Fiscal Policy and the AD-AS Model

The fiscal policy defined above is *discretionary* (or "active"). It is often initiated on the advice of the president's **Council of Economic Advisers (CEA),** a group of three economists appointed by the president to provide expertise and assistance on economic matters. Discretionary changes in government spending and taxes are *at the option* of the Federal government. They do not occur automatically. Changes that occur without congressional action are *nondiscretionary* (or "passive" or "automatic"), and we will examine them later in this chapter.

Expansionary Fiscal Policy

When recession occurs, an **expansionary fiscal policy** may be in order. Consider Figure 30.1, where we suppose that a sharp decline in investment spending has shifted the economy's aggregate demand curve to the left from AD_1 to AD_2. (Disregard the arrows and dashed downsloping line for now.) The cause of the recession may be that profit expectations on investment projects have dimmed, curtailing investment spending and reducing aggregate demand.

Suppose the economy's potential or full-employment output is $510 billion in Figure 30.1. If the price level is inflexible downward at P_1, the broken horizontal line in effect becomes the relevant aggregate supply curve. The aggregate demand curve moves leftward and reduces real GDP from $510 billion to $490 billion. A negative GDP gap of $20 billion (= $490 billion − $510 billion) arises. An increase in unemployment accompanies this negative GDP gap because fewer workers are needed to produce the reduced output. In short, the economy depicted is suffering both recession and cyclical unemployment.

What fiscal policy should the Federal government adopt to try to stimulate the economy? It has three main options: (1) increase government spending, (2) reduce taxes, or (3) use some combination of the two. If the Federal budget is balanced at the outset, expansionary fiscal policy will create a government **budget deficit**—government spending in excess of tax revenues.

Increased Government Spending

Other things equal, a sufficient increase in government spending will shift an economy's aggregate demand curve to the right, from AD_2 to AD_1 in Figure 30.1. To see why, suppose that the recession prompts the government to initiate $5 billion of new spending on highways, education, and health care. We represent this new $5 billion of government spending as the horizontal distance between AD_2 and the dashed line immediately to its right. At each price level, the amount of real output that is demanded is now $5 billion greater than that demanded before the expansion of government spending.

But the initial increase in aggregate demand is not the end of the story. Through the multiplier effect, the aggregate demand curve shifts to AD_1, a distance that exceeds that represented by the originating $5 billion increase in government purchases. This greater shift occurs because the multiplier process magnifies the initial change in spending into successive rounds of new consumption spending. If the economy's MPC is .75, then the simple multiplier is 4. So the aggregate demand curve shifts rightward by four times the distance between AD_2 and the broken line.

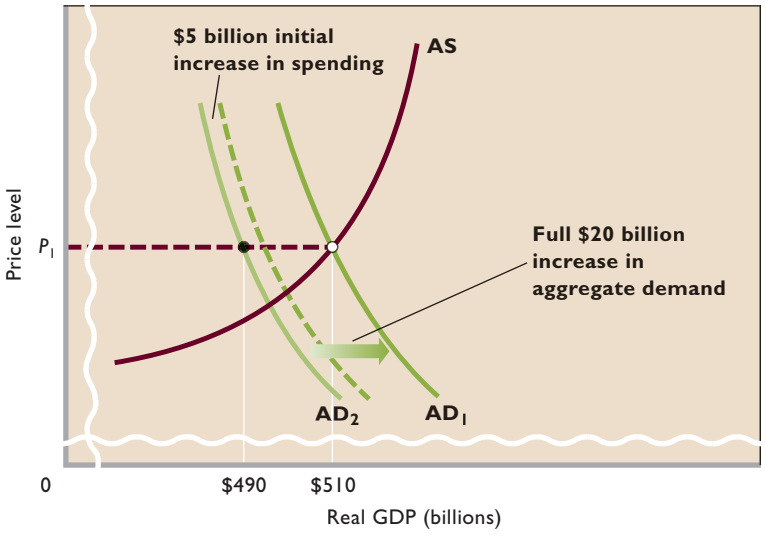


FIGURE 30.1 Expansionary fiscal policy. Expansionary fiscal policy uses increases in government spending or tax cuts to push the economy out of recession. In an economy with an MPC of .75, a $5 billion increase in government spending or a $6.67 billion decrease in personal taxes (producing a $5 billion initial increase in consumption) expands aggregate demand from AD_2 to the downsloping dashed curve. The multiplier then magnifies this initial increase in spending to AD_1. So real GDP rises along the broken horizontal aggregate supply line by $20 billion.

Because this *particular* increase in aggregate demand occurs along the horizontal broken-line segment of aggregate supply, real output rises by the full extent of the multiplier. Observe that real output rises to $510 billion, up $20 billion from its recessionary level of $490 billion. Concurrently, unemployment falls as firms increase their employment to the full-employment level that existed before the recession.

Tax Reductions Alternatively, the government could reduce taxes to shift the aggregate demand curve rightward, as from AD_2 to AD_1. Suppose the government cuts personal income taxes by $6.67 billion, which increases disposable income by the same amount. Consumption will rise by $5 billion (= MPC of .75 × $6.67 billion) and saving will go up by $1.67 billion (= MPS of .25 × $6.67 billion). In this case the horizontal distance between AD_2 and the dashed downsloping line in Figure 30.1 represents only the $5 billion initial increase in consumption spending. Again, we call it "initial" consumption spending because the multiplier process yields successive rounds of increased consumption spending. The aggregate demand curve eventually shifts rightward by four times the $5 billion initial increase in consumption produced by the tax cut. Real GDP rises by $20 billion, from $490 billion to $510 billion, implying a multiplier of 4. Employment increases accordingly.

You may have noted that a tax cut must be somewhat larger than the proposed increase in government spending if it is to achieve the same amount of rightward shift in the aggregate demand curve. This is because part of a tax reduction increases saving, rather than consumption. To increase initial consumption by a specific amount, the government must reduce taxes by more than that amount. With an MPC of .75, taxes must fall by $6.67 billion for $5 billion of new consumption to be forthcoming because $1.67 billion is saved (not consumed). If the MPC had instead been, say, .6, an $8.33 billion reduction in tax collections would have been necessary to increase initial consumption by $5 billion. The smaller the MPC, the greater the tax cut needed to accomplish a specific initial increase in consumption and a specific shift in the aggregate demand curve.

Combined Government Spending Increases and Tax Reductions The government may combine spending increases and tax cuts to produce the desired initial increase in spending and the eventual increase in aggregate demand and real GDP. In the economy depicted in Figure 30.1, the government might increase its spending by $1.25 billion while reducing taxes by $5 billion. As an exercise, you should explain why this combination will produce the targeted $5 billion initial increase in new spending.

If you were assigned Chapter 28, think through these three fiscal policy options in terms of the recessionary-expenditure-gap analysis associated with the aggregate expenditures model (Figure 28.7). And recall from the appendix to Chapter 29 that rightward shifts of the aggregate demand curve relate directly to upward shifts of the aggregate expenditures schedule. **(Key Question 2)**

Contractionary Fiscal Policy

When demand-pull inflation occurs, a restrictive or **contractionary fiscal policy** may help control it. Look at Figure 30.2, where the full-employment level of real GDP is $510 billion. The economy starts at equilibrium at point *a*, where the initial aggregate demand curve AD_3 intersects

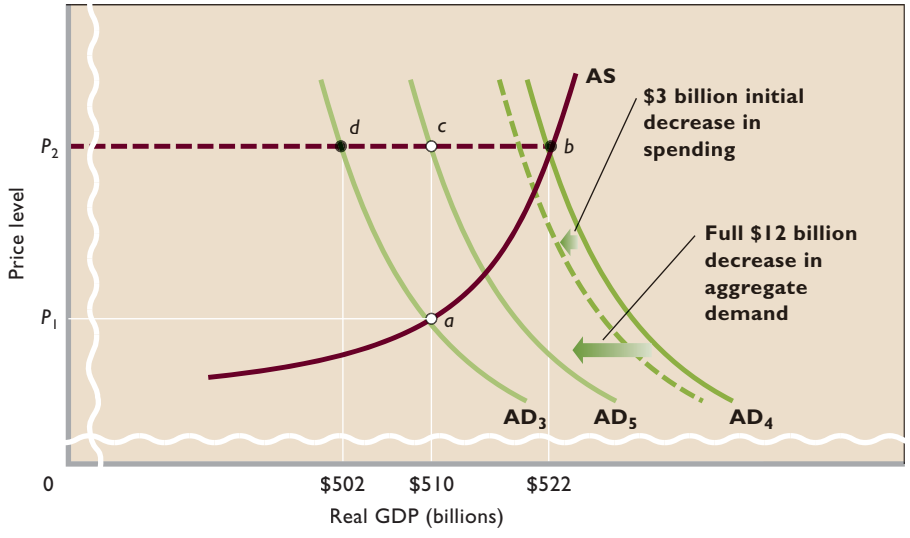


FIGURE 30.2 Contractionary fiscal policy under the ratchet effect. Contractionary fiscal policy uses decreases in government spending or increases in taxes to reduce demand-pull inflation. Contractionary fiscal policy must take the ratchet effect into account. Here, an increase in aggregate demand from AD_3 to AD_4 has driven the economy to equilibrium *b* and ratcheted the price level up to P_2. To return the economy to producing at full employment, $510 billion, the government can either reduce government spending by $3 billion or increase taxes by $4 billion (which will produce a $3 billion decrease in consumption since the MPC is .75). Either policy will shift aggregate demand leftward by $3 billion, from AD_4 to the dashed line. The multiplier effect then shifts the curve farther left, to AD_5. With the price level fixed at P_2, the economy's new equilibrium is established at point *c*, where the horizontal dashed segment of aggregate supply intersects AD_5. The inflationary GDP gap is eliminated while the price level remains at P_2.

aggregate supply curve AS. Suppose that after going through the multiplier process, a $5 billion initial increase in investment and net export spending shifts the aggregate demand curve to the right by $20 billion, from AD_3 to AD_4. (Ignore the downsloping dashed line for now.) Given the upward-sloping AS curve, however, the equilibrium GDP does not rise by the full $20 billion. It only rises by $12 billion, to $522 billion, thereby creating an inflationary GDP gap of $12 billion ($522 billion – $510 billion). The upward slope of the AS curve means that some of the rightward movement of the AD curve ends up causing demand-pull inflation rather than increased output. As a result, the price level rises from P_1 to P_2 and the equilibrium moves to point *b*.

Without a government response, the inflationary GDP gap will cause further inflation (as input prices rise in the long run to meet the increase in output prices). If the government looks to fiscal policy to eliminate the inflationary GDP gap, its options are the opposite of those used to combat recession. It can (1) decrease government spending, (2) raise taxes, or (3) use some combination of those two policies. When the economy faces demand-pull inflation, fiscal policy should move toward a government **budget surplus**—tax revenues in excess of government spending.

But before discussing how the government can either decrease government spending or increase taxes to move toward a government budget surplus and control inflation, we have to keep in mind that the price level is like a ratchet. While increases in aggregate demand that expand real output beyond the full-employment level tend to ratchet the price level upward, declines in aggregate demand do not seem to push the price level downward. This means that stopping inflation is a matter of halting the rise of the price level, not trying to lower it to the previous level. It also means that the government must take the ratchet effect into account when deciding how big a cut in spending or an increase in taxes it should undertake.

Decreased Government Spending Reduced government spending shifts the aggregate demand curve leftward to control demand-pull inflation. To see why the ratchet effect matters so much, look at Figure 30.2 and consider what would happen if the government ignored the ratchet effect and attempted to design a spending-reduction policy to eliminate the inflationary GDP gap. Since the $12 billion gap was caused by the $20 billion rightward movement of the aggregate demand curve from AD_3 to AD_4, the government might naively think that it could solve the problem by causing a $20 billion leftward shift of the aggregate demand curve to move it back to where it originally was. It could attempt to do so by reducing government spending by $5 billion and then allowing the multiplier effect to expand that initial decrease into a $20 billion decline in aggregate demand. That would shift the aggregate demand curve leftward by $20 billion, putting it back at AD_3.

This policy would work fine if there were no ratchet effect and if prices were flexible. The economy's equilibrium would move back from point *b* to point *a*, with equilibrium GDP returning to the full-employment level of $510 billion and the price level falling from P_2 back to P_1.

But because there *is* a ratchet effect, this scenario is not what will actually happen. Instead, the ratchet effect implies that the price level is stuck at P_2, so that the broken horizontal line at price level P_2 becomes the relevant aggregate supply curve. This means that when the government reduces spending by $5 billion in order to shift the aggregate demand curve back to AD_3, it will actually cause a recession! The new equilibrium will not be at point *a*. It will be at point *d*, where aggregate demand curve AD_3 crosses the broken horizontal line. At point *d*, real GDP is only $502 billion, $8 billion below the full-employment level of $510 billion.

The problem is that with what in essence is an immediate-short-run AS curve, the multiplier is at full effect. With the price level fixed and the aggregate supply curve horizontal, the $20 billion leftward shift of the aggregate demand curve causes a full $20 billion decline in real GDP. None of the change in aggregate demand can be dissipated as a change in the price level (as it can be when aggregate supply is upward-sloping). As a result, equilibrium GDP declines by the full $20 billion, falling from $522 billion to $502 billion and putting it $8 billion below potential output. By not taking the ratchet effect into account, the government has overdone the decrease in government spending, replacing a $12 billion inflationary GDP gap with an $8 billion recessionary GDP gap. This is clearly not what it had in mind.

Here's how it can avoid this scenario. First, the government takes account of the size of the inflationary GDP gap. It is $12 billion. Second, it knows that with the price level fixed, aggregate supply will be horizontal so that the multiplier will be in full effect. Thus, it knows that any decline in government spending will be multiplied by a factor of 4. It then reasons that government spending will have to decline by only $3 billion rather than $5 billion. Why? Because the $3 billion initial decline in government spending will be multiplied by 4, creating a $12 billion decline in aggregate demand. Under the circumstances, a $3 billion decline in government spending is the correct amount to exactly offset the $12 billion GDP gap. This inflationary GDP gap is the

problem that government wants to eliminate. To succeed, it need not undo the full increase in aggregate demand that caused the inflation in the first place.

Graphically, the horizontal distance between AD_4 and the dashed line to its left represents the $3 billion decrease in government spending. Once the multiplier process is complete, this spending cut will shift the aggregate demand curve leftward from AD_4 to AD_5. With the price level fixed at P_2 and aggregate supply in this area represented by the horizontal dashed line, the economy will come to equilibrium at point *c*. The economy will operate at its potential output of $510 billion. The inflationary GDP gap will be eliminated. And because the government took the ratchet effect correctly into account, the government will not accidentally push the economy into a recession by making an overly large initial decrease in government spending.

Increased Taxes Just as government can use tax cuts to increase consumption spending, it can use tax *increases* to *reduce* consumption spending. If the economy in Figure 30.2 has an MPC of .75, the government must raise taxes by $4 billion. The $4 billion tax increase reduces saving by $1 billion (= the MPS of .25 × $4 billion). This $1 billion reduction in saving, by definition, is not a reduction in spending. But the $4 billion tax increase also reduces consumption spending by $3 billion (= the MPC of .75 × $4 billion), as shown by the distance between AD_4 and the dashed line to its left in Figure 30.2. After the multiplier process is complete, this initial $3 billion decline in consumption will cause aggregate demand to shift leftward by $12 billion at each price level (multiplier of 4 × $3 billion). With the economy moving to point *c*, the inflationary GDP gap will be closed and the inflation will be halted.

Combined Government Spending Decreases and Tax Increases The government may choose to combine spending decreases and tax increases in order to reduce aggregate demand and check inflation. To check your understanding, determine why a $1.5 billion decline in government spending combined with a $2 billion increase in taxes would shift the aggregate demand curve from AD_4 to AD_5. Also, if you were assigned Chapter 28, explain the three fiscal policy options for fighting inflation by referring to the inflationary-expenditure-gap concept developed with the aggregate expenditures model (Figure 28.7). And recall from the appendix to Chapter 29 that leftward shifts of the aggregate demand curve are associated with downshifts of the aggregate expenditures schedule.

INTERACTIVE GRAPHS
G 30.1
Fiscal policy

Policy Options: *G* or *T*?

Which is preferable as a means of eliminating recession and inflation? The use of government spending or the use of taxes? The answer depends largely on one's view as to whether the government is too large or too small.

Economists who believe there are many unmet social and infrastructure needs usually recommend that government spending be increased during recessions. In times of demand-pull inflation, they usually recommend tax increases. Both actions either expand or preserve the size of government.

Economists who think that the government is too large and inefficient usually advocate tax cuts during recessions and cuts in government spending during times of demand-pull inflation. Both actions either restrain the growth of government or reduce its size.

The point is that discretionary fiscal policy designed to stabilize the economy can be associated with either an expanding government or a contracting government. **(Key Question 3)**

QUICK REVIEW 30.1

- Discretionary fiscal policy is the purposeful change of government expenditures and tax collections by government to promote full employment, price stability, and economic growth.
- The government uses expansionary fiscal policy to shift the aggregate demand curve rightward in order to expand real output. This policy entails increases in government spending, reductions in taxes, or some combination of the two.
- The government uses contractionary fiscal policy to shift the aggregate demand curve leftward in an effort to halt demand-pull inflation. This policy entails reductions in government spending, tax increases, or some combination of the two.
- To be implemented correctly, contractionary fiscal policy must properly account for the ratchet effect and the fact that prices will not fall as the government shifts the aggregate demand curve leftward.

Built-In Stability

To some degree, government tax revenues change automatically over the course of the business cycle and in ways that stabilize the economy. This automatic response, or built-in stability, constitutes nondiscretionary (or "passive" or "automatic") budgetary policy and results from the makeup of most tax systems. We did not include this built-in stability in our discussion of fiscal policy because we implicitly assumed that the same amount of tax revenue was being collected at

each level of GDP. But the actual U.S. tax system is such that *net tax revenues* vary directly with GDP. (Net taxes are tax revenues less transfers and subsidies. From here on, we will use the simpler "taxes" to mean "net taxes.")

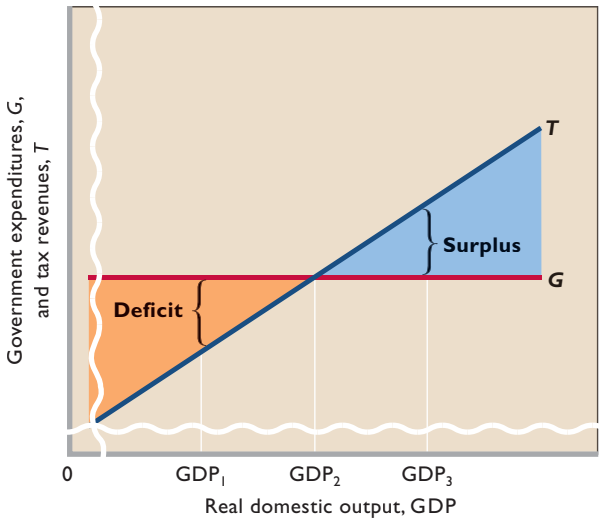
Virtually any tax will yield more tax revenue as GDP rises. In particular, personal income taxes have progressive rates and thus generate more-than-proportionate increases in tax revenues as GDP expands. Furthermore, as GDP rises and more goods and services are purchased, revenues from corporate income taxes and from sales taxes and excise taxes also increase. And, similarly, revenues from payroll taxes rise as economic expansion creates more jobs. Conversely, when GDP declines, tax receipts from all these sources also decline.

Transfer payments (or "negative taxes") behave in the opposite way from tax revenues. Unemployment compensation payments and welfare payments decrease during economic expansion and increase during economic contraction.

Automatic or Built-In Stabilizers

A **built-in stabilizer** is anything that increases the government's budget deficit (or reduces its budget surplus) during a recession and increases its budget surplus (or reduces its budget deficit) during an expansion without requiring explicit action by policymakers. As Figure 30.3 reveals, this is precisely what the U.S. tax system does. Government expenditures G are fixed and assumed to be independent of the level of GDP. Congress decides on a particular level of spending, but it does not determine the magnitude of tax revenues. Instead, it establishes tax rates, and the tax revenues then vary directly with the level of GDP that the economy achieves. Line T represents that direct relationship between tax revenues and GDP.

FIGURE 30.3 Built-in stability. Tax revenues T vary directly with GDP, and government spending G is assumed to be independent of GDP. As GDP falls in a recession, deficits occur automatically and help alleviate the recession. As GDP rises during expansion, surpluses occur automatically and help offset possible inflation.



Economic Importance

The economic importance of the direct relationship between tax receipts and GDP becomes apparent when we consider that:

- Taxes reduce spending and aggregate demand.
- Reductions in spending are desirable when the economy is moving toward inflation, whereas increases in spending are desirable when the economy is slumping.

As shown in Figure 30.3, tax revenues automatically increase as GDP rises during prosperity, and since taxes reduce household and business spending, they restrain the economic expansion. That is, as the economy moves toward a higher GDP, tax revenues automatically rise and move the budget from deficit toward surplus. In Figure 30.3, observe that the high and perhaps inflationary income level GDP_3 automatically generates a contractionary budget surplus.

Conversely, as GDP falls during recession, tax revenues automatically decline, increasing spending and cushioning the economic contraction. With a falling GDP, tax receipts decline and move the government's budget from surplus toward deficit. In Figure 30.3, the low level of income GDP_1 will automatically yield an expansionary budget deficit.

Tax Progressivity

Figure 30.3 reveals that the size of the automatic budget deficits or surpluses—and therefore built-in stability—depends on the responsiveness of tax revenues to changes in GDP. If tax revenues change sharply as GDP changes, the slope of line T in the figure will be steep and the vertical distances between T and G (the deficits or surpluses) will be large. If tax revenues change very little when GDP changes, the slope will be gentle and built-in stability will be low.

The steepness of T in Figure 30.3 depends on the tax system itself. In a **progressive tax system,** the average tax rate (= tax revenue/GDP) rises with GDP. In a **proportional tax system,** the average tax rate remains constant as GDP rises. In a **regressive tax system,** the average tax rate falls as GDP rises. The progressive tax system has the steepest tax line T of the three. However, tax revenues will rise with GDP under both the progressive and the proportional tax systems, and they may rise, fall, or stay the same under a regressive tax system. The main point is this: The more progressive the tax system, the greater the economy's built-in stability.

The built-in stability provided by the U.S. tax system has reduced the severity of business fluctuations, perhaps by as much as 8 to 10 percent of the change in GDP that otherwise would have occurred.[1] But built-in stabilizers can only diminish, not eliminate, swings in real GDP. Discretionary fiscal policy (changes in tax rates and expenditures) or monetary policy (central bank–caused changes in interest rates) will be needed to correct a recession or inflation of any appreciable magnitude.

Evaluating Fiscal Policy

How can we determine whether a government's discretionary fiscal policy is expansionary, neutral, or contractionary? We cannot simply examine the actual budget deficits or surpluses that take place under the current policy because they will necessarily include the automatic changes in tax revenues that accompany every change in GDP. In addition, the expansionary or contractionary strength of any change in discretionary fiscal policy depends not on its absolute size but on how large it is relative to the size of the economy. So, in evaluating the status of fiscal policy, we must adjust deficits and surpluses to eliminate automatic changes in tax revenues and also compare the sizes of the adjusted budget deficits and surpluses to the level of potential GDP.

Standardized Budget

Economists use the **standardized budget** (also called the *full-employment budget*) to adjust actual Federal budget deficits and surpluses to account for the changes in tax revenues that happen automatically whenever GDP changes. The standardized budget measures what the Federal budget deficit or surplus would have been under existing tax rates and government spending levels if the economy had achieved its full-employment level of GDP (its potential output). The idea essentially is to compare *actual* government expenditures with the tax revenues *that would have occurred* if the economy had achieved full-employment GDP. That procedure removes budget deficits or surpluses that arise simply because of changes in GDP and thus tell us nothing about whether the government's current discretionary fiscal policy is fundamentally expansionary, contractionary, or neutral.

Consider Figure 30.4a, where line G represents government expenditures and line T represents tax revenues. In full-employment year 1, government expenditures of $500 billion equal tax revenues of $500 billion, as indicated by the intersection of lines G and T at point a. The standardized budget deficit in year 1 is zero—government expenditures equal the tax revenues forthcoming at the full-employment output GDP_1. Obviously, the full-employment deficit *as a percentage of potential GDP* is also zero. The government's fiscal policy is neutral.

Now suppose that a recession occurs and GDP falls from GDP_1 to GDP_2, as shown in Figure 30.4a. Let's also assume that the government takes no discretionary action, so lines G and T remain as shown in the figure. Tax revenues automatically fall to $450 billion (point c) at GDP_2, while government spending remains unaltered at $500 billion (point b). A $50 billion budget deficit (represented by distance bc) arises. But this **cyclical deficit** is simply a by-product of the economy's slide into recession, not the result of discretionary fiscal actions by the government. We would be wrong to conclude from this deficit that the government is engaging in an expansionary fiscal policy. The government's fiscal policy has not changed. It is still neutral.

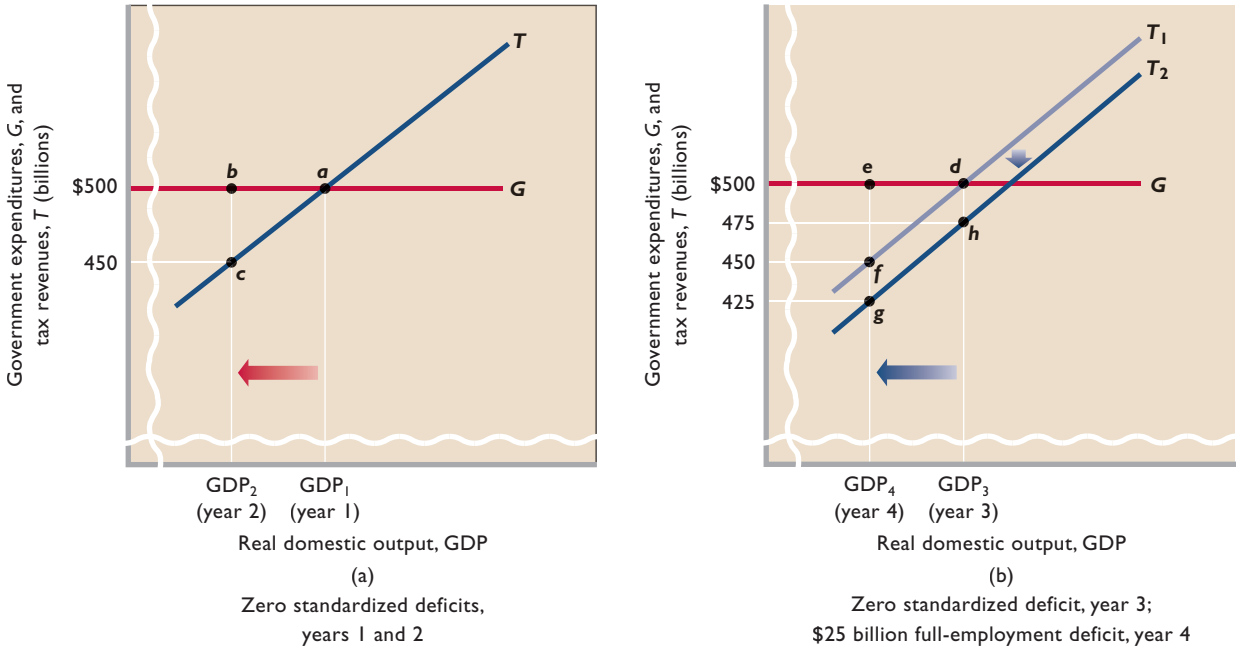
That fact is highlighted when we consider the standardized budget deficit for year 2 in Figure 30.4a. The $500 billion of government expenditures in year 2 is shown by b on line G. And, as shown by a on line T, $500 billion of tax revenues would have occurred if the economy had achieved its full-employment GDP. Because both b and a represent $500 billion, the standardized budget deficit in year 2 is zero, as is this deficit as a percentage of potential GDP. Since the standardized deficits are zero in both years, we know that government did not change its discretionary fiscal policy, even though a recession occurred and an actual deficit of $50 billion resulted.

Next, consider Figure 30.4b. Suppose that real output declined from full-employment GDP_3 to GDP_4. But also suppose that the Federal government responded to the recession by reducing tax rates in year 4, as represented by the downward shift of the tax line from T_1 to T_2. What has happened to the size of the standardized deficit? Government expenditures in year 4 are $500 billion, as shown by e. We compare that amount with the $475 billion of tax revenues that would occur if the economy achieved its full-employment GDP. That is, we compare position e on line G with position h on line T_2. The $25 billion of tax revenues by which e exceeds h is the standardized budget deficit for year 4. As a percentage of potential GDP, the standardized budget deficit has increased from zero in year 3 (before the tax-rate cut) to some positive percent [= ($25 billion/$GDP_3$) × 100] in year 4. This increase in the relative size of the full-employment deficit between the two years reveals that the new fiscal policy is *expansionary*.

In contrast, if we observed a standardized deficit (as a percentage of potential GDP) of zero in one year, followed

[1]Alan J. Auerbach and Daniel Feenberg, "The Significance of Federal Taxes as Automatic Stabilizers," *Journal of Economic Perspectives*, Summer 2000, p. 54.

FIGURE 30.4 Standardized deficits. (a) In the left-hand graph, the standardized deficit is zero at the full-employment output GDP_1. But it is also zero at the recessionary output GDP_2 because the $500 billion of government expenditures at GDP_2 equals the $500 billion of tax revenues that would be forthcoming at the full-employment GDP_1. There has been no change in fiscal policy. (b) In the right-hand graph, discretionary fiscal policy, as reflected in the downward shift of the tax line from T_1 to T_2, has increased the standardized budget deficit from zero in year 3 to $25 billion in year 4. This is found by comparing the $500 billion of government spending in year 4 with the $475 billion of taxes that would accrue at the full-employment GDP_3. Such a rise in the standardized deficit (as a percentage of potential GDP) identifies an expansionary fiscal policy.



by a standardized budget surplus in the next, we could conclude that fiscal policy has changed from being neutral to being contractionary. Because the standardized budget adjusts for automatic changes in tax revenues, the increase in the standardized budget surplus reveals that government either decreased its spending (G) or increased tax rates such that tax revenues (T) increased. These changes in G and T are precisely the discretionary actions that we have identified as elements of a *contractionary* fiscal policy.

Recent U.S. Fiscal Policy

Table 30.1 lists the actual Federal budget deficits and surpluses (column 2) and the standardized deficits and surpluses (column 3), as percentages of actual and potential GDP, respectively, for recent years. Observe that the standardized deficits are generally smaller than the actual deficits. This is because the actual deficits include cyclical deficits, whereas the standardized deficits do not. The latter deficits provide the information needed to assess discretionary fiscal policy and determine whether it is expansionary, contractionary, or neutral.

Column 3 shows that fiscal policy was expansionary in the early 1990s. Consider 1992, for example. From the table we see that the actual budget deficit was 4.5 percent

TABLE 30.1 Federal Deficits (−) and Surpluses (+) as Percentages of GDP, 1992–2007

(1) Year	(2) Actual Deficit − or Surplus +	(3) Standardized Deficit − or Surplus +*
1992	−4.5	−2.9
1993	−3.8	−2.9
1994	−2.9	−2.1
1995	−2.2	−2.0
1996	−1.4	−1.2
1997	−0.3	−1.0
1998	+0.8	−0.4
1999	+1.4	+0.1
2000	+2.5	+1.1
2001	+1.3	+1.0
2002	−1.5	−1.2
2003	−3.4	−2.5
2004	−3.5	−2.4
2005	−2.6	−1.9
2006	−1.9	−1.8
2007	−1.3	−1.4

*As a percentage of potential GDP.

Source: Congressional Budget Office, **www.cbo.gov.**

of GDP and the standardized budget deficit was 2.9 percent of potential GDP. The economy was recovering from the 1990–1991 recession, so tax revenues were relatively low. But even if the economy had been at full employment in 1992, with the greater tax revenues that would have implied, the Federal budget would have been in deficit by 2.9 percent. And that percentage was greater than the deficits in the prior 2 years. So the standardized budget deficit in 1992 clearly reflected expansionary fiscal policy.

But the large standardized budget deficits were projected to continue even when the economy fully recovered from the 1990–1991 recession. The concern was that the large actual and standardized deficits were inappropriate for a full-employment economy. In 1993 the Clinton administration and Congress increased personal income and corporate income tax rates to prevent these potential outcomes. Observe from column 3 of Table 30.1 that the standardized budget deficits shrank each year and eventually gave way to surpluses in 1999, 2000, and 2001.

U.S. stock markets crashed in 2000 and the economy began to slow later that year, with the economy slipping into recession by March 2001. The Congress and the Bush administration responded by passing tax cuts of $44 billion in 2001 and $52 billion in 2002. This fiscal policy action helped to simulate the economy and offset the recession as well as the second economic blow that arrived with the September 11, 2001, terrorist attacks. Further tax cuts totaling $122 billion over two years as well as an extension of unemployment benefits were passed in March 2002.

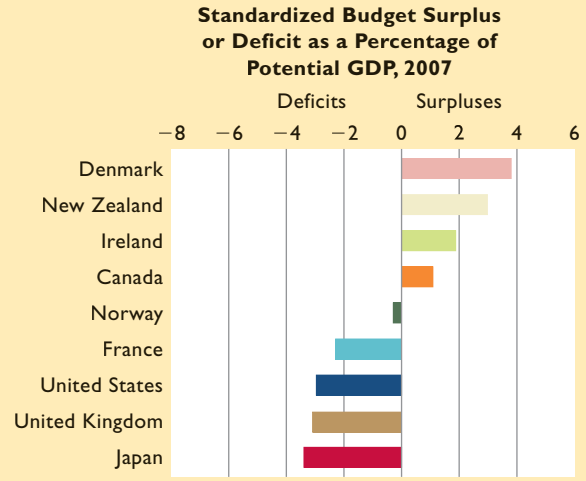
As seen in Table 30.1, the standardized budget moved from a *surplus* of 1.1 percent of potential GDP in 2000 to a *deficit* of 1.2 percent in 2002. Clearly, fiscal policy had turned expansionary. Nevertheless, the economy remained very sluggish through 2002 and into 2003. In June of that year, Congress again cut taxes, this time by an enormous $350 billion over several years. Specifically, the tax legislation accelerated the reduction of marginal tax rates already scheduled for future years and slashed tax rates on income from dividends and capital gains. It also increased tax breaks for families and small businesses. This tax package increased the standardized budget deficit as a percentage of potential GDP to –2.5 percent in 2003. The economy strengthened and real output grew between 2003 and 2007. Full employment was restored. But starting in the summer of 2007, a crisis in the market for mortgage loans occurred and spread quickly to other financial markets. (We discuss this crisis in detail in Chapter 33.) Households in particular retrenched on their spending and in the last quarter of 2007 the economy slowed. With economists projecting a 50-50 prospect of a recession in 2008, Congress acted quickly to enact expansionary fiscal policy in the form of the Economic Stimulus Act of 2008. This law provided a total of $152 billion in stimulus. Some of it came in the form of tax breaks for businesses, but most of it arrived in the form of checks of up to $600 each that were mailed to taxpayers, veterans, and Social Security recipients in May of 2008. It was hoped that those receiving checks would spend the money, thereby boosting consumption and aggregate demand. We urge you to track the economy to see if it receded in 2008 by going to the Bureau of Economic Analysis Web site, **www.bea.gov,** and checking changes in real GDP from quarter to quarter. **(Key Question 6)**

Global Perspective 30.1 shows the magnitudes of the standardized deficits or surpluses of a number of countries in a recent year.

GLOBAL PERSPECTIVE 30.1

Standardized Budget Deficits or Surpluses as a Percentage of Potential GDP, Selected Nations

In 2007 some nations had standardized budget surpluses, while others had standardized budget deficits. These surpluses and deficits varied as a percentage of each nation's potential GDP. Generally, the surpluses represented contractionary fiscal policy and the deficits expansionary fiscal policy.



Source: Organization for Economic Cooperation and Development, *OECD Economic Outlook,* **www.oecd.org.**

Budget Deficits and Projections

Figure 30.5 shows the absolute magnitudes of recent U.S. budget surpluses and deficits. It also shows the projected