Changes in the Macroeconomy and Changes in Macroeconomic Policy

CHAPTER 16

QUESTIONS

How has the structure of the economy changed over the course of the past century?

How has the business cycle changed over the past century?

How has economic policy changed over the past century?

What are future prospects for successful management of the business cycle?

Why does unemployment in Europe remain so high?

Why does growth in Japan remain so low?

16.1 CHANGES IN THE MACROECONOMY

The Past

The structure of the macroeconomy is not set in stone. As time passes the economy changes. The patterns of aggregate economic activity studied in macroeconomics change too. Consumers' opportunities and spending patterns change, industries grow and shrink, the role of international trade steadily expands. The role of the government changes too, rising sharply during the New Deal era of the 1930s and the Great Society era of the late 1960s and early 1970s. It would be surprising indeed if the patterns of macroeconomic fluctuations remained unchanged as all these factors that underpin the macroeconomy change.

Over the past century the structure of modern industrial economies has changed, by some measures at least, more than in the entire previous millennium. Between the year 1100 and the start of the U.S. Civil War in 1860 the share of the labor force engaged in agriculture fell from perhaps 80 percent to perhaps 50 percent. But between the Civil War of the 1860s and the end of the twentieth century the share of the U.S. labor force engaged in agriculture fell from 50 percent to 2 percent, as shown in Figure 16.1. Today in America there are more gardeners, groundskeepers, and producers and distributors of ornamental plants than there are farmers and farm laborers.

The decline of agriculture is not the only major shift in the economy's occupational and industrial distribution. A century ago perhaps 40 percent of the labor force were engaged in mining, manufacturing, and construction: the nonagricultural industries that still required heavy lifting. Today perhaps 25 percent of the labor force are so engaged. The fall in relative employment in these industries has been offset by a rise in service-sector employment — both traditional services and what one might call information-intensive services.

Moreover, a hundred years ago the government's social insurance state was barely in embryo, the tax system was not at all progressive, and most households found it very difficult to borrow in order to see themselves through a year of low income and of unemployment. Today, by contrast, the American financial system lends immense amounts of money to all kinds of consumers. In standard economic theory, that should allow them to smooth their consumption spending. Households should be able to greatly reduce the impact of changes in their incomes on changes in consumption, and so reduce the marginal propensity to consume. Such reductions in the marginal propensity to consume *should* carry along with them a substantial reduction in the size of the multiplier. The same holds true for the fiscal automatic stabilizers of progressive taxes and social insurance, which appear to exert a powerful stabilizing force on the economy. They were not present a century ago.

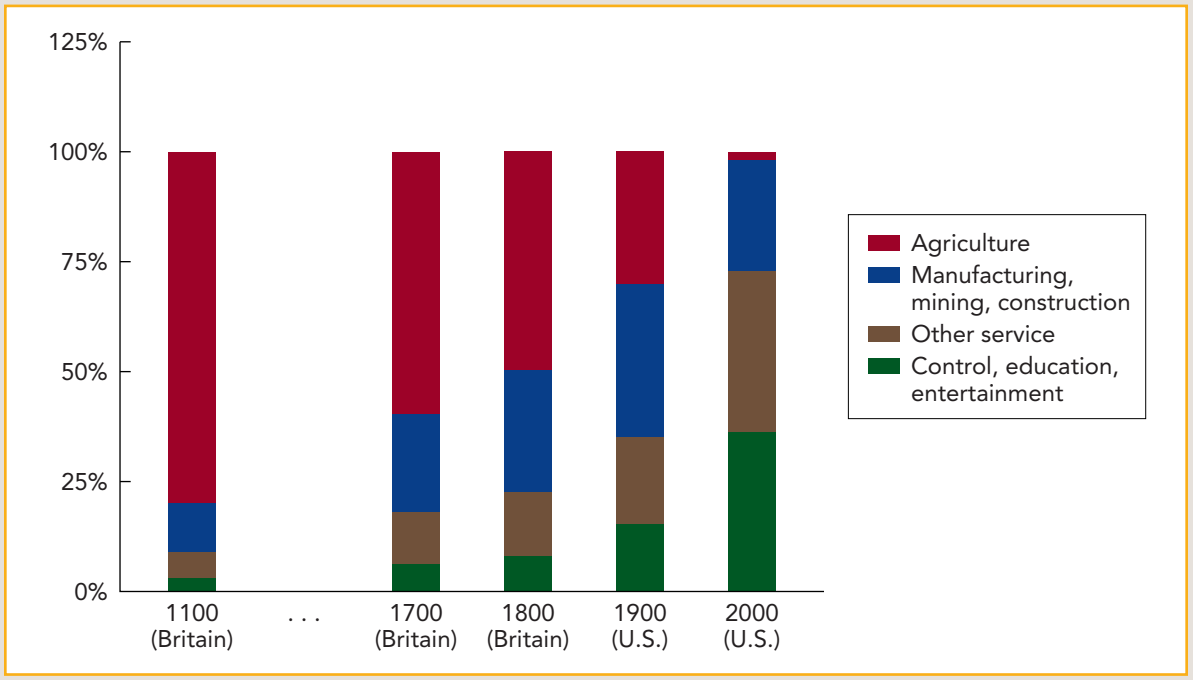
The past century has also seen the rise of **financial automatic stabilizers** like deposit insurance. One major factor making depressions (most notably the Great Depression) larger in the distant past was the fear that your bank might fail, so you needed to pull your money out of the bank and hide it under your mattress. Such sudden increases in the demand for cash during financial panics caused interest rates to spike, investment to fall, and production to decline. Today the existence of a large deposit insurance system has all but eliminated this fear.

Still another change is in the pace and direction of material progress. Back in the late nineteenth century the bulk of improvements in labor productivity came from capital deepening: the buildup of the infrastructure and the factories of the country. In the twentieth century the bulk of improvements in labor productivity came from

FIGURE 16.1

Occupational Distribution of the Labor Force

A thousand years ago almost everyone was a farmer. Even in 1900, nearly one-third of the labor force was made up of farmers. Today the occupational distribution of the labor force is very different. The industries of the industrial revolution — manufacturing, mining, and construction — still employ a quarter of our labor force. But most of today's workers are in the service sector, many of them in information-intensive services.



Source: Author's calculations from *Historical Statistics of the United States* (Washington, DC: Government Printing Office, 1975) and other sources.

improvements in the efficiency of labor as a result of improvements in science and technology: inventions and innovations in materials production, materials handling, and organization.

The share of economic activity oriented toward the future increased as well. Research and development became not a casual by-product of the rest of economic activity, but an organized branch of industry and a key component of investment. At least partly as a result, labor efficiency growth in the twentieth century proceeded at twice the pace of labor efficiency growth of the nineteenth century. And there are few if any signs that the pace of growth in the early twenty-first century will be slower.

Yet in spite of all of these changes in the structure of the economy, the U.S. economy's business cycle has continued. The patterns of the business cycle we see today would seem familiar to those who watched business cycles late in the nineteenth century. Everything else in the economy changes, yet the business cycle seems to remain largely the same. As Table 16.1 shows, there are some signs that fluctuations in unemployment have become smaller in recent years (and many signs that the Great Depression of the 1930s involved an extraordinarily violent business cycle). But the major lesson is that in spite of a number of structural changes that would

TABLE 16.1
Business Cycle Indicators

Period	Typical Swing in Unemployment	Typical Swing in Nonfarm Unemployment	Proportion of Time Spent in Recession
1870–1910	2.3%	4.4%	NA
1886–1915	2.9%	4.8%	22%
1901–1930	1.4%	1.9%	30%
1916–1945	7.2%	8.7%	28%
1931–1945	8.1%	10.1%	18%
1946–1975	1.2%	1.3%	19%
1976–1998	1.3%	1.3%	11%
1946–1998	1.5%	1.5%	15%

Source: Author's calculations from estimates provided by Christina Romer, "Spurious Volatility in Historical Unemployment Estimates," *Journal of Political Economy* 94, no. 1 (February 1986), pp. 1–37; and from *Historical Statistics of the United States* (Washington, DC: Government Printing Office, 1975).

seem likely to diminish the size of the business cycle, it remains and has remained largely the same.

Future Changes

We should not imagine that change is over: It will continue. We can already see some of the future changes that will transform the macroeconomy in the future.

The increase in **financial flexibility** that allows consumers to borrow will continue. The increase in financial flexibility will also make it more difficult to read the financial markets — and is thus likely to make monetary policy somewhat more difficult to conduct. International trade will continue to expand. The odds are that international investments will become easier to make, and so the speed at which capital flows across national borders will increase. And labor markets are likely to continue to change as well.

Consumption

Already **liquidity constraints** — the inability to borrow and the consequent fact that consumption spending is limited by income — play a relatively small role in determining consumption spending in America. They certainly play a much smaller role than at the beginning of this century, or even early in the post–World War II period. Economists' theories tell us that if liquidity constraints are absent, then the marginal propensity to consume should be very low. The level of consumption should depend on one's estimate of one's lifetime resources, and be affected by changes in current income only to the extent that changes in current income change one's estimate of lifetime resources.

Now economists' theories may overstate the case. Tying your current level of spending to your current level of income is a reasonable rule of thumb for managing one's affairs. And it just isn't worth the time spent to do better than one does by using reasonable rules of thumb. So the marginal propensity to consume may remain at some noticeable fraction, and increasing ease of borrowing may not lead the mul-

tiplier to completely disappear. Nevertheless, the multiplier is likely to grow still smaller over time. It will surely play a smaller role in the economy (and in economic policy, and in economics textbooks) in the future.

Globalization

The future is likely to see international trade continue to expand. The growth in trade, depicted in Figure 16.2, will also lower the multiplier: A greater portion of changes in domestic spending will show up as changes in demand for foreign-made goods. So the economy at home will be even less vulnerable to domestic shocks that disturb employment and output. However, increased international integration means that the domestic economy is more vulnerable to foreign shocks: Recession abroad that lowers demand for exports will have repercussions at home.

Accompanying the increase in international trade will be an increase in the magnitude of international financial flows. The odds are that international investments will become easier to make. And the odds are — as means of international communication increase — that investors in one country will become much more confident in making investments in another. So the speed with which capital flows across national borders will increase.

Yet in Chapter 15 we saw that increased flow of capital across national borders is a potential source of financial crisis and macroeconomic volatility. In the East Asian crisis of 1997–1998 a sudden shift in investors' expectations meant that $100 billion a year in international capital flows that had financed investment in East Asia was no longer there. That $100 billion a year had financed the employment of 20 million people working in investment industries, who dug sewer lines, built roads, erected buildings, and installed machines as both domestic and foreign investors bet that there was lots of money to be made in East Asia's industrial revolution. These 20 million East Asian workers had to find new jobs outside of investment industries.

The fall in the value of East Asian currencies has gone a long way to bringing the supply of and demand for foreign exchange back into balance. Falling exchange rates make East Asian goods more attractive to European and American purchasers. East Asia's economies are growing rapidly again.

But what caused the sudden sharp shift in investment patterns? Unfortunately for economists, and unfortunately for economics as a social science, we cannot find any disturbing cause proportional to the large effect. The shift in Wall Street's desires to

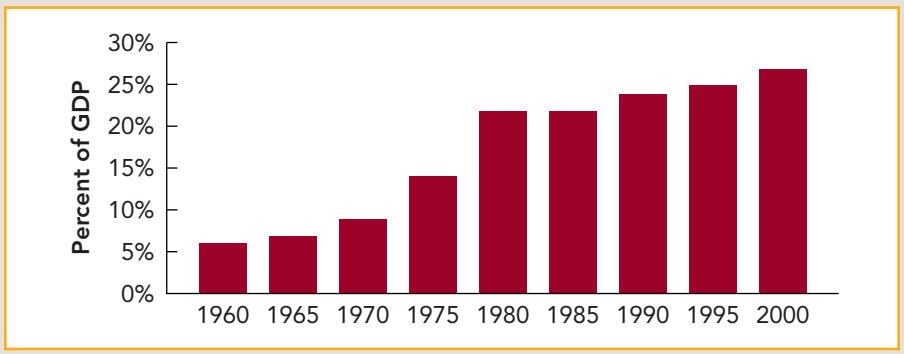


FIGURE 16.2
Globalization: Merchandise Imports as a Share of Total Goods Production
Since 1960 in the United States, the share of merchandise imports has quadrupled relative to total production of goods.

Source: The 2001 edition of *The Economic Report of the President* (Washington, DC: Government Printing Office).

invest in East Asia appears to have been impelled much more by the trend-chasing and herd instincts of Wall Streeters — a community of people who talk to each other too much, and whose opinions often reflect not judgments about the world but simply guesses about what average opinion expects average opinion to be — than by any transformation in the fundamentals of East Asian economic development.

And here we have reached the limits of economics. Economists are good at analyzing how asset markets work if they are populated by far-sighted investors with accurate models of the world and long horizons. Economists are even good at pointing out that such asset markets can be subject to multiple equilibria — situations in which it is rational to be optimistic and rational investors are optimistic if they think that everyone else is optimistic, and in which it is also rational to be pessimistic and rational investors are pessimistic if they think that everyone else is pessimistic. But that is all they can say.

Note that the process of international investment may still be worth supporting. It does promise powerful benefits: faster industrialization on the developing periphery, and higher rates of return for investors from the industrial core, as well as diversification to reduce risk. These benefits may well outweigh the costs of international financial crises. Nevertheless, it is likely that the next generation of business cycles will be judged to have gone well or ill depending on whether the financial crises generated by cross-border financial flows are handled well or badly.

Monetary Policy

The increase in financial flexibility that reduces the multiplier will also make it more difficult to read the financial markets, and probably to conduct monetary policy. Monetary policy works, after all, because the central bank's open-market operations change interest rates. These operations have large effects on interest rates because the assets traded — Treasury bills on the one hand, and reserve deposits at regional Federal Reserve banks on the other hand — play key roles in finance. Few substitute assets can serve the functions that they serve.

But as financial flexibility increases, any one kind of asset will become less and less of a bottleneck. There will be more ways of structuring transactions, and more kinds of financial instruments will be traded. Thus in the future, changes in the supply of Treasury bills likely will have less effect on interest rates than they do today. Open-market operations are likely to become somewhat less effective, and monetary policy somewhat more difficult to conduct, in the future.

Will this make much of a difference? Nobody knows. But monetary policy today is *plenty* effective at controlling production, employment, and prices — albeit with long and variable lags. Even a considerable reduction in the power of open-market operations would still leave central bankers with more-than-ample tools to carry out whatever kinds of policies they wished. The fear that increases in financial instability will rob central banks of their power to control economies is at least a generation in the future.

Will these ongoing and future changes in the structure of the macroeconomy have as little effect on the relative size of the business cycle as past changes appear to have had? To answer that question we need to look at the history of macroeconomic fluctuations, which we do in the next section.

Inventories

Fourth and last of the changes that we can foresee is that improvements in information technology will improve businesses' ability to control their inventories. Mis-

matches between production and demand — unanticipated large-scale inventory accumulation or drawdowns — have been a principal source of fluctuations in unemployment and output over the past century. There is reason to think that better information technology will reduce this component of macroeconomic instability.

But how large this reduction will be is, once again, something that nobody knows.

RECAP CHANGES IN THE MACROECONOMY

The future is likely to bring a continued increase in liquidity. People will find it easier and easier to borrow, hence their spending will be less closely tied to their current income, and the marginal propensity to consume will fall. International trade and financial markets are likely to become increasingly integrated, but at least as far as financial markets are concerned it is not clear that this is a good thing. It's likely that over time the power and effectiveness of monetary policy will decline as increased financial options erode the key role played by commercial bank deposits in finance. And firms will probably become better at managing their inventories, so that inventory fluctuation–driven business cycles will become a thing of the past.

16.2 THE HISTORY OF MACROECONOMIC FLUCTUATIONS

Estimating Long-Run Changes in Cyclical Volatility

Assessing changes in the size of the overall business cycle turns out to be harder than it looks. The obvious thing to do is to compare the cyclical behavior of real GDP and unemployment over the century. But good-quality data exist only for the post–World War II period. The pre–World War II data are much spottier. The Federal Reserve Board index of industrial production begins only in 1919. The Commerce Department GDP series begins only in 1929. The Bureau of Labor Statistics unemployment rate series begins only in 1940. And there is good reason to think that pre-1950 data are less reliable than post-1950 data.

Professor Christina Romer of the University of California–Berkeley has demonstrated that the procedures used to construct pre-1950 data tended to artificially inflate the cyclical volatility of the data. If you simply use the estimates reported in *Historical Statistics of the United States,* you will be comparing pre–World War II apples to post–World War II oranges. A consistent division of the past century-plus into recessions and expansions, as used in Table 16.2, shows little difference in the size of recessions. The average pre–World War I recession was almost exactly one month shorter than the average post–World War II recession.

We can reach a few solid conclusions about the changing cyclical variability of the American economy. The first and most obvious fact is the extraordinarily large size of the business cycle during the interwar period — the 1920–1940 period that came after World War I and before World War II. The Great Depression that began in 1929 was only the largest of three interwar business cycles. Other major contractions in economic activity took place in 1920–1922 and 1937–1938 (see Figure 16.3).

TABLE 16.2

Length of Recessions and Expansions since 1886

Pre–World War I recessions (months to trough) are almost exactly the same length as post–World War II recessions. Post–World War II expansions (months from trough to next peak), however, are half again as long as pre–World War I expansions.

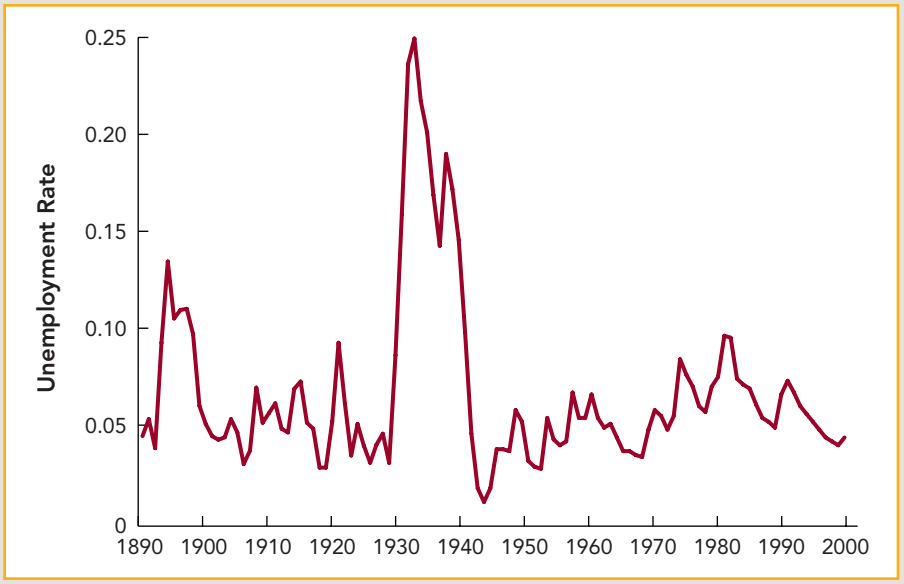
1886–1916			1920–1940			1948–Present		
Year of Peak	Mos. to Trough	Mos. from Trough to Next Peak	Year of Peak	Mos. to Trough	Mos. from Trough to Next Peak	Year of Peak	Mos. to Trough	Mos. from Trough to Next Peak
1887	5	66	1920	14	26	1948	11	45
1893	13	23	1923	14	32	1953	10	39
1896	12	39	1927	9	21	1957	8	24
1900	8	31	1929	34	61	1960	10	106
1903	8	40	1937	10	18	1969	11	36
1907	11	19	1939	3		1973	16	58
1910	16	37				1980	6	12
1914	6	17				1981	16	92
1916	8					1990	8	
Avg.	9.7	34.0	Avg.	14.0	31.6	Avg.	10.7	51.5

Source: Christina Romer, "Remeasuring Business Cycles" (NBER Working Paper 4150), http://papers.nber.org/W4150, published subsequently in the *Journal of Economic History,* 54 (September 1994), pp. 573–609.

FIGURE 16.3

The Great Depression Relative to Other Business Cycles: U.S. Unemployment

Calculating fluctuations in unemployment according to a methodology consistent with the post–WWII data reveals that past unemployment estimates contained in *Historical Statistics of the United States* overstated the size of the depression of the 1890s.



Source: The 2001 edition of *The Economic Report of the President* (Washington, DC: Government Printing Office); *Historical Statistics of the United States* (Washington, DC: Government Printing Office, 1975); and Christina Romer, "Spurious Volatility in Historical Unemployment Estimates," *Journal of Political Economy* 94, no. 1 (February 1986), pp. 1–37.

A second clear conclusion is that in the post–World War II era the business cycle, measured relative to the size of the economy, has been a little bit but not much smaller than before World War I. The shrinkage in the business cycle appears to be between 25 and 30 percent. The postwar business cycle is a somewhat smaller animal, but it would seem to be of the same species.

Thus many of the changes in the economy since 1900 must have roughly canceled each other out. The decline of agriculture as a share of employment and production (as a rule not very susceptible to the industrial business cycle) has been offset by the rise in importance of relatively acyclical services (also not very susceptible to the business cycle). An increase in the life span of capital equipment built with more durable materials might seem likely to increase cyclical volatility because more economic activity takes the form of long-term bets on the future. But this has apparently been offset by faster technological obsolescence, which reduces the effective economic life of investments in fixed capital. A smaller multiplier due to reduced liquidity constraints on households has presumably had some effect. But perhaps keeping spending proportional to income remains a useful rule of thumb even as credit becomes widely available, and so perhaps credit availability has not done as much to reduce the multiplier as economists' theories claim.

Economic Policy

How Economic Policy Has Worked

Yet if we look a little deeper, we see that business cycles today are not the same animals as they were before the Great Depression. The fall in the multiplier, the arrival of automatic stabilizers, and the increasing power of central banks have allowed monetary policy to offset many of the kinds of shocks that generated pre-Depression business cycles. The absence of significant stabilization springs from the fact that the increasing power of central banks has created a new class of shocks to the economy: recessions deliberately induced by monetary authorities to curb rising inflation. The post–World War II economy appears to have had fewer small recessions caused by shocks to the IS and LM curves. Stabilization policy has worked, in that it allows for the central bank working in combination with automatic stabilizers to react when the economy threatens to turn down into recession because of any sudden shock.

Before 1916 it was impossible for the U.S. government to have any effect on aggregate demand. Government purchases and net taxes were so small relative to economic activity that no fiscal policy variation short of fighting a major war could materially shift the IS curve, and change equilibrium real GDP. The pre–World War I government also lacked, until the founding of the Federal Reserve in 1914, the ability to affect the level of interest rates. Neither fiscal stabilization policy nor monetary stabilization policy as we know them today was possible before World War I.

By the end of World War II the power of stabilization policy and the government's commitment to manage aggregate demand were both firmly established. The war left the United States with a federal government that annually spent about one-fifth of GDP, and a government committed to countercyclical fiscal policy. Before World War II it had been a commonplace of political and policy-making discourse that taxes should be raised and spending cut to try to balance the budget in a recession. By the 1950s this doctrine was dead: The automatic stabilizers of the federal budget were in place.

The emergence of a significant progressive income tax made government revenues substantially procyclical, and the emergence of unemployment compensation, food stamps, and welfare led government spending to have a substantial automatic

procyclical component as well. By the 1960s the federal government believed that it ought to be undertaking countercyclical discretionary fiscal policy as well (even though it has never been able to succeed in doing so). In monetary policy a similar shift had been accomplished near the beginning of the post–World War II period. By the early 1950s the U.S. Treasury and the Federal Reserve had agreed — in their Accord of 1951 — that the principal task of the Federal Reserve was to use monetary policy to stabilize the economy.

Since then the Federal Reserve has attempted to use monetary policy, within the limits placed on it by long and variable lags, to stabilize the economy and to moderate recessions. Both overall survey studies and detailed studies of cases like the interest rate cuts that followed the stock market crash of 1987 teach the lesson that the Federal Reserve has had considerable success in cutting short recessions and in accelerating growth in the early stages of the subsequent economic expansion.

There is no doubt that automatic stabilizers as well have played a role in moderating the business cycle. Yet a third innovation in economic policy — deposit insurance — has had effects that are harder to quantify. However, as Christina Romer observes, "the obvious starting point is the observation that financial panics were ubiquitous before World War I and almost nonexistent since World War II . . . there were major panics in 1890, 1893, 1899, 1901, 1903, and 1907 — all of them the source of substantial contractionary pressure on real GDP." Perhaps the effects of deposit insurance have been large as well: We are not really sure.

How Economic Policy Has Not Worked

But if economic policy since World War II has prevented or moderated many recessions, it has caused recessions as well. The existence of **policy-induced recessions** like those of 1981–1982 and 1990–1992 is what explains why there has not been a more dramatic reduction in the size of the business cycle over time. At least four times in the United States since World War II the Federal Reserve has engineered a recession, or has willingly accepted a substantial risk of a recession, in order to accomplish its policy goal of curbing inflation. It has had to curb an inflation rate that has crept upward into an uncomfortably high range.

If the prewar boom-and-bust business cycle was driven by, in John Maynard Keynes's phrase, the "animal spirits" of investors' shifts from optimism to pessimism and back again (and by financial panics), the post–World War II boom-and-bust business cycle has been driven by economic policies that have allowed rises in inflation, followed by the development of a consensus within the Federal Reserve that the rise in inflation must be reversed.

The minutes of the FOMC meetings identify seven moments since World War II at which the Federal Reserve took steps to reduce the growth rate of aggregate demand because inflation was thought to be too high. At each of these seven moments, therefore, the Federal Reserve risked a recession in order to try to reduce inflation. It sought to combat an inflationary cost-price spiral in spite of the fact that if it did so it would run the risk of incurring temporary unemployment.

Why have economic policy makers in the post–World War II era found themselves repeatedly driven to risk recession in order to fight inflation? In the late 1940s inflation was allowed to accelerate because the Federal Reserve had adopted the mission of keeping interest rates low to reduce the cost of financing the huge national debt incurred during World War II. The Federal Reserve was not satisfied with this mission, and in fact negotiated the Treasury–Federal Reserve Accord of 1951 to remove it from its list of policy objectives.

In the 1960s and 1970s inflation was allowed to accelerate for reasons that economists still debate. I have stressed historical accidents and the lingering memory of the Great Depression. The Stanford economist John Taylor stresses mistaken economic theories held in the early 1960s — in particular, the Phillips curve model of Samuelson and Solow constructed under the assumption that inflation expectations were and would remain static. Political scientists like Edward Tufte stress political business-cycle considerations.

At the first, surface level, the United States had an unstable macroeconomy in the 1970s because until the 1980s no influential policy makers — until Paul Volcker chaired the Federal Reserve — would place a sufficiently high priority on keeping inflation from rising. As long as inflation remained relatively low, it was not seen as a crisis, and so other goals took precedence among every group of economic policy makers. Thus presidents, members of Congress, and members of the Federal Open Market Committee were willing to accept the risk of increasing inflation to achieve other goals. Only after inflation had risen — only after it had reached the level of a political crisis — did a consensus develop that priorities needed to be changed, and steps were taken to reduce inflation.

Under this interpretation, the United States after World War II had a boom-bust, stop-go business cycle because the political system could pay attention to only one phenomenon at a time: When inflation wasn't a crisis, it wasn't an issue.

Only with the acceleration of inflation toward the end of the 1970s did political sentiment begin to shift. For rising inflation did become a severe political problem in 1979. And Paul Volcker was then nominated and confirmed as chair of the Federal Reserve in a political environment in which control of inflation — rather than reducing the unemployment rate — was the highest priority for economic policy. The Volcker-led Federal Reserve quickly signaled its intention to place first priority on controlling inflation by shifting its operating procedures to place a greater emphasis on money supply targets.

At a second, deeper level, the United States had a burst of inflation in the 1970s that required a painful recession cure in the 1980s because economic policy makers during the 1960s dealt their successors a bad hand: an unfavorable Phillips curve. Thus the policies of the 1960s left economic policy makers of the 1970s with a painful dilemma: either higher-than-usual inflation, or higher-than-usual unemployment. Bad cards coupled with bad luck made inflation in the 1970s worse than anyone expected it might be. And unsuccessful attempts to find a way out of this dilemma gave the economy the boom-bust cycle of the 1970s.

And at a third, deepest level, the truest cause of the inflation of the 1970s was the memory of the Great Depression. The Great Depression made it impossible for a while to believe that the business cycle was a fluctuation *around* rather than a shortfall *below* potential output and potential employment. The memory of the Great Depression made everyone skeptical of taking the average level of capacity utilization or the unemployment rate as a measure of the economy's sustainable productive potential.

Only after the experiences of the 1970s were economic policy makers persuaded that the flaws and frictions in American labor markets made it unwise to try to use stimulative macroeconomic policies without limit. Only after the experiences of the 1970s were policy makers persuaded that the minimum sustainable rate of unemployment attainable by macroeconomic policy was relatively high, and that the costs — at least the political costs — of even moderately high one-digit inflation were high as well.

It is somewhat depressing that the post–World War II gains from stabilization policy appear to have been relatively small. Nearly 50 years ago Milton Friedman warned that stabilization policy, if pursued overly aggressively by policy makers who did not understand its limits, could easily turn into destabilization policy. It looks as though his gloomy warning was very close to being correct. Yet important lessons may have been learned.

RECAP PRE–WWII VERSUS POST–WWII BUSINESS CYCLES

The pre–WWII boom-and-bust business cycle was driven by investors' shifts from optimism to pessimism and back again. The post–WWII boom-and-bust business cycle has been driven by economic policies that have allowed rises in inflation, followed by a Federal Reserve–caused recession to reverse the rise in inflation. There is reason to hope that the modern Federal Reserve has learned how to eliminate or at least reduce the size of these inflation-fighting recessions. The magnitude of the business cycle has been much smaller since the mid-1980s.

The Great Depression

But if the business cycle has remained in spite of — and in part because of — active macroeconomic policy, it is important to remember that active macroeconomic policy has made a disaster on the order of magnitude of the Great Depression inconceivable. To see how bad things could get in an extreme situation when economic policy does not do its job, we need only to look back 70 years at the Great Depression.

The Magnitude of the Great Depression

The speed and magnitude of the economy's collapse during the first stages of the Great Depression was unprecedented: Nothing like it had been seen before, and nothing like it has been seen since. From full employment in 1929, real GDP fell until it was nearly 40 percent below potential output by 1933 (see Figure 16.4). Investment collapsed: By 1932 real investment spending was less than one-ninth what it had been three years before. And by 1933 unemployment had reached a quarter of the labor force.

In our analytical framework it is straightforward to understand why investment and real GDP fell so far so fast between 1929 and 1933. They did so because of an extraordinary rise in real interest rates. Real interest rates that had been 4 percent in 1929 spiked to nearly 13 percent by 1931, and stayed high throughout 1932 (see Figure 16.5). With such high real interest rates, naturally investment spending fell off.

After 1932 investment spending remained low, averaging less than half its 1929 value for the rest of the Great Depression decade even though real interest rates returned to more normal values. Why didn't the return of real interest rates to normal values cause a revival of investment? Because the magnitude of the Great Depression itself caused businesses to put off expanding their capacity. In 1933, with real GDP less than two-thirds of potential output, practically every business in the United States had excess capacity and hence no immediate incentive to invest at all. The

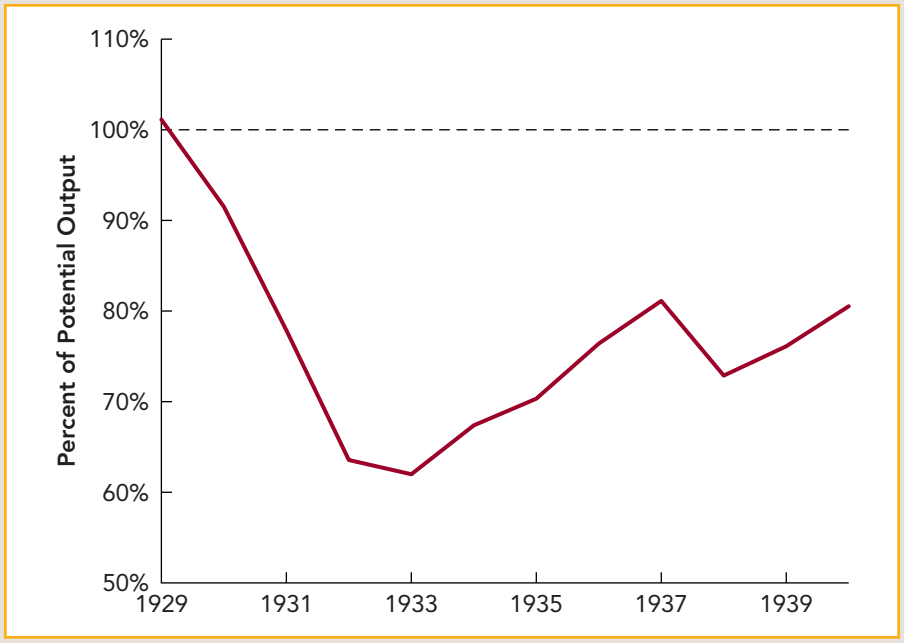


FIGURE 16.4
Real GDP Relative to Potential Output during the Great Depression
The Great Depression saw the steepest fall ever in real GDP relative to potential output.

Source: Author's calculations from *Historical Statistics of the United States* (Washington, DC: Government Printing Office, 1975).

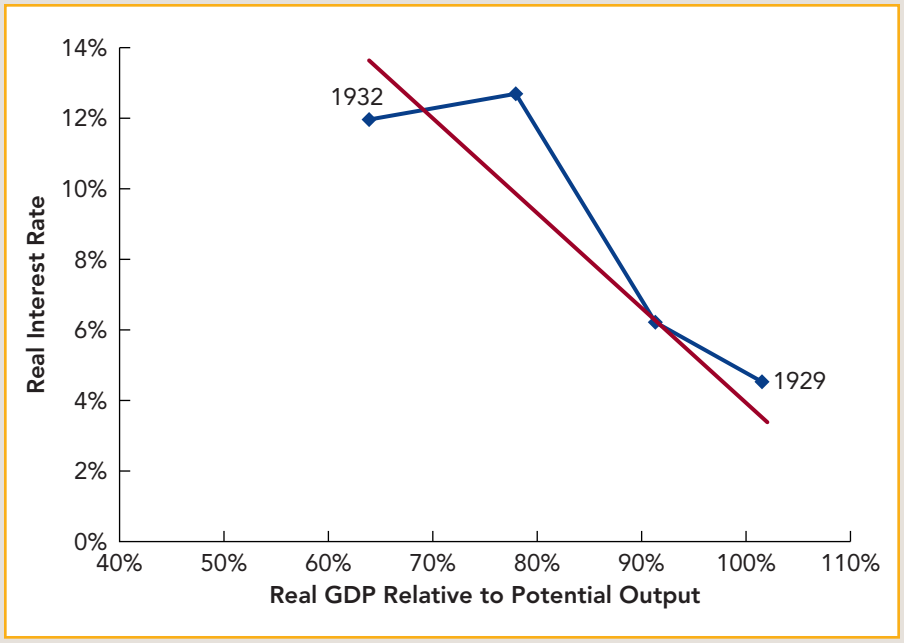


FIGURE 16.5
Movement along the IS Curve: The Great Contraction, 1929–1932
Sharp rises in expected real interest rates due to deflation and rising risk premiums pushed the economy far up the IS curve between 1929 and 1932.

Source: Author's calculations from *Historical Statistics of the United States* (Washington, DC: Government Printing Office, 1975).

very depth of the Great Depression caused a steep fall in the baseline investment coefficient I_0 in the investment equation

$$I = I_0 - (I_r \times r)$$

Thus even a restoration of real interest rates to normal levels was not sufficient to restore the economy to full employment.

Deflation and High Real Interest Rates

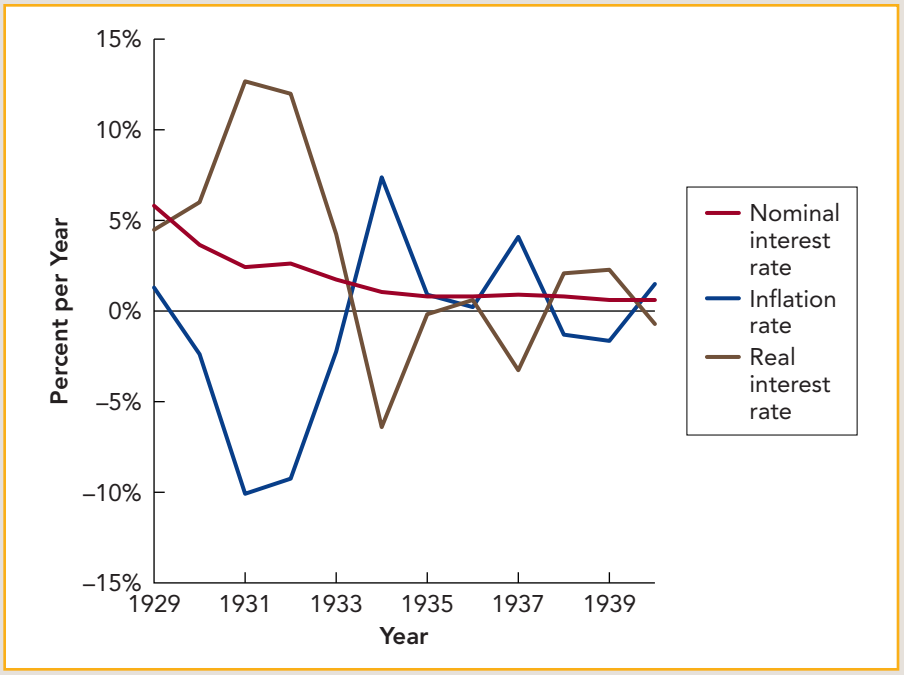
So why did real interest rates rise so high between 1929 and 1932? The immediate, proximate cause of high real interest rates was rapid deflation: rapid sustained falls in prices that, when combined with moderate nominal interest rates, produced very high real interest rates, as shown in Figure 16.6.

What caused the deflation? The first thing was the depth of the Great Depression itself: Falling production, employment, and demand produced steep falls in prices, which caused high real interest rates that reduced demand, production, and employment still further. But it makes little sense to say that the Great Depression caused itself. There must have been an initial shock to start the downward spiral that was the Great Depression.

The Initial Shock

Economists have proposed many candidates for the shock that triggered the Great Depression. Perhaps the stock market crash of 1929 reduced wealth and increased uncertainty, and caused a downward shift in the baseline level of consumption. Perhaps the availability of consumer credit in the 1920s caused a consumption spending boom

FIGURE 16.6
Real and Nominal Interest Rates and the Inflation Rate in the Great Depression
Nominal interest rates on Treasury securities fell rapidly between 1929 and 1933. But such cuts in nominal interest rates did not keep real interest rates from rising sharply: Deflation played a big role too.



Source: Author's calculations from *Historical Statistics of the United States* (Washington, DC: Government Printing Office, 1975).

that then came to a natural end. Perhaps there was excessive residential investment in the 1920s because builders failed to realize how the restrictions on immigration put into place in the mid-1920s would affect housing demand in the long run. Perhaps the recognition that the housing stock was too large triggered a downward shift in the baseline level of investment. Perhaps the Federal Reserve's 1928 increases in interest rates, an attempt to reduce stock market speculation, triggered the initial slump.

Practically any analyst soon reaches the conclusion that the response was disproportionate to the initial shock. Somehow the American economy at the end of the 1920s was very vulnerable in the sense that a small shock could cause a big depression. It is this disproportion between the hard-to-find initial shock and the subsequent depression that makes many economists fear that the economy will be unstable if not managed by appropriate government policies.

Consequences of the Price Level Decline

Economists have reached a consensus that a sufficiently aggressive and activist monetary policy could have stemmed the price decline, and so ended the Great Depression much earlier if undertaken rapidly and aggressively enough. Policies of massive federal deficits funded by money-printing, coupled with aggressive open-market operations to increase the monetary base could have, if carried far enough, produced inflation. And without the high real interest rates produced by deflation in the early 1930s, it is hard to see how there could have been a Great Depression.

Falling price levels reduce real GDP through two separate channels. The first is the real interest rate channel that we saw above: The real interest rate is the nominal interest rate minus the inflation rate, so deflation leads to high real interest rates, to a move up and to the left along the IS curve, and to falling real GDP and employment.

But there is a second channel as well. Unexpected falls in the price level redistribute wealth from debtors to creditors. Those businesses that are heavily in debt find that they cannot pay, and so they go bankrupt. Those financial institutions that have loaned to heavily indebted businesses find that their loans are worthless, and so they go bankrupt as well. Deflation destroys the web of credit that channels funds from savers through banks and other financial institutions to businesses wanting to invest. More than one-third of U.S. banks failed in the first years of the Great Depression. And without the web of financial intermediaries to channel investment through the financial markets, maintaining or restoring the flow of investment becomes very difficult.

These effects of deflation are long-lasting. Even after real interest rates have returned to normal, the deflation-driven destruction of the web of financial intermediation will continue to depress investment. So it was in the Great Depression.

16.3 MACROECONOMIC POLICY: LESSONS LEARNED

Stabilization

For almost all of your lives — "you" being the typical reader of this textbook — the business cycle has been relatively quiescent. A substantial difference in business-cycle behavior comes from dividing the post–World War II era into two periods with the breakpoint chosen at the end of the Volcker disinflation in the early 1980s. The pre-1984 years show much more business-cycle volatility than do the post-1983 years, as Table 16.3 indicates.

TABLE 16.3

Post-Volcker Stabilization of the U.S. Economy: Standard Deviation of Percentage Changes

Since the mid-1980s the U.S. economy has been astonishingly, remarkably stable. Typical business-cycle movements in the unemployment rate or in real GDP have been half the size they were from 1948 to 1984.

Series	1948–1984	1985–Present
Industrial production	5.7%	2.2%
GNP	2.8	1.3
Commodity output	5.3	3.6
Unemployment rate	1.2	0.6

Source: Christina Romer, "Changes in Business Cycles: Evidence and Explanations" (NBER Working Paper 6948, 1999), http://papers.nber.org/W6948.

One possibility is that the period since 1984 has been the result of good luck — that business-cycle macroeconomic performance has been good because there have not been many shocks nor any truly large shocks to the economy. But just as the relatively placid 1960s were followed by the disruptive 1970s, perhaps the 1990s will turn out to be followed by an equally turbulent decade.

Learning

A second possibility is that lessons have truly been learned from the experience of the 1960s and 1970s. The late 1980s and the 1990s were not only an era of relatively stable economic growth but also an era of low inflation. Recessions have been few and growth relatively steady since the early 1980s in large part because inflation has been firmly under control: A lack of inflation has meant that the Federal Reserve has not had to risk a recession to control inflation.

This leads to the hope that the monetary policy authorities have gained sufficient experience and expertise at using their policy tools to successfully carry out stabilization policy. Perhaps the first three decades of the post–World War II era saw little stabilization of the business cycle because of repeated policy mistakes: overoptimism with respect to the possible sustainable rate of economic growth, followed by recessions to demonstrate that the central bank was, after all, serious about controlling inflation.

Prospects

Perhaps the more recent era shows how much more stable our economic system can be with successful institutions that understand the limits of their power. But it is not clear whether the growth of aggregate demand has been smoother because economic policy makers have recognized the limits of what they can achieve, because of the skill of Paul Volcker and Alan Greenspan, because of better economic theories to guide policy, or simply because of good luck. It is clear that every time in the past a "new era" or a "new economy" has been proclaimed, the same old business cycle has soon returned.

The expansion of the 1920s led economists to hope that the newly constructed Federal Reserve had learned how to stabilize output by eliminating the fluctuations in interest rates that caused financial crises. Irving Fisher, the most prominent monetarist of his day, went so far as to claim on the eve of the 1929 crash that stock prices had reached a "permanent and high plateau." The prolonged expansion of the 1960s led the Department of Commerce to change the name of its *Business Cycle Digest* to the *Business Conditions Digest,* for it seemed silly to have a publication named after a phenomenon that no longer existed. Both President Eisenhower's and President Johnson's Council of Economic Advisers chairs, Arthur Burns and Walter Heller, agreed that substantial progress in economic science and policy making toward economic stability had opened up new dimensions of political economy.

One can be optimistic about the future of macroeconomic policy, and count up all the lessons that economists and policy makers have successfully learned over the course of the twentieth century.

One can be especially optimistic from the perspective of the United States today. From that perspective macroeconomic policy appears remarkably successful. Unemployment is very low, at levels that have not been seen in a generation. Inflation is also low, at levels that have not been seen in a generation either. The stock market is at record highs, both absolutely and relative to corporate earnings and dividends, suggesting that the market at least expects a very bright future. The increase in income inequality that was an extremely worrisome social trend in the United States appears to have stopped (although it has not reversed itself). And in recent years *measured* productivity growth has been rapid, suggesting that the political claims by Clinton administration officials in the early 1990s that deficit reduction would lead to a high-investment, high-productivity-growth, high-income-growth recovery were largely correct.

Nevertheless, it is likely that at some point the long expansion that began in the early 1990s will be followed by a recession. And what will follow in the way of management of the business cycle is ours to decide.

16.4 MACROECONOMIC POLICY: LESSONS UN- OR HALF-LEARNED

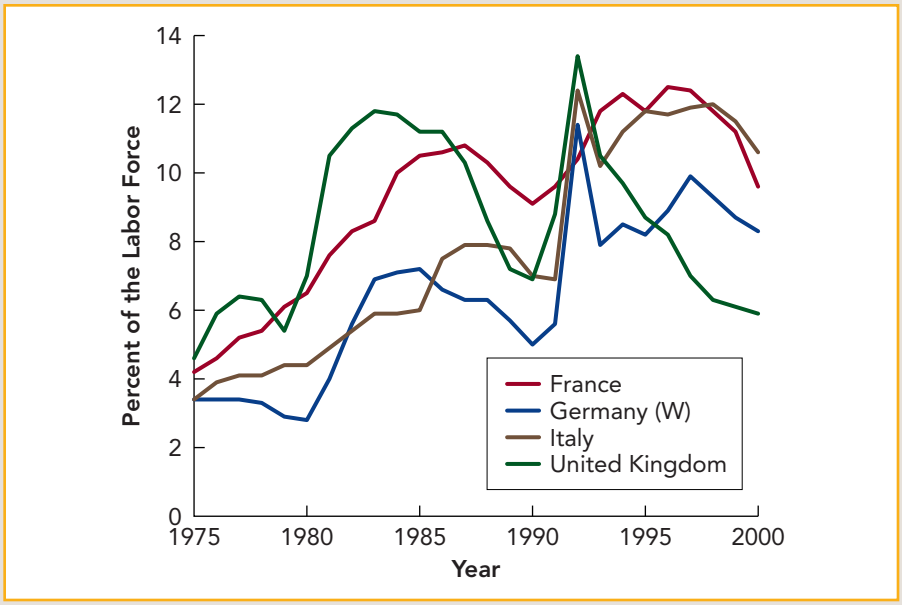
One can also be pessimistic about the future of macroeconomic policy. One can count up all the lessons that economists and policy makers have not learned, or have half-learned, or have learned and then forgotten over the course of the twentieth century. Certainly a look outside the United States, either at Japan, or at the financial-crisis-ridden emerging economies, or at Europe with its stubbornly high unemployment, does not lend strength to the claim that traditional business-cycle patterns have come to an end.

Lessons Unlearned: High European Unemployment

Europe at the end of the 1990s is not in a Great Depression. Nevertheless, unemployment rates in western Europe at the end of the 1990s are within hailing distance of the rates achieved during the Great Depression. Unemployment averages 10 percent in the zone of countries that now share the common currency of the euro (see Figure 16.7).

Up until the end of the 1970s, unemployment in western Europe had been lower — sometimes substantially lower — than unemployment in the United States. But

FIGURE 16.7
European Unemployment
The growth of unemployment in the 4 largest western European countries, 1975–2000.



Source: The 2001 edition of *The Economic Report of the President* (Washington, DC: Government Printing Office).

starting in the 1970s European unemployment began to ratchet upward. Unemployment rose during recessions, yet it did not fall during economic expansions. During the recession of the Volcker disinflation at the start of the 1980s, western European and U.S. unemployment rates were about equal. But during the later 1980s and 1990s the trend of U.S. unemployment was down; the trend of European unemployment was stable or upward.

In the United States it is possible to understand the comovements of unemployment and inflation over 1960–2000 using the standard Phillips curve. The Phillips curve shifts out in the 1970s as everyone begins to expect higher inflation and demographic factors cause the natural rate of unemployment to rise. The Phillips curve shifts back in the 1980s and 1990s as people regain confidence in the Federal Reserve's commitment to low inflation and as changing demographic factors cause the natural rate of unemployment to fall. The story does not fit badly. Movements in the expected rate of inflation reflect changes in the economic policy environment. Movements in the natural rate of unemployment are relatively small, and can be linked to plausible factors.

In western Europe, by contrast, the accelerationist Phillips curve *never* fit the historical experience very well. Each policy episode from 1970 on — supply shocks, the Volcker disinflation, the recession of the early 1990s — seemed to shift the Phillips curve further out, and to further raise the natural rate of unemployment. It seemed as if this year's natural rate of unemployment was equal to whatever unemployment had happened to be last year.

The dominant view expressed in Europe in the early 1990s was that high European unemployment was the result of labor market rigidities. Europe possessed laws, restrictions, and regulations that made it too difficult for firms to hire new workers cheaply at a relatively low wage, and too difficult for firms to fire workers

(and thus forward-looking firms were reluctant to hire workers). Thus it was too expensive to conduct a labor-intensive business in Europe or to adjust to changes in the economic environment.

According to this dominant view, high unemployment in Europe is an *equilibrium* level that is what economists call "**classical**": It arises not from any deficiency of aggregate demand, but simply from the fact that the state's regulations keep the labor market from clearing. The state's regulations boost the cost of employing the marginal worker far above the extra revenue the typical firm would gain from employing an extra worker.

But the "rigidities" in the European labor market were stronger in the 1960s — when European unemployment was very low — than they are today. It is not that the natural rate of unemployment in Europe has always been high; it is that each additional adverse shock that increases unemployment seems to increase the natural rate as well. Thus many economists who have examined European unemployment dissent from the conventional wisdom of the editorial writers and the politicians. They tend to see western Europe not as locked into high unemployment, but as in a reversible situation. Just as increases in unemployment in the 1970s and 1980s raised the natural rate of unemployment in Europe, so decreases in the rate of unemployment in the 2000s would in all likelihood lower the natural rate of unemployment in Europe.

A Grand Bargain?

Economists' views of western European unemployment thus suggest there is potential for much improvement. Have central bankers and governments shift to a more expansionary monetary policy. As demand expands, people will find that the natural rate of unemployment is falling. The falling natural rate of unemployment will create still further room for demand expansion, and for further unemployment rate reduction.

Central bankers may fear that the economists' view is wrong and that the conventional wisdom is right — that attempts to expand demand and reduce unemployment a little bit will lead to accelerating inflation as unemployment falls below its (high) current natural rate. Therefore begin the process with some steps to eliminate labor-market rigidities: Reduce employers' contributions to social security, reduce severance costs, transfer unemployment insurance money from the payment of benefits to assistance with job searching, and allow the minimum wage to fall. These steps should leave central bankers confident that there is room to expand demand in the context of a falling natural rate of unemployment.

But governments find that such steps to initiate the process of demand expansion can be portrayed as an attack on the standard of living of the unemployed — as an antiworker, antihuman policy. Only if governments are confident that reform of the social insurance system will be accompanied by stronger demand and higher employment will they be willing to undertake their part of the grand bargain. Otherwise they will fear that — with high interest rates and slow demand growth — social insurance system reform will merely change high classical unemployment to high Keynesian unemployment, and in the process create mass poverty. And only if central banks are confident that their expansionary monetary policies will be accompanied by social insurance system reform would it make sense for them to risk lower interest rates and a change in monetary policy.

Even if the conventional wisdom is right, such a grand bargain promises to make everyone — the currently unemployed, the currently employed who pay taxes to support the social insurance system, politicians dealing with high unemployment, central

bankers accused of being out of touch with human experience — better off. And if the economists' view is right — if the principal determinant of a high natural rate of unemployment in Europe is the fact that unemployment has been high in Europe for a long time — then the benefits to such a grand bargain are overwhelmingly large.

Yet European politicians and central bankers have been unable to learn how to deal with their high, stubborn rates of unemployment.

Lessons Half-Learned: Japanese Stagnation

The End of the Bubble Economy

The standard analysis of how the Japanese economy entered its present period of stagnation is straightforward. The Japanese stock market and real estate market rose far and fast in the 1980s, to unsustainable "bubble" levels. And eventually the market turned, and both the real estate and stock markets collapsed.

When stock and real estate prices collapsed, it was discovered that lots of enterprises and individuals had borrowed heavily against their real estate and security holdings, putting up their real estate and their stocks as collateral. After the collapse, not only were those who had borrowed heavily bankrupt, but the banks and other institutions that had loaned them money were bankrupt as well: The value of the collateral they had accepted was no longer enough to repay the *lenders'* creditors.

One problem was that no one was exactly sure which institutions were bankrupt — which institutions had liabilities in excess of their assets. Thus no one was anxious to lend money to anyone: You might well never see your money again if the organization you loaned it to was one of those that had extended itself during the bubble economy of the late 1980s. A second problem was regulatory forbearance: the belief that the best way to solve the problem was to pretend that it did not exist, try to let business go on as usual, and hope that a few good years would allow all of the institutions that were "underwater" to make enough in profits to repay their debts even given the low value of the collateral that they had accepted.

These two problems together meant that investment spending was depressed. Financial institutions exist to channel money from savers with purchasing power to businesses that can use that purchasing power to expand their capital. But in the aftermath of the collapse of the bubble, no one really wanted to lend — for you could not know whether the organization wanted your money to invest, or to try to paper over some of its previous losses.

The situation was analogous to the collapse of investment spending in the Great Depression, where the chain of deflation and bankruptcies had similar effects. The collapse of the Japanese financial bubble of the 1980s depressed consumption and investment spending. Banks' and other institutions' large bets on the real estate market meant that the collapse of the bubble put them underwater — with assets and lines of business that were worth less than the debt they already owed that they had borrowed to speculate in real estate. Who will invest in a business — or a bank — if they fear that their money will be used not to boost profitability but instead to pay back earlier creditors?

Thus Japan has fallen into a decade of economic stagnation. Growth since 1990 has been almost zero, as Figure 16.8 shows. Unemployment has risen to levels previously unheard-of in Japan. The IS curve has shifted far to the left. And nothing seems to correct it: Even extremely low nominal interest rates are not sufficient to boost investment and aggregate demand. And for nearly an entire decade Japanese economic growth has been extremely slow and stagnant.

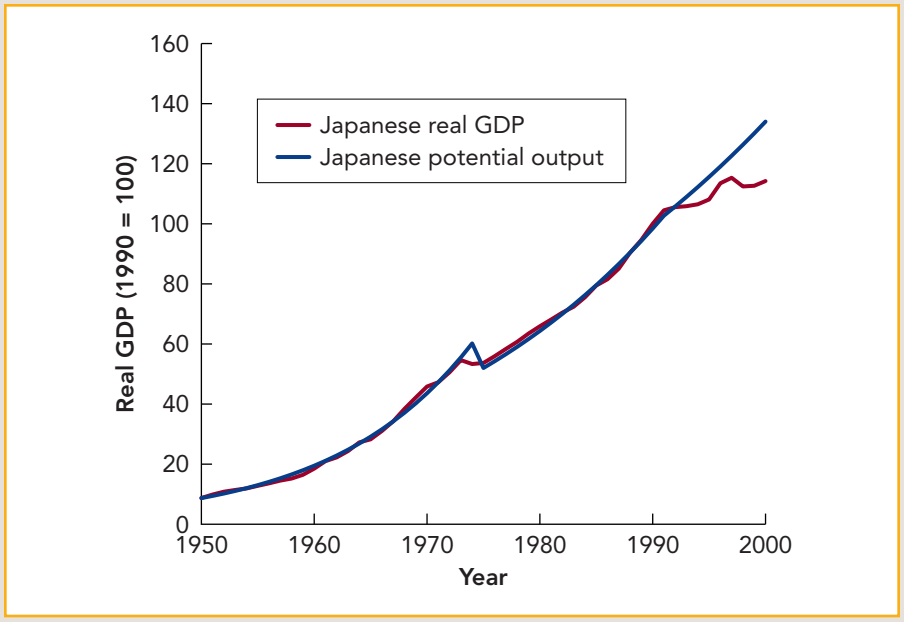


FIGURE 16.8
The Japanese Bubble Economy: Before, during, and after
(Real and potential GDP are graphed on the scale on the left side.) Since the Japanese stock market crash at the beginning of the 1990s, Japanese economic growth has been extremely slow. What was the fastest growing of the Group of Seven (G-7) major industrial nations' economies has become the slowest growing of them.

Source: Organization for Economic Cooperation and Development.

What should economic policy makers do in such a situation? The answer to what you should do in order to recover from such a state of depressed aggregate demand is "everything." You should have the government run a substantial deficit (although, as E. Cary Brown of MIT pointed out in the 1950s, it requires truly awesome deficit spending — on the order of deficit spending in World War II — to reverse a Great Depression like that in the United States in the 1930s or a Great Stagnation like that in Japan today). You should have the central bank push the interest rate it charges close to zero (to make it very easy and cheap to borrow money).

If that isn't enough you should try to deliberately engineer moderate inflation. If demand is depressed because people think investing in corporations is too risky, change their minds by making the alternative to investment spending even more risky. If the alternative is hoarding your money in cash, then eat away a share of its real purchasing power every year with inflation.

So far Japan has changed its fiscal policy to run big deficits (but, as any student of the Great Depression would suspect, they haven't been big enough). Japan has lowered its short-term safe nominal interest rates to within kissing distance of zero. But these haven't done enough good. The lessons of the Great Depression have been only half-learned.

Lessons Half-Learned: Moral Hazard

Even in the United States, it seems that some of the lessons on economic policy taught by the past century of experience have been only half-learned. Consider the problem of dealing with financial crises: those moments when large and highly leveraged financial institutions have failed or are about to, and when there is a genuine fear that a chain of bankruptcies is about to be triggered.

In such a situation the fear that the organization to which one might lend will fail greatly retards lending. The flow of funds through financial markets will slow to a trickle, as savers conclude that keeping their wealth close at hand in safe forms is a much better opportunity than lending it to organizations that are probably bankrupt. Thus such a financial crisis is likely to see the IS curve shift far and fast to the left as the level of investment spending collapses. If this leftward shift in the IS curve is not stemmed, there will be a recession and the financial crisis will rapidly become worse as businesses that were solvent at normal levels of production and sales find that the fall-off in demand has bankrupted them.

What to do in such a situation was first outlined by Bagehot a century and a quarter ago. The government needs to rapidly close down and liquidate those organizations that are fundamentally bankrupt. If they would be bankrupt even if production and demand were at normal levels relative to potential, then they should be closed. The government needs to lend money — albeit at a high, unpleasant, penalty rate — to organizations that would be solvent if production and demand were at normal levels, but that nevertheless suffer a cash crunch now.

The key is twofold: Government support is necessary in order to prevent a deep meltdown of the entire financial system. Government assistance must be offered on terms unpleasant enough and expensive enough that no one would wish in advance to get into a situation in which they need to draw on it. Moreover, the government must accept that its ability to distinguish between these two classes of institutions is imperfect, and that it will inevitably make mistakes.

Yet more and more in the political discussion over economic policy one hears the claim that government provision of liquidity and support in a financial crisis is dangerous — that it causes "moral hazard" because organizations place riskier and riskier bets counting on government support to bail them out if things go wrong. The right policy in a financial crisis is a completely hands-off one. A century and a quarter of experience suggests that this is only a half-truth. Moral hazard is a problem, but so is a Great Depression. The balancing point is hard to determine: Bank and financial regulators must impose rules that restrict the growth of moral hazard, assistance in times of financial crisis must be expensive and painful to the organization drawing on the government, and yet the worst outcome — a freezing-up of the financial system and a severe recession — must be guarded against. To focus on only one of these three rather than balancing between them is to recommend bad economic policy.

The Ultimate Lesson

It is strange that neither European nor Japanese governments appear to have learned the lessons that macroeconomists have to teach. It is also strange that fundamentals of crisis policy that seemed settled more than a century ago are still up for grabs in America's political debate. The principal lesson is that it seems very hard to learn the lessons of history.

Thus the future of economic policy seems likely to be similar to the past. Gross mistakes will be made, historical analogies will be misapplied, and economists and other observers after the fact (and sometimes during the fact) will find major policy mistakes made by governments and central banks to be inexplicable: We will genuinely be unable to figure out just what the people who made the decisions were thinking.

So do not mistake the steady hand on the monetary policy tiller and the relatively placid business cycle that the United States has experienced since the mid-1980s for the way things will be in the future.

RECAP MACROECONOMIC POLICY: LESSONS UN- OR HALF-LEARNED

Economists and economic policy makers have learned much over the past century, but many lessons appear unlearned or imperfectly learned. European unemployment remains stubbornly high in spite of the prospect that a two-handed approach to both stimulate aggregate demand and remove restrictions on aggregate supply would allow for more rapid growth and expanded employment without inflation. The Japanese government continues to fail to resolve what is now a decade-old financial crisis, thus keeping its economy stagnant. And the economic policy debate within the United States fails to note that financial crises pose a choice between evils and not a situation in which one single principle of economic governance — whether "avoid moral hazard" or "avoid chains of bankruptcies" — can be applied to the fullest. Perhaps the most important lesson is that the lessons of history are hard to learn.

Chapter Summary

1. The structure of the economy has undergone mammoth changes over the past century, yet these changes appear to have had relatively little impact on the size of the business cycle.
2. Stabilization policy as we know it was impossible a hundred years ago; yet it is now performed routinely and aggressively.
3. Since World War II, stabilization policy has had successes and failures. Its principal failure has been that it has generated recessions to fight inflation, and these policy-induced recessions have kept policy from successfully stabilizing the economy to a greater degree.
4. In the past two decades, stabilization policy in the United States has been very successful. Is this just good luck, or is it a pattern? We shall see.
5. Certainly from the U.S. perspective there is every reason to be optimistic about the future of macroeconomic policy, and of the macroeconomy.
6. From a European perspective there is less reason to be optimistic: European governments and central banks have not learned how to deal with their high levels of unemployment.
7. From a Japanese perspective there is less reason to be optimistic: The Japanese government has not learned how to deal with its financial meltdown.
8. Even from a U.S. perspective, it seems to be hard to learn the lesson that good economic policy during an economic crisis is not a matter of clinging to one principle, but of balancing the conflicting requirements of several valid principles.

Key Terms

stabilization policy (p. 440)
financial automatic stabilizers (p. 440)
financial flexibility (p. 442)
liquidity constraints (p. 442)
globalization (p. 443)
cyclical volatility (p. 445)
policy-induced recessions (p. 448)
classical unemployment (p. 457)
bubble economy (p. 458)
moral hazard (p. 459)

Analytical Exercises

1. What changing factors since the start of the twentieth century would make one expect business cycles to become larger?
2. What changing factors since the start of the twentieth century would make one expect business cycles to become smaller?
3. As the macroeconomy continues to change in the twenty-first century, do you expect business cycles to become larger or smaller?
4. Why has production become more stable in the United States since the early 1980s?
5. Why does unemployment remain high in Europe today?

Policy Exercises

1. How, in your view, is the way the Federal Reserve conducts monetary policy likely to change over the next generation?
2. If the government's share of GDP in spending shrinks over the next generation, what in your view is likely to happen to the size of the business cycle?
3. How, in your view, will increased ease of international trade and increased international capital mobility change the workings of the macroeconomy over the next generation?
4. What steps would you take to try to reduce European unemployment, and how might those steps backfire?
5. What steps would you take to try to end Japan's current depression, and how might those steps backfire?