

Stabilization Policy

What we need is not a skilled monetary driver of the economic vehicle continuously turning the steering wheel to adjust to the unexpected irregularities of the route, but some means of keeping the monetary passenger who is in the back seat as ballast from occasionally leaning over and giving the steering wheel a jerk that threatens to send the car off the road.

– Milton Friedman

The financial crisis of 2008–2009 has revived a long-standing debate that has for many years occupied a central place in economics literature: how should government policy makers respond to the business cycle? The answer depends on one's beliefs and viewpoint. Some economists view the economy as inherently unstable. They argue that the economy experiences frequent shocks to aggregate demand and aggregate supply. Unless policy makers use monetary and fiscal policy to stabilize the economy, these shocks will lead to unnecessary and inefficient fluctuations in output, unemployment and inflation. According to the popular saying, macroeconomic policy should 'lean against the wind', stimulating the economy when it is depressed and slowing the economy when it is overheated.

Other economists (such as Milton Friedman) view the economy as naturally stable. They blame bad economic policies for the large and inefficient fluctuations we have sometimes experienced. They argue that economic policy should not try to 'fine-tune' the economy. Instead, economic policy makers should admit their limited abilities and be satisfied if they do no harm.

This debate has persisted for decades, with numerous protagonists advancing various arguments for their positions, and became especially relevant as economies around the world sank into recession in 2008. The fundamental issue is how policy makers should use the theory of short-run economic fluctuations developed in the preceding chapters. In this chapter we ask two questions that arise in this debate. First, should monetary and fiscal policy take an active role in trying to stabilize the economy, or should policy remain passive? Second, should policy makers be free to use their discretion in responding to changing economic conditions, or should they be committed to following a fixed policy rule?

15-1 Should Policy Be Active or Passive?

As we have seen in the preceding chapters, monetary and fiscal policy can exert a powerful impact on aggregate demand and, thereby, on inflation and unemployment. When the government is considering a major change in fiscal policy, or when the central bank is considering a major change in monetary policy, foremost in the discussion are how the change will influence inflation and unemployment, and whether aggregate demand needs to be stimulated or restrained.

Although the governments of advanced industrialized economies have long conducted monetary and fiscal policy, the view that they should use these policy instruments to try to stabilize the economy is more recent, dating from the immediate post-World War II period, when the memory of the Great Depression and its political repercussions were still fresh in the minds of policy makers. In the immediate post-war period, it seemed that in the absence of an active government role in the economy, events like the Great Depression could occur regularly. The financial crisis that erupted in 2008 across Europe brought to the epicentre of the debate the role that governments and policy makers should have played in order to prevent such economic turmoil and how they should now respond in order to minimize the repercussions of recession and to facilitate the process of economic recovery.

To many economists, the case for active government policy is clear and simple. Recessions are periods of high unemployment, low incomes and increased economic hardship. The model of aggregate demand and aggregate supply shows how shocks to the economy can cause recessions. It also shows how monetary and fiscal policy can prevent (or at least soften) recessions by responding to these shocks. These economists consider it wasteful not to use these policy instruments to stabilize the economy.

Other economists are critical of the government's attempts to stabilize the economy. These critics argue that the government should take a hands-off approach to macroeconomic policy. At first, this view might seem surprising. If our model shows how to prevent or reduce the severity of recessions, why do these critics want the government to refrain from using monetary and fiscal policy for economic stabilization? To find out, let's consider some of their arguments.

Lags in the Implementation and Effects of Policies

Economic stabilization would be easy if the effects of policy were immediate. Making policy would be like driving a car: policy makers would simply adjust their instruments to keep the economy on the desired path.

Making economic policy, however, is less like driving a car than it is like piloting a large ship. A car changes direction almost immediately after the steering wheel is turned. By contrast, a ship changes course long after the pilot adjusts the rudder, and once the ship starts to turn, it continues turning long after the rudder is set back to normal. A novice pilot is likely to over-steer and, after noticing the mistake, overreact by steering too much in the opposite direction. The ship's path

could become unstable, as the novice responds to previous mistakes by making larger and larger corrections.

Like a ship's pilot, economic policy makers face the problem of long lags. Indeed, the problem for policy makers is even more difficult, because the lengths of the lags are hard to predict. These long and variable lags greatly complicate the conduct of monetary and fiscal policy.

Economists distinguish between two lags that are relevant for the conduct of stabilization policy: the inside lag and the outside lag. The **inside lag** is the time between a shock to the economy and the policy action responding to that shock. This lag arises because it takes time for policy makers first to recognize that a shock has occurred and then to put appropriate policies into effect. The **outside lag** is the time between a policy action and its influence on the economy. This lag arises because policies do not immediately influence spending, income and employment.

The inside lag of tax policy in the economies of European countries that have a parliamentary system of government is generally quite short, because once the government announces a tax change, it can become law and be implemented very quickly. On the other hand, a considerable amount of time may still pass between the decision to increase public spending in a certain area and the actual implementation of the spending programme, due to the planning, staffing and general administration that the programme may require.

Matters become more complex when there are no existing practices, and intervention procedures need to be designed from the beginning. The EU was caught unprepared in the recent crisis because it did not have in place a crisis management mechanism that could be utilized to ease the pressure primarily on the peripheral countries. As a result, in 2010 the European Financial Stability Facility (EFSF) and the European Financial Stabilisation Mechanism (EFSM) were set up in order to address the immediate difficulties faced by the most exposed Euro Area (Eurozone) economies. In late 2012 the Euro Area finance ministers introduced a permanent crisis management mechanism, the European Stability Mechanism (ESM), which provides access to financial assistance for Euro Area members in financial difficulty. It replaced the two earlier temporary EU funding programmes, though the previously approved bailout loans to Ireland, Portugal and Greece are still operated within the two earlier schemes. All new bailouts for any Euro Area member state will now be operated under the ESM, with a lending ceiling of €500 billion. ESM member states can apply for a bailout if they are in financial difficulty or if their financial sector is in need of recapitalization. These bailouts are conditional on member states having first ratified the European Fiscal Compact and then agreeing to the necessary reforms or fiscal consolidation required to restore financial stability as determined by the European Commission, ECB and IMF. To date, the ESM has assigned up to €100 billion for recapitalization of Spanish banks and €9 billion for a sovereign state bailout and financial sector recapitalization programme for Cyprus.

In the United States, which does not have a parliamentary government system, the inside lag of fiscal policy is much longer for both tax and spending, compared to most European economies. This is because of the US system of government: changes in spending or taxes require the approval of the president

and both houses of Congress and generally involve a slow and cumbersome legislative process.

However, even though the inside lag of tax policy in Europe may be relatively short, the outside lag – the time taken for the effect on tax revenues to work through – may still be long.

Overall, therefore, fiscal policy is nowadays seen as a somewhat imprecise tool for stabilizing the economy.

Monetary policy has a much shorter inside lag than fiscal policy, because a central bank can decide on and implement a policy change in less than a day, but monetary policy has a substantial outside lag. Monetary policy works by changing the money supply and interest rates, which in turn influence investment and aggregate demand. Many firms make investment plans far in advance, however, so a change in monetary policy is thought not to affect economic activity until about six months after it is made.

The long and variable lags associated with monetary and fiscal policy certainly make stabilizing the economy more difficult. Advocates of passive policy argue that, because of these lags, successful stabilization policy is almost impossible. Indeed, attempts to stabilize the economy can be *destabilizing*. Monetary policy interventions in fact become pro-cyclical, pushing the economy even further away from steady state and destabilizing it more. Suppose that the economy's condition changes between the beginning of a policy action and its impact on the economy. In this case, active policy may end up stimulating the economy when it is heating up, or depressing the economy when it is cooling off. Advocates of active policy admit that such lags do require policy makers to be cautious. But, they argue, these lags do not necessarily mean that policy should be completely passive, especially in the face of a severe and protracted economic downturn, such as the recession that began in 2008.

Some fiscal policies, called **automatic stabilizers**, are designed to reduce the lags associated with stabilization policy. Automatic stabilizers are policies that stimulate or depress the economy when necessary, without any deliberate policy change. For example, the system of income taxes automatically reduces taxes when the economy goes into a recession, without any change in the tax laws, because individuals and corporations pay less tax when their incomes fall. Similarly, the unemployment-insurance and welfare systems automatically raise transfer payments when the economy moves into a recession, because more people apply for benefits. One can view these automatic stabilizers as a type of fiscal policy without any inside lag.

The Difficult Job of Economic Forecasting

Because policy influences the economy only after a long lag, successful stabilization policy requires the ability to predict accurately future economic conditions. If we cannot predict whether the economy will be in a boom or a recession in six months or a year, we cannot evaluate whether monetary and fiscal policy should now be trying to expand or contract aggregate demand. Unfortunately, economic developments are often unpredictable, at least given our current understanding of the economy.

One way forecasters try to look ahead is with macroeconomic models, which have been developed both by government agencies and by private firms for forecasting and policy analysis. These large-scale computer models are made up of many equations, each representing a part of the economy. After making assumptions about the path of the exogenous variables, such as monetary policy, fiscal policy and oil prices, these models yield predictions about unemployment, inflation and other endogenous variables. Keep in mind, however, that the validity of these predictions is only as good as the model and the forecasters' assumptions about the exogenous variables.

CASE STUDY

Mistakes in Forecasting

'Light showers, bright intervals, and moderate winds.' This was the forecast offered by the renowned British national weather service on 14 October 1987. The next day Britain was hit by its worst storm in more than two centuries.

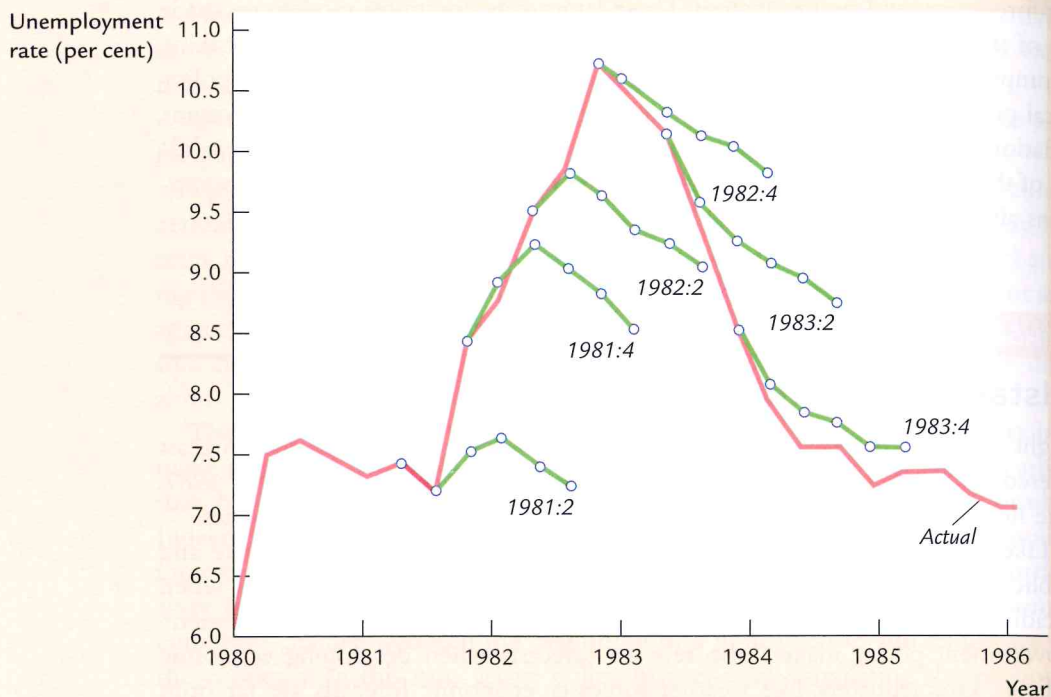
Like weather forecasts, economic forecasts are a crucial input to private and public decision making. Business executives rely on economic forecasts when deciding how much to produce and how much to invest in plant and equipment. Government policy makers also rely on forecasts when developing economic policies. Unfortunately, like weather forecasts, economic forecasts are far from precise.

The most severe economic downturn in US history, the Great Depression of the 1930s, caught economic forecasters completely by surprise. Even after the stock market crash of 1929, they remained confident that the economy would not suffer a substantial setback. In late 1931, when the economy was clearly in bad shape, the eminent economist Irving Fisher predicted that it would recover quickly. Subsequent events showed that these forecasts were much too optimistic: the unemployment rate continued to rise until 1933, and it remained elevated for the rest of the decade.¹

Figure 15-1 shows how economic forecasters did during the recession of 1982, one of the most severe economic downturns in the United States since the Great Depression. This figure shows the actual unemployment rate (in red) and six attempts to predict it for the following five quarters (in green). You can see that the forecasters did well when predicting unemployment one quarter ahead. The more distant forecasts, however, were often inaccurate. For example, in the second quarter of 1981, forecasters were predicting little change in the unemployment rate over the next five quarters; yet only two quarters later unemployment began to rise sharply. The rise in unemployment to almost 11 per cent in the fourth quarter of 1982 caught the forecasters by surprise. After the depth of

¹Kathryn M. Dominguez, Ray C. Fair and Matthew D. Shapiro, 'Forecasting the Depression: Harvard Versus Yale', *American Economic Review*, September 1988, vol. 78, pp. 595–612. This article shows how badly economic forecasters did during the Great Depression, and it argues that they could not have done any better with the modern forecasting techniques available today.

FIGURE 15-1



Forecasting the Recession of 1982 The red line shows the actual unemployment rate from the first quarter of 1980 to the first quarter of 1986. The green lines show the unemployment rate predicted as six points in time: the second quarter of 1981, the fourth quarter of 1981, the second quarter of 1982, and so on. For each forecast, the symbols mark the current unemployment rate and the forecast for the subsequent five quarters. Notice that the forecasters failed to predict both the rapid rise in the unemployment rate and the subsequent rapid decline.

Source: The unemployment rate is from the US Department of Labor. The predicted unemployment rate is the median forecast of about 20 forecasters by the American Statistical Association and the National Bureau of Economic Research.

the recession became apparent, the forecasters failed to predict how rapid the subsequent decline in unemployment would be.

The story was much the same for the economic downturn of 2008. The November 2007 Survey of Professional Forecasters predicted a slowdown, but only a modest one: the US unemployment rate was projected to increase from 4.7 per cent in the fourth quarter of 2007 to 5.0 per cent in the fourth quarter of 2008. By the May 2008 survey, the forecasters had raised their predictions for unemployment at the end of the year, but only to 5.5 per cent. In fact, the unemployment rate was 6.9 per cent in the last quarter of 2008. The forecasters became more pessimistic as the recession unfolded, but still not pessimistic enough. In November 2008, they predicted that the unemployment would rise to 7.7 per cent in the fourth quarter of 2009. In fact, it was 10.0 per cent. At that

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point, the professional forecasters predicted a meagre recovery from the recession, with only a slight fall in the unemployment rate over the following year. Unfortunately, this time they proved correct.

These episodes – the Great Depression, the recession and recovery of 1982 and the 2008 economic downturn – show that many of the most dramatic economic events are unpredictable. Although private and public decision makers have little choice but to rely on economic forecasts, they must always keep in mind that these forecasts come with a large margin of error. ■

Ignorance, Expectations and the Lucas Critique

The prominent economist Robert Lucas once wrote: ‘As an advice-giving profession we are in way over our heads.’ Even many of those who advise policy makers would agree with this assessment. Economics is a young science, and there is still much that we do not know. Economists cannot be completely confident when they assess the effects of alternative policies. This ignorance suggests that economists should be cautious when offering policy advice.

In his writings on macroeconomic policy making, Lucas has emphasized that economists need to pay more attention to the issue of how people form expectations of the future. Expectations play a crucial role in the economy because they influence all sorts of behaviour. For instance, households decide how much to consume based on how much they expect to earn in the future, and firms decide how much to invest based on their expectations of future profitability. These expectations depend on many things, but one factor, according to Lucas, is especially important: the policies being pursued by the government. When policy makers estimate the effect of any policy change, therefore, they need to know how people’s expectations will respond to the policy change. Lucas has argued that traditional methods of policy evaluation – such as those that rely on standard macroeconomic models – do not adequately take into account the impact of policy on expectations. This criticism of traditional policy evaluation is known as the **Lucas critique**.²

An important example of the Lucas critique arises in the analysis of disinflation. As you may recall from Chapter 14, the cost of reducing inflation is often measured by the sacrifice ratio, which is the number of percentage points of GDP that must be forgone to reduce inflation by 1 percentage point. Because estimates of the sacrifice ratio are often large, they have led some economists to



‘It’s true, Caesar. Rome is declining, but I expect it to pick up in the next quarter.’

Drawing by Dana Fradon; © 1988 The New Yorker Magazine, Inc.

² Robert E. Lucas, Jr., ‘Econometric Policy Evaluation: A Critique’, *Carnegie Rochester Conference on Public Policy*, vol. 1, Amsterdam: North-Holland, 1976, pp. 19–46. Lucas won the Nobel Prize for this and other work in 1995.

argue that policy makers should learn to live with inflation, rather than incur the large cost of reducing it.

According to advocates of the ‘rational expectations’ approach, however, these estimates of the sacrifice ratio are unreliable because they are subject to the Lucas critique. Traditional estimates of the sacrifice ratio are based on adaptive expectations, that is, on the assumption that expected inflation depends on past inflation. Adaptive expectations may be a reasonable premise in some circumstances, but if the policy makers make a credible change in policy, workers and firms setting wages and prices will rationally respond by adjusting their expectations of inflation appropriately. This change in inflation expectations will quickly alter the short-run trade-off between inflation and unemployment. As a result, reducing inflation can potentially be much less costly than is suggested by traditional estimates of the sacrifice ratio.

The Lucas critique leaves us with two lessons. The narrow lesson is that economists evaluating alternative policies need to consider how policy affects expectations and, thereby, behaviour. The broad lesson is that policy evaluation is hard, so economists engaged in this task should be sure to show the requisite humility.

The Historical Record

In judging whether government policy should play an active or passive role in the economy, we must give some weight to the historical record. If the economy has experienced many large shocks to aggregate supply and aggregate demand, and if policy has successfully insulated the economy from these shocks, then the case for active policy should be clear. Conversely, if the economy has experienced few large shocks, and if the fluctuations we have observed can be traced to inept economic policy, then the case for passive policy should be clear. In other words, our view of stabilization policy should be influenced by whether policy has historically been stabilizing or destabilizing. For this reason, the debate over macroeconomic policy frequently turns into a debate over macroeconomic history.

Yet history does not settle the debate over stabilization policy. Disagreements over history arise because it is not easy to identify the sources of economic fluctuations. The historical record often permits more than one interpretation.

CASE STUDY

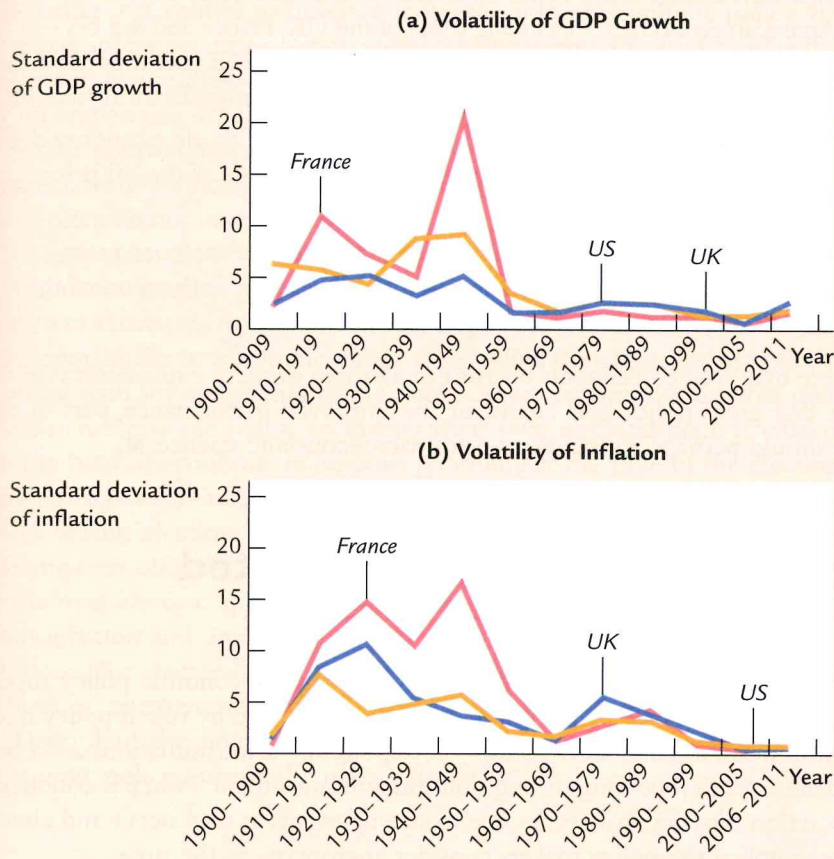
The Remarkable Stability of the Modern Economy

Although economists who take a long historical view debate how much the economy has stabilized over time, there is less controversy about the more recent experience. Everyone agrees that the 1990s and early 2000s stand out as a period of remarkable stability for the advanced economies of the UK, Continental Europe and the US.

Figure 15-2 shows the volatility of annual growth in real GDP and the volatility of annual inflation for the UK, France and the US, for ten-year periods from 1900 to 1990, and for six-year periods from 2000 to 2011. The standard

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FIGURE 15-2



Macroeconomic Volatility in the UK, France and the US Since 1900

Panel (a) shows the standard deviation of economic growth. Panel (b) shows the standard deviation of inflation. By both measures, the 1990s and early 2000s were a period of remarkable macroeconomic stability.

Source: For a full list of the sources of these data, see James R. Lothian and Mark P. Taylor, 'Real Exchange Rates Over the Past Two Centuries: How Important Is the Harrod-Balassa-Samuelson Effect?', Discussion Paper, University of Warwick, 2006. For the period 2006-2011 GDP growth rate data were collected from the CIA World Factbook and inflation data from World Bank.

Notes: Economic growth is measured as annual change in real GDP. Inflation is measured as the annual change in the GDP deflator from four quarters earlier. The standard deviation is computed for ten-year periods and two six-year periods, 2000-2011.

deviation measures the volatility of a variable: the higher the standard deviation, the more volatile the variable is. One striking result from this figure is the low volatility in both variables during the 1990s and early 2000s: in all three countries, both inflation and growth were more stable during this period than they have been at any time during the past century.

What accounts for the stability of that period? There are several hypotheses:

- **Structural change.** Most of the advanced Western European and North American economies – including those of the UK, France and the US – became more service-based and less manufacturing-based than they had been in the past, and service industries are less volatile than manufacturing industries.
- **Good luck.** During that period and until 2008, the world economy did not have to deal with adverse supply shocks as severe as the oil price shocks of the 1970s.
- **Good policy.** Many economists gave credit to better macroeconomic management by the governments and the monetary authorities of the world's major economies during that time.

There may well be elements of truth to all three of these explanations. To the extent that good policy gets credit for the improved performance, part of that credit should perhaps go to advances in macroeconomic science. ■

15-2 Should Policy Be Conducted by Rule or by Discretion?

A second topic debated among economists is whether economic policy should be conducted by rule or by discretion. Policy is conducted by rule if policy makers announce in advance how policy will respond to various situations and commit themselves to following through on this announcement. Policy is conducted by discretion if policy makers are free to size up events as they occur and choose whatever policy the policy makers consider appropriate at the time.

The debate over rules versus discretion is distinct from the debate over passive versus active policy. Policy can be conducted by rule and yet be either passive or active. For example, a passive policy rule might specify steady growth in the money supply of 3 per cent per year. An active policy rule might specify that

$$\text{Money Growth} = 2\% + (\text{Unemployment Rate} - 5\%).$$

Under this rule, the money supply grows at 2 per cent if the unemployment rate is 5 per cent, but for every percentage point by which the unemployment rate exceeds 5 per cent, money growth increases by an extra percentage point. This rule tries to stabilize the economy by raising money growth when the economy is in a recession.

We begin this section by discussing why policy might be improved by a commitment to a policy rule. We then examine several possible policy rules.

Distrust of Policy Makers and the Political Process

'You can fool all the people some of the time, and some of the people all the time, but you cannot fool all the people all the time.'

Abraham Lincoln

Some economists believe that economic policy is too important to be left to the discretion of policy makers. Although this view is more political than economic, evaluating it is central to how we judge the role of economic policy. If politicians are incompetent or opportunistic, then we may not want to give them the discretion to use the powerful tools of monetary and fiscal policy.

■ Incompetence in economic policy arises for several reasons. Some economists view the political process as erratic, perhaps because it reflects the shifting power of special interest groups. In addition, macroeconomics is complicated, and politicians often do not have sufficient knowledge of it to make informed judgements. This ignorance allows charlatans to propose incorrect but superficially appealing solutions to complex problems. The political process often cannot weed out the advice of charlatans from that of competent economists.

■ Opportunism in economic policy arises when the objectives of policy makers conflict with the well-being of the public. Some economists fear that politicians use macroeconomic policy to further their own electoral ends. If citizens vote on the basis of economic conditions prevailing at the time of the election, then politicians have an incentive to pursue policies that will make the economy look good during election years. A government might cause a recession soon after coming into office in order to lower inflation, and then stimulate the economy as the next election approaches to lower unemployment; this would ensure that both inflation and unemployment are low on election day. Manipulation of the economy for electoral gain, called the **political business cycle**, has been the subject of extensive research by economists and political scientists.³

Distrust of the political process leads some economists to advocate placing economic policy outside the realm of politics.

The Time Inconsistency of Discretionary Policy

If we assume that we can trust our policy makers, discretion at first glance appears superior to a fixed policy rule. Discretionary policy is, by its nature, flexible. As long as policy makers are intelligent and benevolent, there might appear to be little reason to deny them flexibility in responding to changing conditions.

Yet a case for rules over discretion arises from the problem of **time inconsistency** of policy. In some situations, policy makers may want to announce in advance the policy they will follow to influence the expectations of private decision makers. But later, after the private decision makers have acted on the basis of their expectations, these policy makers may be tempted to renege on their announcement. Understanding that policy makers may be inconsistent over time, private decision makers are led to distrust policy announcements. In this situation, to make their announcements credible, policy makers may want to make a commitment to a fixed policy rule.

³ William Nordhaus, 'The Political Business Cycle', *Review of Economic Studies*, 1975, vol. 42, pp. 169–190; and Edward Tufte, *Political Control of the Economy*, Princeton, NJ: Princeton University Press, 1978.

Time inconsistency is illustrated most simply in a political rather than an economic example – specifically, public policy about negotiating with terrorists over the release of hostages. The announced policy of many nations is that they will not negotiate over hostages. Such an announcement is intended to deter terrorists: if there is nothing to be gained from kidnapping hostages, rational terrorists will not kidnap any. In other words, the purpose of the announcement is to influence the expectations of terrorists and, thereby, their behaviour.

In fact, unless the policy makers are credibly committed to the policy, the announcement has little effect. Terrorists know that once hostages are taken, policy makers face an overwhelming temptation to make some concession to obtain the hostages' release. The only way to deter rational terrorists is to take away the discretion of policy makers and commit them to a rule of never negotiating. If policy makers were truly unable to make concessions, the incentive for terrorists to take hostages would be largely eliminated.

The same problem arises less dramatically in the conduct of monetary policy. Consider the dilemma of a central bank that cares about both inflation and unemployment. According to the Phillips curve, the trade-off between inflation and unemployment depends on expected inflation. The central bank would prefer everyone to expect low inflation so that it will face a favourable trade-off. To reduce expected inflation, the central bank might announce that low inflation is the paramount goal of monetary policy.

But an announcement of a policy of low inflation is by itself not credible. Once households and firms have formed their expectations of inflation and set wages and prices accordingly, the central bank has an incentive to renege on its announcement and implement expansionary monetary policy to reduce unemployment. People understand the central bank's incentive to renege and therefore do not believe the announcement in the first place. Just as a government facing a hostage crisis is sorely tempted to negotiate their release, a central bank with discretion is sorely tempted to inflate in order to reduce unemployment. And just as terrorists discount announced policies of never negotiating, households and firms discount announced policies of low inflation.

The surprising outcome of this analysis is that policy makers can sometimes better achieve their goals by having their discretion taken away from them. In the case of rational terrorists, fewer hostages will be taken and killed if policy makers are committed to following the seemingly harsh rule of refusing to negotiate for hostages' freedom. In the case of monetary policy, there will be lower inflation without higher unemployment if the central bank is committed to a policy of low inflation. (This conclusion about monetary policy is modelled more explicitly in the appendix to this chapter.)

The time inconsistency of policy arises in many other contexts. Here are some examples:

- To encourage investment, the government announces that it will not tax income from capital. But after factories have been built, the government is tempted to renege on its promise to raise more tax revenue from them.
- To encourage research, the government announces that it will give a temporary monopoly (a patent) to companies that discover new drugs. But

after a drug has been discovered, the government is tempted to revoke the patent or to regulate the price to make the drug more affordable.

- To encourage good behaviour, a parent announces that he or she will punish a child whenever the child breaks a rule. But after the child has misbehaved, the parent is tempted to forgive the transgression, because punishment is unpleasant for the parent as well as for the child.
- To encourage you to work hard, your professor announces that this course will end with an examination. But after you have studied and learned all the material, the professor is tempted to cancel the exam so that he or she will not have to mark it.

In each case, rational agents understand the incentive for the policy maker to renege, and this expectation affects their behaviour. And in each case, the solution is to take away the policy maker's discretion with a credible commitment to a fixed policy rule.

Rules for Monetary Policy

Even if we are convinced that policy rules are superior to discretion, the debate over macroeconomic policy is not over. If the central bank were to commit to a rule for monetary policy, what rule should it choose? Let's discuss briefly three policy rules that various economists advocate.

Some economists, called **monetarists**, advocate that the central bank should keep the money supply growing at a steady rate. The quotation at the beginning of this chapter from Milton Friedman – the most famous monetarist – exemplifies this view of monetary policy. Monetarists believe that fluctuations in the money supply are responsible for most large fluctuations in the economy. They argue that slow and steady growth in the money supply would yield stable output, employment and prices.

Although a monetarist policy rule might have prevented many of the economic fluctuations we have experienced historically, most economists believe that it is not the best possible policy rule. Steady growth in the money supply stabilizes aggregate demand only if the velocity of money is stable. But sometimes the economy experiences shocks, such as shifts in money demand, which cause velocity to be unstable. Most economists believe that a policy rule needs to allow the money supply to adjust to various shocks to the economy.

A second policy rule that economists widely advocate is **nominal GDP targeting**. Under this rule, the central bank announces a planned path for nominal GDP. If nominal GDP rises above the target, the central bank reduces money growth to dampen aggregate demand. If it falls below the target, the central bank raises money growth to stimulate aggregate demand. Because a nominal GDP target allows monetary policy to adjust to changes in the velocity of money, most economists believe it would lead to greater stability in output and prices than a monetarist policy rule.

A third policy rule that is often advocated is **inflation targeting**. Under this rule, the central bank would announce a target for the inflation rate (usually a