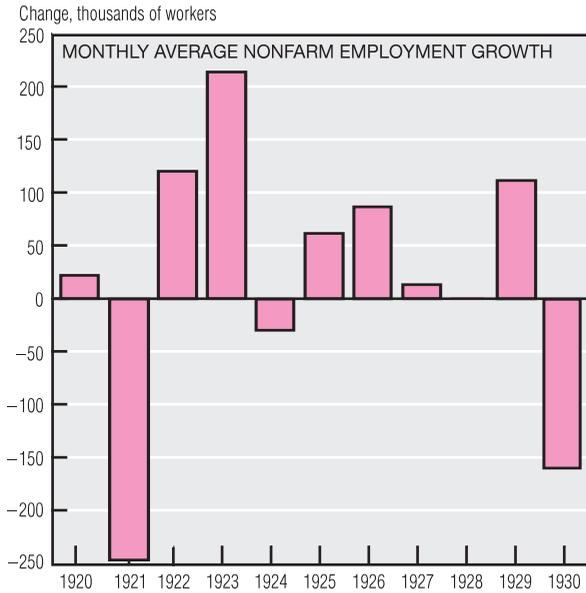
index for nonfarm payrolls shows that only 58% of detailed industries experienced employment gains over a three-month period, versus 72% as recently as December 1997.

Interestingly, the household survey (used to calculate the unemployment rate) registered the slowing more immediately. While the payroll employment series has continued to show growth in most months, household employment has not shown any statistically significant employment gain for the

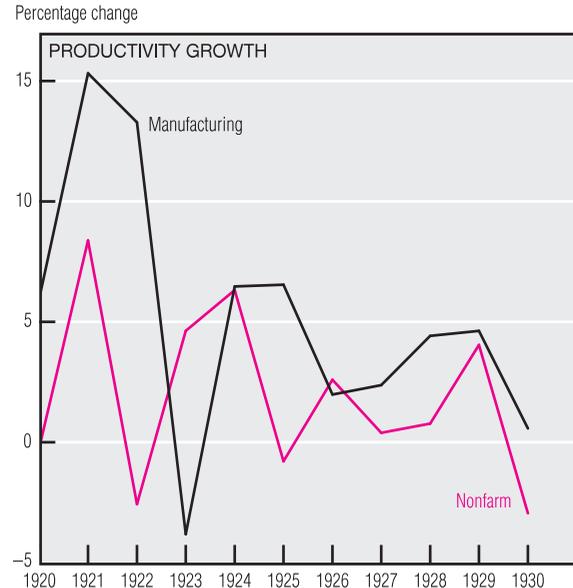
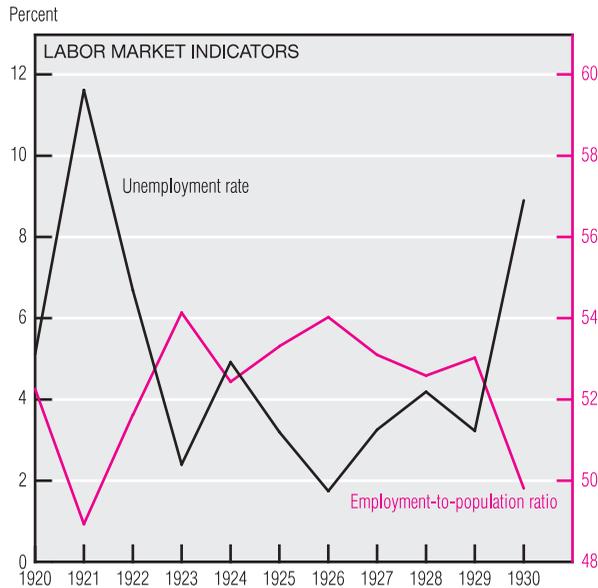
last several months. The household survey's weaker measured employment growth halted the downward trend in the unemployment rate. Unemployment fell to 4.3% in May and has since risen to 4.5%. Typically, the payroll and household series do not deviate for many months, but no firm explanation for this deviation has yet been offered.

Productivity growth has also slowed. In the latest quarter, the increase was only 0.1% for nonfarm businesses.

Labor Markets of the 1920s



	Monthly average change (thousands of employees)				
	1921	1922	1923	1924	1925
Payroll employment	-247	120	214	-30	62
Goods-producing	-210	84	126	-54	32
Mining	-23	-3	24	-9	-1
Construction	14	14	4	8	10
Manufacturing	-200	72	98	-52	22
Service-producing	-38	37	88	25	30
Transportation and public utilities	-45	4	31	-6	2
Wholesale and retail trade	10	26	32	10	14
Government	-6	1	6	9	7
Manufacturing workweek (hours) ^a	43.1	44.2	45.6	43.7	44.5



a. Includes all production workers in Manufacturing.
 SOURCES: U.S. Department of Labor, Bureau of Labor Statistics; and U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*, part 2. Washington, D.C., 1975.

Looking back to the labor markets of the 1920s requires using annual estimates derived much later, which somewhat reduces the accuracy of the data. These estimates show that the labor market was booming in 1923, as the economy recovered from the large employment declines experienced two years earlier (3 million jobs lost). While the net gain for 1923 (214,000 workers per month) is quite similar to recent increases, it was added to a far smaller labor force. At the time, this number of workers expanded the nation's employment almost 10%; in contrast, adding an average 237,000

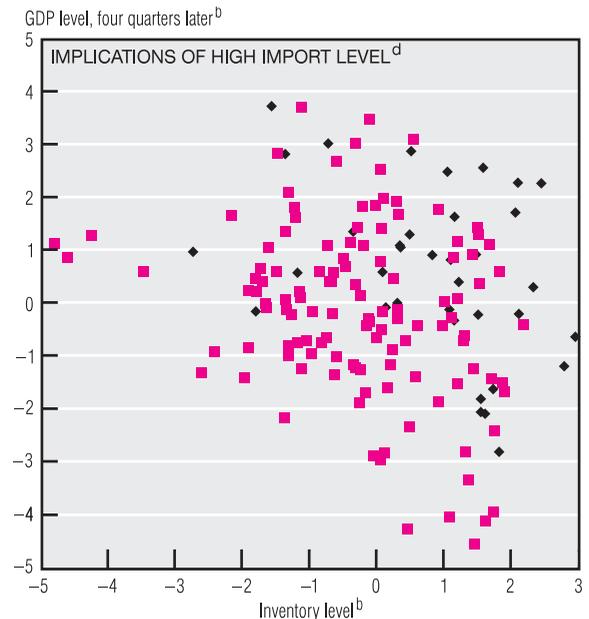
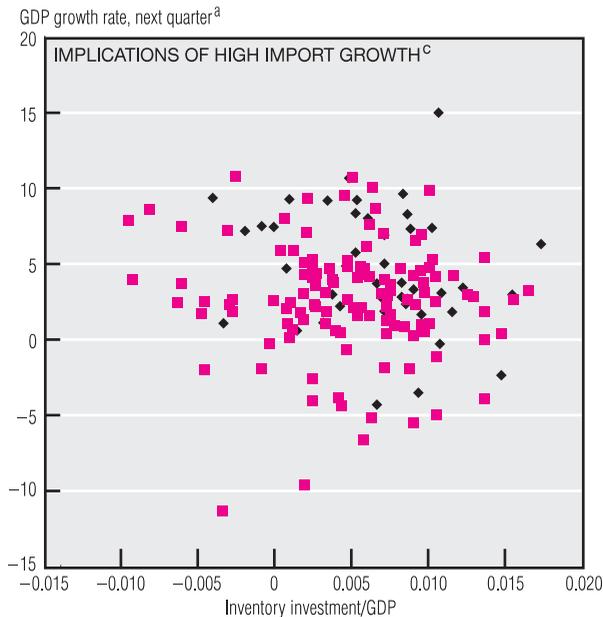
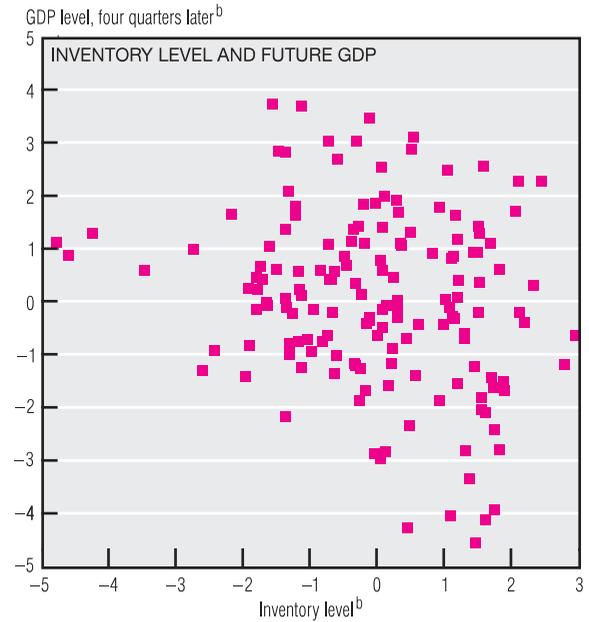
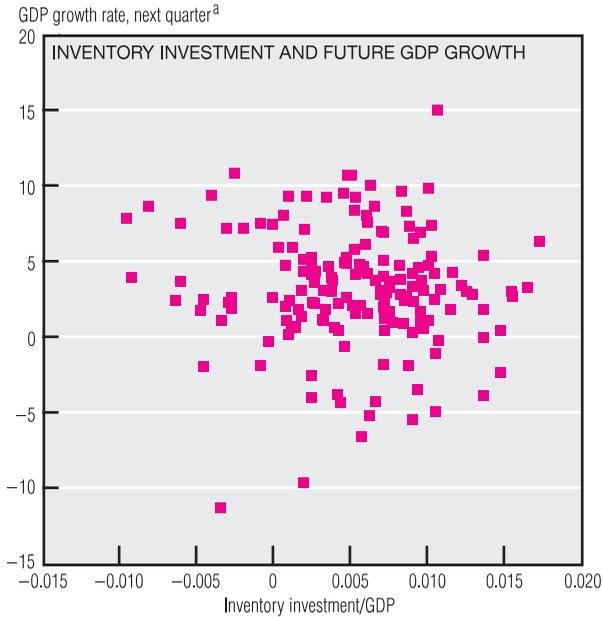
workers a month over the year ending August 1998 increased payroll employment only 3%. Note that in the 1920s, the manufacturing sector (36% of nonfarm payroll employment in 1923) accounted for almost half of the employment changes. Manufacturing today plays a small role in total jobs growth.

The fact that employment was much more volatile in the 1920s showed in unemployment rates, which frequently averaged less than 4% for the year. Economists would expect low unemployment rates in this period, partly because the unemployment insurance system now

in use was initially funded as part of the Social Security Act of 1935. The lack of unemployment insurance makes the 1921 unemployment rate (over 10%) far more alarming than the high unemployment rates of later years.

Productivity growth was stronger (10-year average growth was 2% in the 1920s, compared to only 1% over the 10 years ended 1998:IIQ) but erratic. Between 1921 and 1922, annual productivity growth fell from over 8% to below -2%. Change of this magnitude has been unknown in the post-World War II era.

Inventories, Imports, and Output



a. Annual rate, percent

b. Deviations from trend, percent.

c. High import growth is defined as more than 12.6%, which is twice the sample mean.

d. High import levels are 3% above their trend.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; and Federal Reserve Bank of Cleveland.

Substantial inventory accumulation and a surge in imports have accompanied the strong GDP growth of the last two years. Throughout this period, some analysts have warned that the inventory buildup signals a substantial slowdown in output growth—perhaps even a recession—as firms respond to a perceived inventory “overhang” by cutting back production. Other commentators have suggested that if the buildup is largely composed of imported goods, then the implications for future output

growth may be less dire, since a smaller overhang would exist for domestic firms.

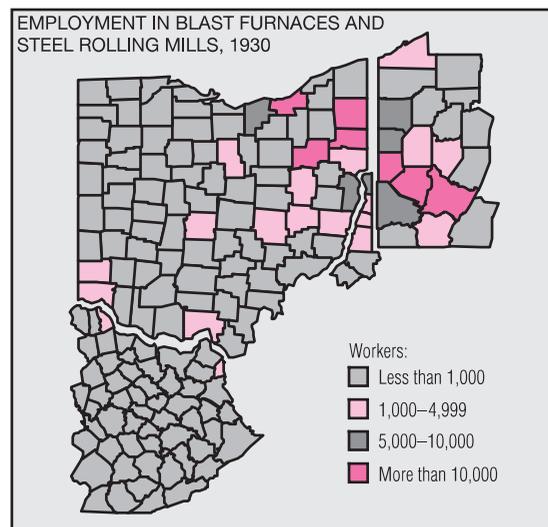
A fundamental problem with this argument is that historical data do not support its basic premise: that high inventory investment consistently precedes slow—or negative—future output growth. In fact, the relationship between high inventory investment and future output growth is very cloudy, whether one looks at the next quarter or the next year.

Though unable to see a clear relationship between inventory invest-

ment and future output growth, we can still ask whether that relationship is influenced by a strong surge in imports. The answer is “not much.” If anything, a surge in imports portends stronger output growth than occurs in periods with no such surge. Of course, high import growth does not imply that the inventory buildup is in imported goods. Examining how the import composition of inventories affects future output growth would require much more detailed data.

Regional Conditions in the 1920s

	KY	OH	PA	WV	Fourth District States	U.S.
Agriculture, forestry, and animal husbandry	46.8	15.7	8.3	25.6	16.5	26.4
Mining	6.1	2.6	9.7	21.0	7.7	2.6
Manufacturing	17.5	41.7	41.6	23.8	37.5	30.6
Transportation	5.9	7.5	8.3	7.6	7.7	7.4
Trade	7.7	10.7	9.9	7.1	9.7	10.2
Public services	2.0	1.4	1.6	0.9	1.5	1.9
Professional services	2.6	5.1	4.8	4.6	4.6	5.2
Personal services	7.2	7.0	7.5	5.5	7.2	8.2
Clerical	4.1	8.3	8.3	3.8	7.5	7.5



	Value of product (Millions of dollars)	Share of total (Percent)
Steel works and rolling mills	709	14.1
Foundry and machine-shop products	338	6.7
Rubber tires and tubes	391	7.8
Steam-railroad repair shops	108	2.1
Electrical machinery, supplies, etc.	174	3.5
Motor vehicles, excluding motorcycles	355	7.0
Motor vehicle bodies and parts	144	2.9
Clay products, excluding pottery, and nonclay refractories	57	1.1
Pottery, including porcelain	43	0.8
Boots and shoes other than rubber	61	1.2
All other	2,666	52.8

a. Persons aged 10 years and over.

SOURCE: Arthur Fredrick Blaser, Jr. *The Federal Reserve Bank of Cleveland*. New York: Columbia University Press, 1942; Federal Reserve Bank of Cleveland, *Monthly Business Review*, vol. 7, no. 9 (September 1, 1925), p. 5; and *The Cleveland Plain Dealer*, Federal Reserve Bank Section, "Fourth District Reserve Bank Serves Iron and Steel Center of the United States," August 26, 1923.

The Fourth Federal Reserve District encompasses eastern Kentucky, Ohio, western Pennsylvania, and six counties in the northern panhandle of West Virginia. When these boundaries were established in 1914–15, they contained the world's largest concentration of finished steel manufacturers.

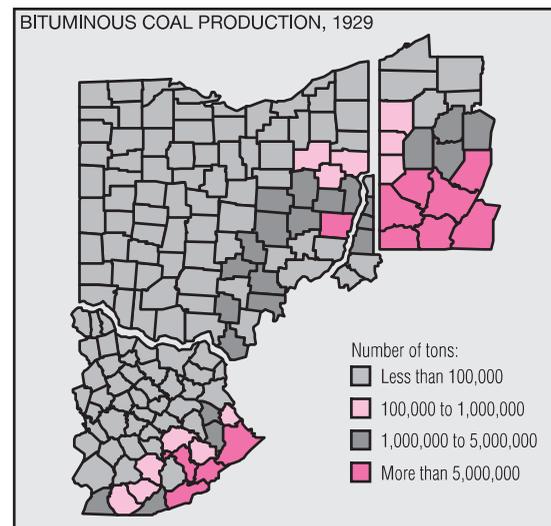
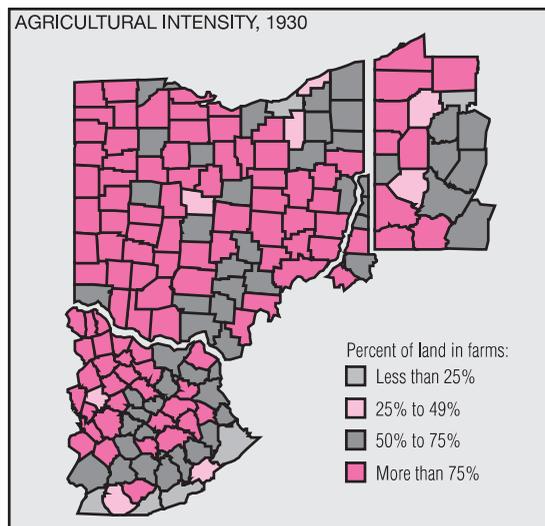
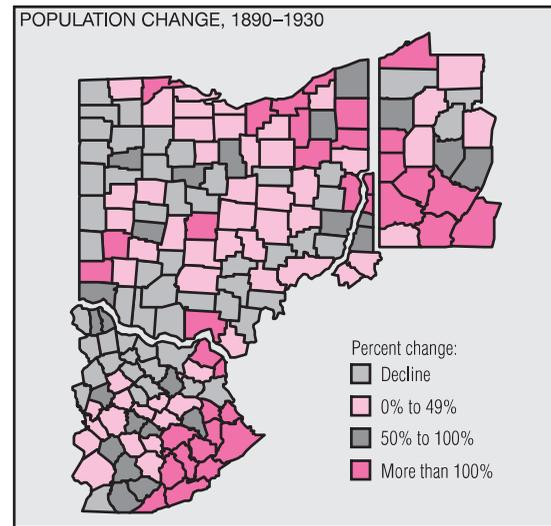
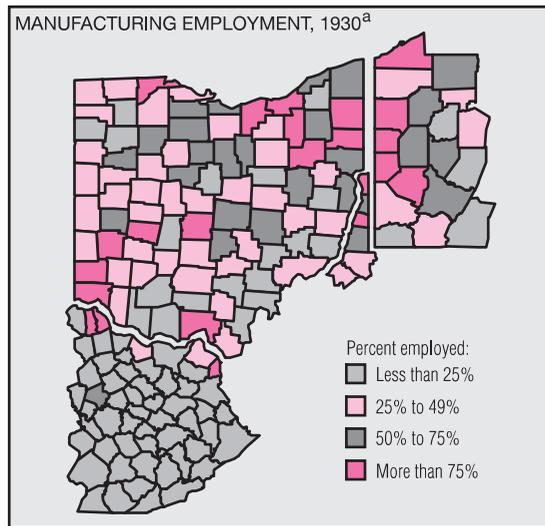
The Census of 1920 established nine main categories of employment. About 61.8% of the Fourth District states' labor force was em-

ployed in one of the three major categories—agriculture, manufacturing, and mining activities—a proportion exceeding the national average of 59.6%. The District had a larger share of workers employed in both mining and manufacturing firms than the nation and a smaller percentage of workers engaged in agriculture.

Clearly, it was a highly industrialized region. A nearly continuous string of steel mills and factories extended from Cleveland through

the Mahoning Valley and on to Pittsburgh. In many other counties throughout the District, manufacturing was the largest employer among the three major industry groups, but activities within manufacturing were diversified. In fact, steel works and rolling mills accounted for only 14.1% of the leading manufacturing industries in Ohio in 1923. Moreover, even in counties throughout the District where mining or agriculture was the dominant employer, *(continued on next page)*

Regional Conditions in the 1920s (cont.)



a. Persons aged 10 years and over, gainfully employed in manufacturing, as a percentage of all such persons engaged in agriculture, manufacturing, and mining.
 SOURCE: Arthur Fredrick Blaser, Jr. *The Federal Reserve Bank of Cleveland*. New York: Columbia University Press, 1942; *The Cleveland Plain Dealer*, Federal Reserve Bank Section, "Fourth District Reserve Bank Serves Iron and Steel Center of the United States," August 26, 1923; and Inter-University Consortium for Political and Social Research, "Historical, Demographic, Economic, and Social Data: The United States, 1790–1970," <http://fisher.lib.virginia.edu/cgi-local/censusbin/census/cen.pl?year=930>.

manufacturing still made a substantial contribution.

From 1890 to 1930, the District's population growth was closely related to the development of mining and manufacturing. Counties dominated by these industries accounted for 92.3% of the population increase for the entire District—a trend that has been reversed more recently. By 1930, the Fourth District had 11,555,730 residents, 9.4% of the nation's inhabitants. More than a

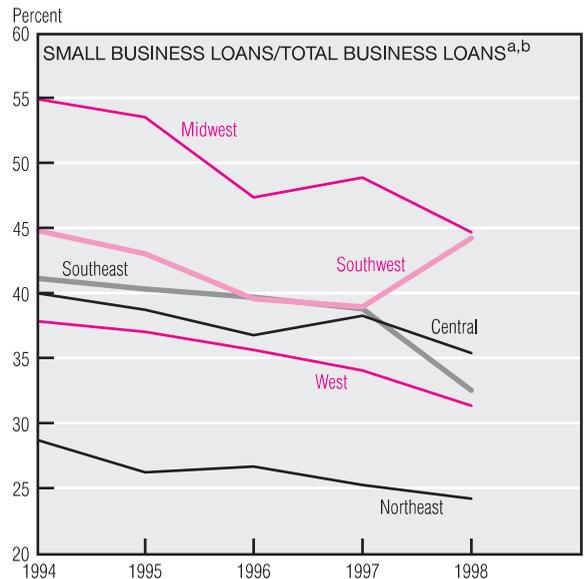
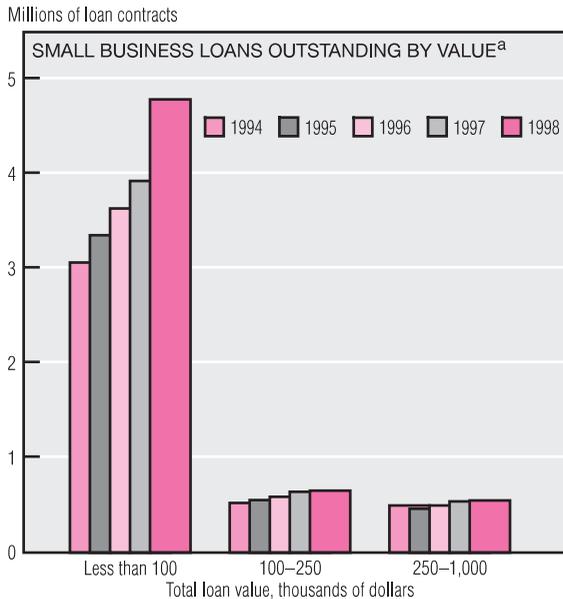
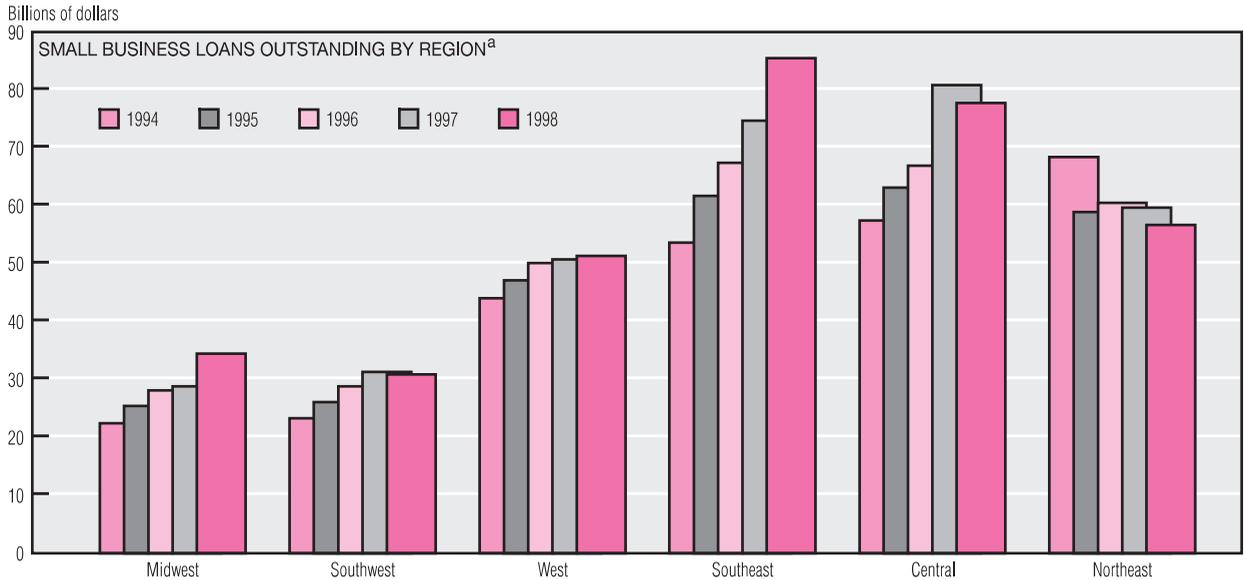
quarter (27.4%) of them lived in the counties containing Pittsburgh, Cleveland, and Cincinnati, the areas with the largest number of manufacturing establishments.

Although manufacturing was dominant, the District also had important agricultural and extractive industries. Farming was widespread and accounted for 16.5% of the District states' employment in 1920. A large share of farm workers lived in eastern Kentucky, a state where agricul-

ture was the principal occupation for 46.8% of all workers.

By 1930, 19.2% of the nation's mining workers lived and worked in the 47 eastern counties of the Fourth District. A year earlier, these counties had produced 36.1% of the nation's bituminous coal. Coal mining was particularly important because it was the foundation upon which the industrial development of the District rested.

Small Business Lending



a. Small business loans (for \$1 million or less) secured by nonfarm, nonresidential properties, plus commercial and industrial loans to U.S. addresses.
 b. Dollar value of all small business loans as a fraction of total business lending.
 NOTE: All data are for FDIC-insured domestic commercial banks.
 SOURCE: Federal Financial Institutions Examination Council, *Consolidated Reports of Condition and Income*, June 1994-98.

Since 1994, banks have been required to report the volume of their small business loans (defined as loans of less than \$1 million). The total volume of such lending has grown steadily over the past five years, from \$269 billion in 1994 to \$336 billion in 1998, a rise of almost 25%.

The Northeast is a striking exception to this growth trend. There, small business lending has declined in four of the past five years.

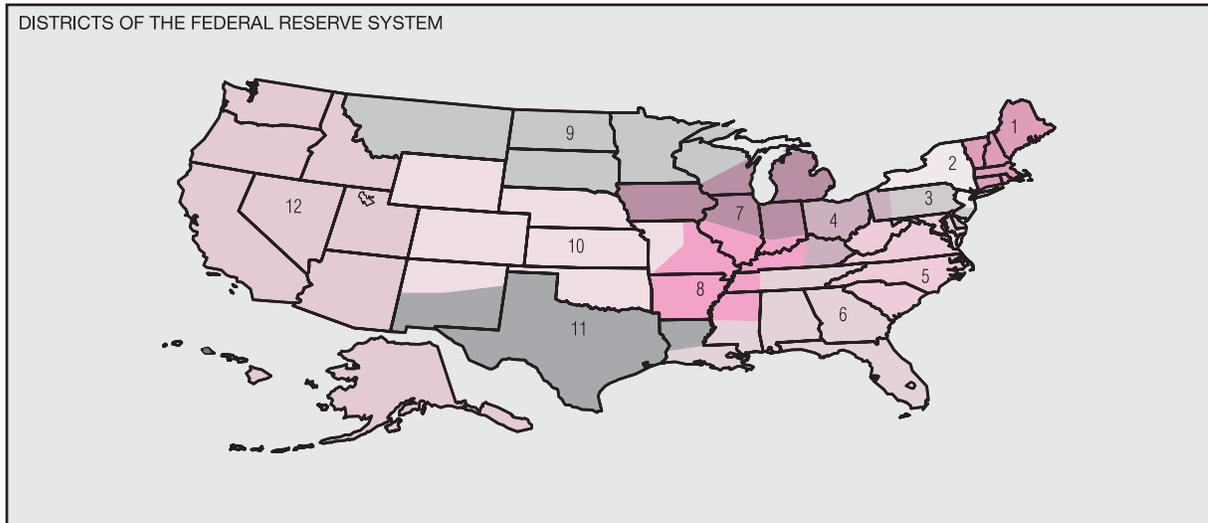
Interestingly, the fastest-growing

segment of this market is for loans of less than \$100,000, which number 4.79 million in 1998, a jump of 22% from the previous year. Of course, the largest loans (those with principal amounts of more than \$250,000) still account for over half of all small business lending—\$181 billion out of a total \$336 billion in 1998 (not shown in chart).

Caution is warranted in interpreting these data, however. Banks report their lending based on the office

through which the loan is booked rather than the location of the borrower. Recent merger activity, therefore, may cause shifts in lending across regions when there is no actual change in the credit available to borrowers in those regions. Such apparent shifts may be partly responsible for the strong lending growth posted in the Southeast and Central regions, given the aggressive acquisition strategies of many banks headquartered there.

Banking Conditions — Then and Now



	Total Assets		Total Loans		Total Deposits		Number of Banks	
	1923:IIQ	1998:IIQ	1923:IIQ	1998:IIQ	1923:IIQ	1998:IIQ	1923:IIQ	1998:IIQ
Percent of total for all districts								
1. Boston	7.39	5.08	7.70	4.79	7.25	5.00	4.33	1.73
2. New York	29.07	17.85	26.76	13.10	29.60	15.16	4.33	3.28
3. Philadelphia	7.12	3.79	6.26	4.08	6.80	1.48	8.33	4.13
4. Cleveland	9.95	10.37	9.80	12.04	9.80	9.24	7.31	6.31
5. Richmond	4.39	16.97	4.92	17.57	4.04	13.88	8.93	7.05
6. Atlanta	3.54	8.19	3.93	8.96	3.42	7.80	6.38	9.17
7. Chicago	14.68	11.00	15.36	11.23	15.11	11.84	5.38	14.68
8. St. Louis	4.28	3.68	4.37	3.70	4.18	3.92	14.55	8.40
9. Minneapolis	3.37	4.41	3.69	5.28	3.38	5.13	6.30	9.33
10. Kansas City	4.58	3.21	4.73	3.02	4.65	4.67	10.03	16.66
11. Dallas	2.91	3.90	3.21	3.44	2.66	6.23	11.62	13.08
12. San Francisco	8.73	11.54	9.28	12.80	9.11	15.65	8.70	6.19
Total for all districts	32,687^a	3,569,960^a	18,750^a	2,222,583^a	27,087^a	579,644^a	9,856^b	3,632^b

a. Millions of dollars.

b. Number of member banks.

NOTE: Data in table are for all member banks of the Federal Reserve System. These represented 63% of all bank assets in 1923:IIQ and 72% in 1998:IIQ.

SOURCES: Federal Financial Institutions Examination Council, *Consolidated Reports of Condition and Income*, June 1998; and Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics*. Washington, D.C.: National Capital Press, 1943.

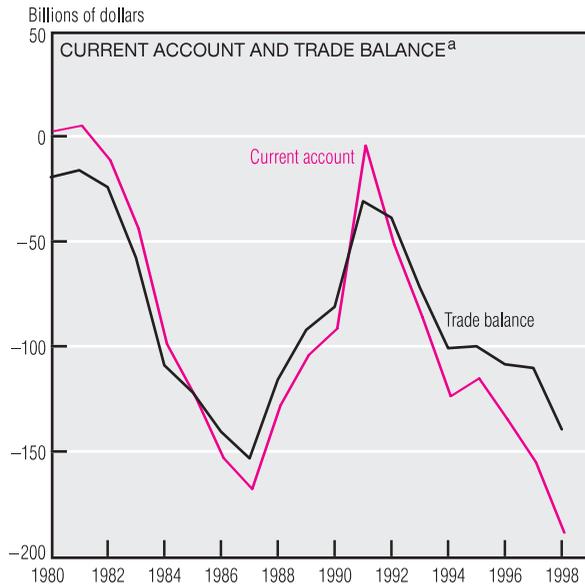
One of the most common misperceptions about the Federal Reserve's 12 districts is that their boundaries are anachronisms. Considering the twentieth century's dramatic population shifts and economic changes, this notion goes, how can lines drawn near the century's beginning reflect banking needs at its end?

Perhaps surprisingly, banking activity is more evenly distributed across the Federal Reserve districts today than it was when the Fourth District's Cleveland building was

dedicated in 1923. At that time, nearly 30% of all assets of the System's member banks were concentrated in the New York District; today that figure is less than 18%. A calculation of the Herfindahl-Herschmann index, a standard measure of market concentration, shows that the concentration of banking assets within the System has declined substantially (from 1,432 in 1923 to 1,134 in 1998). A similar story can also be told about other measures of banking activity.

The Fourth District's relative importance as a banking center has grown in the last 75 years. Although the number of its member banks has continued to decline—falling in 1998 to 229, or 6.31% of all member banks in the Federal Reserve System—total assets and lending activity in the Fourth District remain strong. Indeed, it now provides over 12% of all lending by the System's member banks.

Current-Account Deficits



U.S. Balance of Payments (Billions of dollars)			
	1991	1998 ^a	Change ^b
Current account	-4	-189	-184
Capital flows	52	185	133
Official reserves	23	39	16
Other U.S. government	3	-2	-5
Direct investment	-9	-24	-14
Securities	24	283	260
Other nonbank	8	1	-7
Other bank	3	-113	-117
(Discrepancy)	-47	4	51

Foreign Purchases and Sales of Securities (Billions of dollars)			
	1991	1998 ^a	Change ^b
Total securities	24	283	260
U.S. purchases of foreign securities	-46	-21	25
Foreign purchases of:			
U.S. Treasury securities	19	-6	-24
U.S. currency	15	3	-13
U.S. private securities	35	307	272

Savings, Investment, and Foreign Capital Flows (Billions of dollars)			
	1991	1998 ^a	Change ^b
Savings	934	1,483	549
Private	931	1,130	199
Government	3	352	349
Foreign capital inflow ^c	4	189	185
Domestic investment	937	1,604	667
(Discrepancy)	-1	-68	-67

a. 1998 values are based on first-quarter data.

b. Data may contain rounding errors.

c. Includes balance-of-payments statistical discrepancy as unreported capital flows.

SOURCES: U.S. Department of Commerce, Bureau of the Census and Bureau of Economic Analysis.

Any U.S. current-account deficit must be accompanied by a foreign-capital inflow of equal magnitude. Movements in dollar exchange rates and changes in the spreads between U.S. and foreign interest rates preserve this balance in our international accounts. How far exchange rates and interest rates must adjust to maintain this equilibrium, however, depends on both the financial instrument and the output that the capital finances. Capital

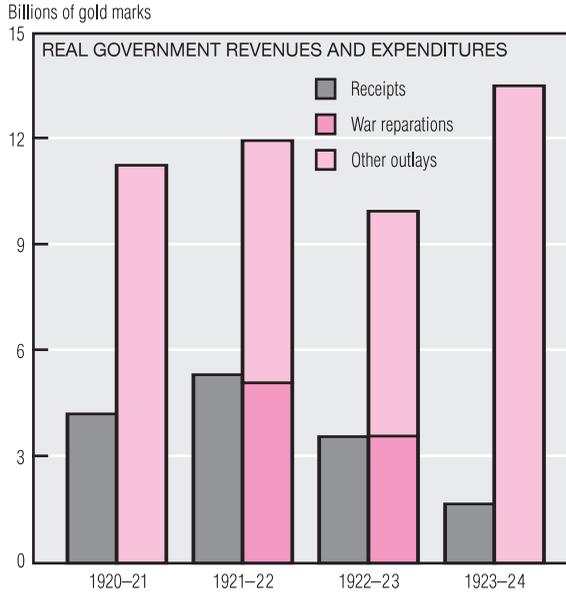
flows into liquid assets are prone to rapid, abrupt flight that can produce swift, extensive exchange- and interest-rate adjustments. Likewise, flows that sustain domestic consumption may require larger rate adjustments than flows sustaining domestic investment.

We lack data on the maturity structure of foreign investments, but we can link the \$184 billion increase in our current-account deficit since 1991 to a sharp increase in foreign holdings of U.S. private

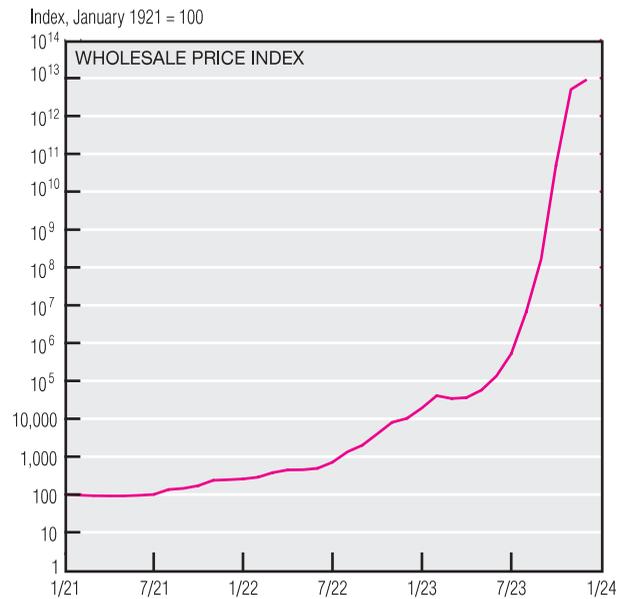
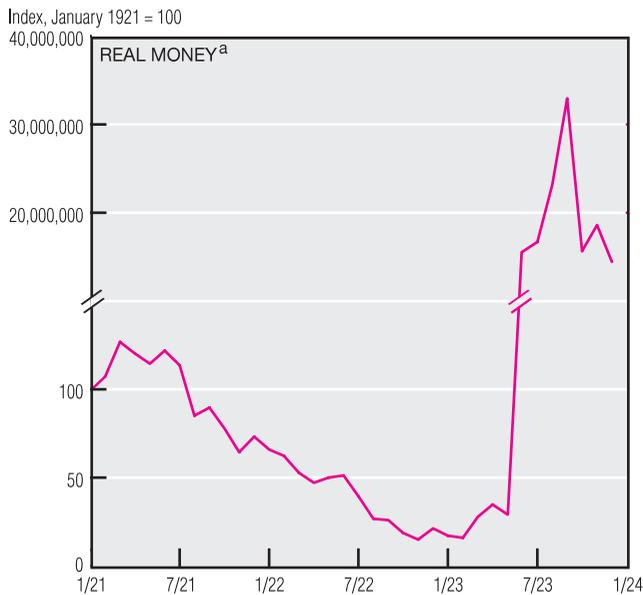
securities. These are probably more prone to flight than are official reserves or foreign direct investments that represent controlling interests in U.S. businesses.

The connection between domestic savings and investment and the current account deficit is clearer. Since 1991, capital inflows associated with the expanding current-account deficit have been accompanied by even larger increases in domestic savings and investment.

Germany's Hyperinflation, 1923



January 1921– January 1922	155%
January 1922– January 1923	3,410%
January 1923– December 1923 ^a	6.8 (10 ¹⁵)%
January 1924– December 1924	173%



a. Fiscal reforms took place in December 1923.
 SOURCE: Thomas J. Sargent, "The Ends of Four Big Inflations," in Robert E. Hall, *Inflation: Causes and Effects*. Chicago: University of Chicago Press, 1982, pp. 41-97.

In January 1923, French and Belgian troops occupied the Ruhr Valley to compel repayment of World War I debts—set at 132 billion gold marks—from a wavering Germany. Workers resisted the incursion through absenteeism, supported by German welfare payments. The nation's fiscal position had already deteriorated as the Socialist government tried to meet foreign obligations and to mend the tattered social fabric by deficit spending. An inflation tax is easy to collect and requires no parliamentary wrangling.

Soon after the occupation began, Germany capitulated to the French and Belgians and the deficit ballooned further still. The German central bank discounted enormous amounts of government treasury securities in 1922 and 1923, along with massive quantities of private commercial paper. By late 1923, the government was financing almost its entire budget through money creation. The inflation rate averaged 40% per month in 1922, then jumped to 3,666% per month in 1923, with an

astounding 29,525% in October. The public responded by shifting as rapidly as possible from marks into foreign currencies and commodities. Consequently, prices rose faster than the money stock—that is, the real money stock fell. This hyperinflation ended in 1924 following fiscal reforms, reorganization of the central bank, and relief from the crushing burden of war reparations. But the events of 1923 have continued to color German attitudes about monetary policy to this day.