

Chapter 6

Meeting the Revenue Challenge

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Between 2000 and 2003, federal revenue fell from 20.8 percent of the economy to 16.5 percent, its lowest share since 1959. Although revenue will increase as a share of GDP as the economy recovers from the recent recession, it will remain insufficient to match spending needs under any of the plans sketched earlier in the volume.¹ As a result, all of those plans will require higher taxes if the budget is to be balanced by 2014.

This chapter is a guide to revenue options that would help balance the budget. Accordingly, we present a menu of options for revenue increases from which policymakers and citizens could choose. For the most part, these changes are simple adjustments to tax rates or the tax base, but we also include rough estimates of added revenues from new forms of taxation. Although we refer to the changes as revenue increases, many are increases only relative to the adjusted baseline laid out in chapter 1. Compared with the official tax code, which assumes that the tax cuts enacted in 2001, 2002, and 2003 will expire in 2010 or before, most of the changes represent *tax reductions*.

To avoid turning this chapter into a book of its own, we do not examine in any detail many of the broader issues crucial to evaluating the effects of tax changes, including the impact on equity, simplification, or economic growth. But it is worth noting that well-designed revenue increases can make taxes both more equitable and simpler.

Although most tax increases are thought to discourage economic activity, revenue increases can also help, or at least not hurt, economic efficiency and growth. Taxes have two sets of effects on the economy. First, they directly shape economic decisions, including work behavior, saving, investment, and risk-taking. Available evidence suggests these effects are usually modest and occasionally positive. For example, higher tax rates on items, such as cigarettes, that create social

Table 6-1. *Sources of Federal Revenue, Fiscal Year 2003*

<i>Source</i>	<i>Billions of dollars</i>	<i>Percent of revenue</i>	<i>Percent of GDP</i>
Individual income tax	794	44.5	7.4
Social insurance taxes	713	40.0	6.6
Corporate income tax	132	7.4	1.2
Other	144	8.1	1.3
Total	1,783	100.0	16.6

Source: Congressional Budget Office, "Monthly Budget Review," October 9, 2003, and authors' calculations.

costs can reduce economic distortions, as can closing loopholes. Second, revenue increases have a positive indirect effect. By reducing the budget deficit (or raising the surplus), revenue increases can raise national saving—the sum of private and public saving—which in turn raises the future national income of American households. The net impact of tax changes is the sum of the direct and indirect effects. In short, whether tax increases support or hamper economic growth depends, in large measure, on how they are designed.²

Historical evidence shows no clear correlation between tax rates and economic growth. The United States has enjoyed rapid growth both when taxes were low and when taxes were high. The strongest recent extended period of growth in U.S. history spanned the two decades from the late 1940s to the late 1960s, when the top marginal personal income tax rates were 70 percent or higher. Economic growth accelerated after the top marginal tax rate was increased from 31 percent to 39.6 percent in 1993.³ Comparisons across countries confirm that rapid growth has been a feature of both high- and low-tax nations. These considerations suggest that well-designed revenue increases need not inflict significant damage and may even strengthen economic performance.

To provide some perspective on possible tax changes, we note that in 2003 the federal government collected nearly \$1.8 trillion in revenue. Individual income taxes supplied almost half the total (see table 6-1). Another 40 percent came from payroll taxes earmarked to finance social insurance programs, primarily Social Security and Medicare. Corporate income taxes and such other revenue sources as estate and gift taxes, excise fees, and customs duties accounted for the remainder.

Potential Revenue Sources

How much revenue is required to achieve budget balance in 2014 depends on how much the nation spends. According to the adjusted baseline, the budget deficit in 2014 is \$687 billion, or about 3.7 percent of GDP (see chapter 1). The three plans set forth in chapter 2 would close, respectively, 25 percent, 75 percent, and all of the gap through tax increases.⁴

We examine seven types of tax changes:

—partial or full repeal or expiration of the 2001, 2002, and 2003 tax cuts;

- reform of the alternative minimum tax;
- increases in payroll taxes earmarked for Social Security;
- increases in excise taxes, such as those on cigarettes and alcoholic beverages;
- technical changes that would collect additional revenue;
- base-broadening, including scaling back current tax expenditures; and
- new revenue sources, such as a permit-trading system on carbon emissions or a value-added tax.

Adjusting the 2001, 2002, and 2003 Tax Cuts

In 2001 and 2003, President Bush requested and Congress approved large tax cuts—the Economic Growth and Tax Relief Reconciliation Act of 2001 and the Jobs and Growth Tax Relief Reconciliation Act of 2003. These acts reduced marginal tax rates, increased the child credit, provided marriage penalty relief, gradually eliminated the estate tax, and made numerous other changes. Under the 2001 act, many of these provisions were phased in slowly over time. The 2003 act accelerated the reductions in marginal tax rates and some other provisions enacted in 2001 whose implementation was delayed. The 2003 act also reduced taxes on capital gains and dividends. All or some of these cuts could be reversed (see table 6-2).⁵

One revenue-increasing option involves reversing the income tax changes made in 2001, including all of the marginal tax rate reductions, the child credit increases, and marriage penalty relief. This option raises \$262 billion in 2014, or about 1.4 percent of GDP relative to the adjusted baseline.⁶

A second option would reverse only the income tax cuts that benefit primarily high-income filers. If cuts in tax rates primarily affecting lower- and middle-income filers—the increase in the child credit from \$500 to \$1,000, the creation of a 10 percent marginal tax bracket, and the marriage penalty relief provisions included in the 2001 legislation—are retained and only those cuts that affect the 25 percent of tax units who face marginal rates above 15 percent are undone, revenues would increase by about \$80 billion in 2014. Under this option, the roughly 75 percent of tax units in the zero, 10 percent, or 15 percent marginal rate brackets would continue to enjoy all the tax cuts they received under the 2001 act. Higher-income households would still receive tax cuts, though they would be smaller than the cuts originally legislated.

The 2001 act also called for the gradual reduction and eventual elimination of the estate tax. In 2001, that tax fell on estates with a net value (after allowable deductions, including unlimited transfers between spouses and charitable gifts) of more than \$600,000. The maximum estate tax rate

Table 6-2. *How Would Repealing the 2001-03 Tax Cuts Affect Federal Revenue in 2014?*

<i>Change</i>	<i>Billions of Dollars</i>	<i>Percent of GDP</i>
1. Reverse all 2001 income tax changes (exclude alternative minimum tax and capital gains/dividends changes)	262	1.4
2. Reverse 2001 income tax changes that benefit high-income filers (return top four marginal rates to 2000 levels)	79	0.4
3. Retain estate tax At a 35 percent tax rate with \$5 million exemption per person	30	0.2
At a 45 percent tax rate with \$3.5 million exemption per person	38	0.2
At a 50 percent tax rate with \$2.5 million exemption per person	46	0.3
4. Repeal capital gains, dividends tax reductions from 2003 act given change #1	39	0.2
5. Eliminate bonus depreciation provisions in 2002 act	29	0.2
6. Reform alternative minimum tax Given changes #1 and #4	38	0.2
Without changes #1 and #4	70	0.4

Source: Authors' calculations based on Tax Policy Center microsimulation results and published Joint Committee on Taxation and Congressional Budget Office estimates.

was 55 percent. The 2001 act raised the estate-value floor gradually to \$3.5 million in 2009 and lowered the maximum rate to 45 percent. At this level, the tax would apply to only 5 decedents in 1,000—approximately 10,000 estates each year nationwide. The 2001 act repealed the estate tax in 2010 but restored pre-2001 law in 2011. Retaining the estate tax under the terms that apply in 2009, with the ceiling adjusted annually for inflation, would raise about \$38 billion in 2014 relative to repealing it altogether. Applying the tax to estates with a net value of \$2.5 million or more per person with a maximum rate of 50 percent would raise \$46 billion relative to the adjusted baseline. Taxing only estates of \$5 million or more per person at a maximum rate of 35 percent would increase revenue by \$30 billion in 2014.

A fourth option would rescind the cuts in taxes on dividends and capital gains enacted in 2003. These tax cuts do not efficiently address the stated goal of eliminating the “double taxation” of corporate income. Double taxation refers to the fact that corporate profits are taxed once through the corporation income tax and again at the personal level through personal income tax on dividends and capital gains.⁷ We and many other economists believe that all corporate income should be taxed once—but *only* once—at the same rate that applies to labor income received by any given taxpayer. Today some corporate source income is taxed twice, but some escapes tax altogether, through shelters or because of corporate tax subsidies.⁸ The provisions of the 2003 act regarding dividends and capital gains address the first problem, but not the second. This “dessert now, vegetables later” approach, which addresses only half the problem, reduces the chances of dealing with the whole. The dividend and capital gains tax cuts could be repealed and legislation could be enacted that prevents both double-taxation and no-taxation in a revenue neutral way. Following this course would raise revenues almost \$40 billion in 2014.⁹

The final option in this section is to eliminate the 50 percent “bonus depreciation” provision for business investments introduced in the 2002 tax cuts and extended in the 2003 legislation. This provision was intended to provide a temporary stimulus to business investment during the recession, not to serve as a permanent subsidy.¹⁰ Eliminating it would raise \$29 billion in 2014 relative to the adjusted baseline.

Reform the Alternative Minimum Tax

The individual alternative minimum tax (AMT) was originally designed to collect taxes on filers who aggressively sheltered their income. All taxpayers must pay the regular income liability or the AMT, whichever is larger. For most filers, the AMT is so low that they need not bother with it. Only 2.4 million people now pay the AMT. Because the ordinary income tax is adjusted for inflation but the AMT is not, the number of filers subject to the AMT will grow rapidly to 33 million by 2010. Our adjusted baseline assumes that the AMT is modified so that it is indexed for inflation and otherwise reformed to prevent more filers being subjected to it (see chapter 1).

Even while preventing a substantial increase in the share of taxpayers on the AMT, revenue-increasing reforms are possible. For example, one could keep the total share of taxpayers on the AMT roughly constant, while shifting AMT liabilities higher up the income distribution. One such option would raise the top AMT tax rate to 35 percent, repeal the AMT exemption phase-out, treat dividends and capital gains as ordinary income under the AMT (so that the preferences for capital gains would remain in the ordinary income tax but not in the AMT), and raise the real value of the AMT

Table 6-3. *How Would Raising Social Security Taxes Affect Federal Revenue in 2014?*

<i>Change</i>	<i>Billions of dollars</i>	<i>Percent of GDP</i>
Raise earnings ceiling so that 87 percent of total earnings are taxable	21	0.11
Raise earnings ceiling so that 90 percent of total earnings are taxable	53	0.29
Eliminate earnings ceiling so that all earnings are taxable	158	0.85
Raise payroll tax rate to 13 percent	44	0.24
Impose 3 percent legacy charge on earnings above ceiling	38	0.20

Source: Authors' calculations based on Congressional Budget Office, *Budget Options* (March 2003), and Office of the Chief Actuary, Social Security Administration.

exemption over time. This option would also raise \$38 billion in 2014 if the income tax rate reductions and capital gains and dividends tax cuts are repealed and about \$70 billion if they are retained (see table 6-2).¹¹

Increasing Social Security Revenue

As noted in chapter 5, Social Security faces a long-term financial shortfall that will have to be resolved by some combination of benefit cuts and tax increases. The payroll tax that finances Social Security is now 12.4 percent on earnings up to a ceiling—\$87,900 in 2004. In 1983, when the last major congressional legislation on Social Security was enacted, the ceiling covered 90 percent of all earnings in covered employment. The earnings ceiling is adjusted annually for growth in average wages. Since 1983, however, earnings inequality has grown. As a result, the share of earnings subject to payroll tax has fallen from 90 percent to 85 percent.

We include three options for boosting revenues through an increase in the ceiling on taxable earnings and one for increasing the tax rate (see table 6-3). Increasing the ceiling so that the payroll tax covers 87 percent of earnings—about halfway between the current level and the one that applied in 1983—would raise revenues in 2014 by \$21 billion and would require raising the ceiling in 2004 to about \$105,000. Covering 90 percent of earnings would require raising the ceiling to about \$130,000 in 2004; it would boost revenues in 2014 by \$53 billion. Eliminating the ceiling and subjecting all earnings to the 12.4 percent payroll tax would raise \$158 billion in 2014 alone and, if made permanent, would eliminate the seventy-five-year deficit in Social Security. These revenue estimates are all based on an unchanged tax rate of 12.4 percent. Raising the payroll tax rate from 12.4 percent to 13.0 percent without raising the ceiling would raise \$44 billion in 2014 and close roughly one-third of the projected seventy-five-year deficit in Social Security.

Another option is to impose a charge to offset the loss of Social Security reserves resulting from past decisions to pay early cohorts more in benefits than their contributions could have financed.¹² If earlier cohorts had received only the benefits that could have been financed by their contributions plus interest, current Social Security reserves would be larger and better able to finance future benefits. This gap comprises a “legacy debt,” which must be financed in the future. A 3 percent “legacy charge” on earnings above the existing payroll tax ceiling would raise about \$40 billion in 2014. It would also close approximately a third of the seventy-five-year deficit in Social Security.

Increases in “Sin” Taxes

Certain taxes, such as those on cigarettes and alcohol, discourage the use of products that impose social costs. For example, the cigarette tax discourages smoking and reduces smoking-related disease. An increase in this tax would strengthen this disincentive, particularly for teenagers whose limited incomes and typically brief addiction make their smoking decisions more sensitive to the price of cigarettes than are those of adults. Consequently, an increase in the excise tax on tobacco would be particularly effective in discouraging teen smoking.¹³ Similarly, taxes that raise the price of alcohol discourage drinking, even among heavy drinkers.¹⁴ Raising the excise tax on cigarettes 50 cents a pack would increase revenue by an estimated \$7 billion in 2014 (see table 6-4).¹⁵ Increasing the tax on all alcoholic beverages to a standardized \$16 per proof gallon—which would raise the tax on a six-pack of beer from 33 cents to 81 cents—would raise \$6 billion.

Activities that create pollution also impose costs on society. Accordingly, a third option in this category is to raise the gas tax. Increasing this tax by 12 cents a gallon, from 18.4 cents to 30.4 cents a gallon, would raise \$20 billion in 2014, reducing the deficit, encouraging fuel efficiency, and curtailing pollution.

Technical Changes

Two technical changes in the revenue system would also help to reduce the deficit (see table 6-5). The first involves the price index used to adjust personal exemptions, the standard deduction, and the

Table 6-4. How Would Expanding “Sin” Taxes Affect Federal Revenue in 2014?

<i>Change</i>	<i>Billions of current dollars</i>	<i>Percent of GDP</i>
Increase excise tax on cigarettes by 50 cents a pack	7	0.04
Increase taxes on alcohol to \$16 per proof gallon	6	0.03
Increase gas tax by 12 cents a gallon	20	0.11

Source: Authors’ calculations based on Congressional Budget Office, “Budget Options,” March 2003.

Table 6-5. *How Would Technical Changes in the Tax System Affect Federal Revenue in 2014?*

<i>Change</i>	<i>Billions of dollars</i>	<i>Percent of GDP</i>
Index the tax code to the improved consumer price index	18	0.1
Improve enforcement	37	0.2

Source: Authors' calculations based on Tax Policy Center microsimulation results and Leonard Burman, Testimony before the Committee on Ways and Means, U.S. House of Representatives, July 17, 2003.

income levels at which tax rates change. These nominal quantities are adjusted annually according to changes in the consumer price index to hold them constant in real terms. Research has shown that the consumer price index overstates inflation somewhat. As a result, personal exemptions and the standard deduction tend to grow in real value, and revenues are lower than they would be if the index were more accurate than it is. As explained in the chapter on entitlements, the Bureau of Labor Statistics has developed a so-called "superlative" price index that measures inflation better than does the traditional consumer price index. Using the improved index in the future would reduce measured inflation by an estimated 0.2 percentage point a year and raise revenue in 2014 by \$18 billion.

A second technical change would deal with the disturbing fact that many taxpayers simply do not pay the taxes they owe. One reason is that the Internal Revenue Service lacks the resources to enforce payment. Providing the IRS with an additional \$2 billion a year to collect the taxes people owe would reduce the deficit by approximately \$37 billion by 2014.¹⁶

Base-broadening Options

Broadening the tax base generates additional revenue with no increase in statutory tax rates. It can also improve economic efficiency by reducing tax-motivated distortions between similar activities.

At the personal level, the current tax system favors foreign earned income. Each American who lives and works abroad can qualify for an exclusion from income taxation of up to \$80,000 of earnings. This provision originated when few American worked abroad and served as a crude offset to taxes U.S. foreign residents were assumed to owe abroad. However, people receive the exclusion from U.S. taxation even if they owe no foreign tax. Eliminating the exclusion, so that all income earned abroad would be included in taxable income in the United States, would raise \$5 billion in 2014 (see table 6-6). U.S. foreign residents would still be eligible for a credit for foreign taxes paid, so that they would not be taxed twice on their income.

At the business level, the United States is going to have to make changes in its very low tax rates on so-called Foreign Sales Corporation/Extra-Territorial Income (FSC/ETI). The World Trade Organization has found these rates to be export subsidies, which are prohibited by international treaty.

Table 6-6. *How Would Base-broadening Options Affect Federal Revenue in 2014?*

<i>Change</i>	<i>Billions of dollars</i>	<i>Percent of GDP</i>
Eliminate foreign earned income exclusion	5	0.03
Repeal FSC/ETI	7	0.04
Replace mortgage interest deduction with 15 percent tax credit	36	0.20

Source: Authors' calculations based on Tax Policy Center microsimulation results, Congressional Budget Office, *Budget Options* (August 2003), and Joint Committee on Taxation.

The European Union has been authorized to impose billions of dollars in trade sanctions on U.S. exports if the FSC/ETI tax provisions are not repealed. Bipartisan support exists for repealing the FSC/ETI, a step that would raise revenue by an estimated \$7 billion in 2014. Unfortunately, Congress is debating which of a long list of alternative tax breaks Congress should link to repeal of the prohibited subsidies, reducing revenues rather than raising them.

Current tax rules subsidize homeownership by permitting homeowners to deduct mortgage interest. This deduction is a subsidy because the homeowner/investor is not required to report an estimate of the investment income (or “imputed” rent) on the same investment. Under current law, taxpayers may deduct interest paid on up to \$1 million of mortgage loans. This deduction favors high-bracket filers because the tax saving is proportional to one’s marginal tax rate and because high-bracket filers tend to live in much more costly houses than do low-income households. Transforming the home mortgage interest deduction into a refundable 15 percent credit would have a number of advantages. It would encourage homeownership among filers whose incomes put them in the 10 percent marginal rate bracket and those with incomes too low to require tax payments. It would be helpful or neutral for the three-quarters of tax units facing the 15 percent or lower marginal tax brackets. And it would raise revenue in 2014 by \$36 billion, which would come from added taxes on the 25 percent of filers who face marginal rates above 15 percent.

Other Revenue Options

Rather than relying on the personal or corporation income tax to generate increased revenue, Congress might decide to create new revenue sources. Most developed nations and all members of the European Union now impose a value-added tax (VAT)—a tax collected at each stage of production that amounts to a tax on consumption other than goods and services that are expressly shielded from tax.¹⁷ Many observers believe that partially replacing the income tax with a VAT would promote saving because the VAT taxes consumer purchases.

A broad-based VAT (one that excludes only small businesses, education, religion, and health

Table 6-7. *How Would New Tax Options Affect Federal Revenue in 2014?*

<i>Change</i>	<i>Billions of dollars</i>	<i>Percent of GDP</i>
Impose VAT excluding small businesses, education, religion, and health care:		
2 percent rate	149	0.8
5 percent rate	372	2.0
8½ percent rate	632	3.4
Create carbon trading system, assume \$25 per ton permit price	34	0.2

Source: Authors' calculations.

care) would generate revenue of about 0.4 percent of gross domestic product for each 1 percentage point of tax. It would also increase the cost of government purchases. The net contribution to deficit reduction, therefore, would be 0.4 percent of GDP—or \$74 billion in 2014—for each 1 percentage point of tax (see table 6-7). A VAT could be imposed at a low rate—say, 2 percent—as part of a larger tax program. At 5 percent, the revenue would close almost 70 percent of the deficit in 2014. At 8.5 percent, a VAT would more than close the entire adjusted baseline deficit in 2014.

Another option—a tax on carbon emissions, combined with a market in rights to emit carbon—would deal with a major environmental problem as well as contribute to deficit reduction. This program would reduce greenhouse gas emissions and the harm caused by global climate change.¹⁸ Total carbon emissions would be capped. Companies would need a permit to emit carbon.¹⁹ Each year the government would auction permits authorizing the emission of carbon at the capped level. As an illustration, suppose that the number of carbon permits were set equal to the number of tons of carbon emitted in 1990. Suppose further that the permit price turned out to be \$25 per ton of carbon. At that price and quantity, the auctions would raise \$34 billion in 2014. Taking into account the increase in prices paid by the government, the net revenue increase would amount to 0.2 percent of GDP.²⁰

Packages

The options presented above can be combined in various ways. In considering which items to choose, policymakers and citizens should evaluate not only how much revenue the proposals produce, but also how the burdens are distributed and how they affect economic activity. For example, repealing the income tax cuts from the 2001 legislation or retaining the estate tax would burden upper-income taxpayers more and lower-income taxpayers less than would imposing a value-added tax or increasing sin taxes.

Tables 6-8, 6-9, and 6-10 present three revenue packages. The smaller government package closes 25 percent of the adjusted baseline deficit in 2014; the better government package closes 75

percent; and the larger government package closes more than 100 percent. Clearly, it would be possible to raise the same amounts with other packages. These changes represent large tax increases from the perspective of the adjusted baseline. But if the various expiration dates (“sunsets”) for tax cuts in current law were allowed to take effect, revenues would be \$493 billion higher in 2014 than in our adjusted baseline. Thus, if one takes current law as the basis of comparison rather than our adjusted baseline, the plans that close 25 percent and 75 percent of the deficit in 2014 via tax increases do not represent tax increases, but tax *cuts*, of \$360 billion and \$100 billion, respectively, and the plan that relies exclusively on tax increases to close the deficit in 2014 would represent a revenue increase of \$128 billion, or about 0.7 percent of GDP.

Table 6-8. *How Would the Smaller Government Package (25 percent of Deficit Reduction from Revenue) Affect Federal Revenue in 2014?*

<i>Change</i>	<i>Billions of dollars</i>	<i>Percent of GDP</i>
Reform alternative minimum tax	70	0.4
Retain estate tax at a 35 percent tax rate with \$5 million exemption	30	0.2
Improve enforcement	37	0.2
Total	137	0.7

Table 6-9. *How Would the Better Government Package (75 Percent of Deficit Reduction from Revenue) Affect Federal Revenue in 2014?*

<i>Change</i>	<i>Billions of dollars</i>	<i>Percent of GDP</i>
Return top four marginal rates to 2000 levels	79	0.4
Retain estate tax with \$3.5 million exemption	38	0.2
Improve enforcement	37	0.2
Index tax code to improved consumer price index	18	0.1
Repeal 2003 capital gains and dividends tax reductions	39	0.2
Reform alternative minimum tax	38	0.2
Raise Social Security earnings ceiling so that 90 percent of earnings are taxable	53	0.3
Eliminate bonus depreciation	29	0.2
Raise payroll tax rate to 13 percent	44	0.2
Create modest carbon trading system	27	0.1
Total	402	2.2

Table 6-10. *How Would the Larger Government Package (100 Percent of Deficit Reduction from Revenue) Affect Federal Revenue in 2014?*

<i>Change</i>	<i>Billions of dollars</i>	<i>Percent of GDP</i>
Return top four marginal rates to 2000 levels	79	0.4
Retain estate tax with \$3.5 million exemption	38	0.1
Improve enforcement	37	0.2
Index tax code to improved consumer price index	18	0.1
Repeal 2003 capital gains and dividends tax reductions	39	0.2
Reform alternative minimum tax	38	0.2
Eliminate Social Security earnings ceiling so that all earnings are taxable	158	0.9
Eliminate bonus depreciation	29	0.2
Raise payroll tax rate to 13 percent	44	0.2
Impose a 2 percent value-added tax	149	0.8
Total	629	3.4

ENDNOTES

1. Under our adjusted baseline, the tax cuts are extended beyond their official sunsets. Under that baseline, revenue increases from 16.9 percent of GDP in 2003 to 17.6 percent in 2013—which is below its average level over the past several decades and, more important, well below projected spending.

2. For further discussion, see William G. Gale and Samara R. Potter, “An Economic Evaluation of the Economic Growth and Tax Relief Reconciliation Act of 2001,” *National Tax Journal*, vol. 55 (March 2002.)

3. Some may argue that economic growth would have been even more rapid, and pretax income gains among top earners even more dramatic, were it not for the 1993 marginal tax rate increases. But the evidence to support such a proposition is weak, and on its face it seems implausible.

4. In all cases, the sum of spending cuts and tax increases is smaller than \$687 billion because deficit reduction means slower growth in the public debt and in attendant interest outlays than would be required if deficits increase unabated.

5. Again, it is worth emphasizing that if current law is followed, all of these tax cuts will have expired by 2014.

6. This estimate is relative to the adjusted baseline. It is based on results from a model devised by the Tax Policy Center, a joint project of the Urban Institute and the Brookings Institution. The results were reduced by 20 percent to reflect an estimate of the effects of the microeconomic behavioral responses likely to be assumed by congressional revenue and budget scorers. The Tax Policy Center model generates revenue estimates that are completely “static” (that is, they do not incorporate any behavioral reaction to the tax changes). The 20 percent reduction factor is intended to roughly match published estimates from the Congressional Joint Committee on Taxation or the Congressional Budget Office, which incorporate microeconomic responses to the tax changes. The same 20 percent reduction factor is applied to the revenue estimate for repealing only the top four marginal rate reductions.

7. For further explanation, see Leonard E. Burman, William G. Gale, and Peter R. Orszag, “Thinking Through the Tax Options,” *Tax Notes* (May 19, 2003).

8. Robert McIntyre, “Calculations of the Share of Corporate Profits Subject to Tax in 2002,” Citizens for Tax Justice, January 2003.

9. This estimate is based on extrapolations of the Congressional Joint Committee on Taxation estimates.

10. The bonus depreciation provision, by allowing 50 percent immediate expensing, also distorts incentives to invest in assets with long depreciation lives relative to assets with short depreciation lives. The revenue estimate is based on extrapolations of the Congressional Joint Committee on Taxation estimates.

11. The top statutory marginal tax rate under the AMT is now 28 percent, but the phase-out of the exemption under the AMT raises the effective marginal tax rate to 35 percent. After the exemption is fully phased out (in 2003, when alternative minimum taxable income is slightly less than \$400,000 for married filers), the effective marginal tax rate declines back to 28 percent. This option would eliminate the phase-out of the exemption but raise the marginal tax rate to 35 percent. As a result, the effective rate would rise only for those now above the exemption phase-out range. The revenue estimate is based on results from the Tax Policy Center model.

12. Peter A. Diamond and Peter R. Orszag, *Saving Social Security: A Balanced Approach* (Brookings, 2004).

13. See, for example, Jonathan Gruber, “Youth Smoking in the U.S.: Prices and Policies,” Working Paper 7506 (Cambridge, Mass.: National Bureau of Economic Research, January 2000.) Disagreement exists about whether the current cigarette excise tax adequately reflects the costs imposed by smokers on others; a new line of research emphasizes instead the costs imposed on the smoker himself and why the initial decision to smoke may not have been made with adequate information about the future consequences. For discussion, see David Cutler and Jonathan Gruber, “Health Policy in the Clinton Era,” and W. Kip Viscusi, “Comments,” in Jeffrey A. Frankel and Peter R. Orszag, eds., *American Economic Policy in the 1990s* (MIT Press, 2002). Gruber has also shown that smoking imposes costs on less-than-fully-rational decisionmakers themselves that justify cigarette taxes far higher than any now imposed. See Jonathan Gruber and Botond Koszegi, “A Theory of Government

Regulation of Addictive Bads: Optimal Tax Levels and Tax Incidence for Cigarette Excise Taxation,” Working Paper 8777 (Cambridge, Mass.: National Bureau of Economic Research, February 2002.)

14. See David Cutler, “Public Policy for Health Care,” in A. Auerbach and M. Feldstein, eds., *Handbook of Public Economics*, vol. 4. (North-Holland, 2002).

15. These revenue estimates are based on extrapolations from Congressional Budget Office, *Budget Options* (March 2003), Revenue Options 33-35.

16. Leonard E. Burman, Testimony before the Committee on Ways and Means, United States House of Representatives, July 17, 2003.

17. For more detailed discussion of the economic effects of a VAT, see Henry J. Aaron and William G. Gale, eds., *Economic Effects of Fundamental Tax Reform* (Brookings, 1996).

18. For ways of designing incentives to mitigate climate change, see Joseph E. Aldy, Peter R. Orszag, and Joseph E. Stiglitz, “Climate Change: An Agenda for Global Collective Action,” Pew Center on Global Climate Change, October 2001.

19. A “safety valve” system in which the government would commit to selling permits at a given price, even if the result is that the quantity target is exceeded, has advantages over a strict quantity-based system. See William Pizer, “Choosing Price or Quantity Controls for Greenhouse Gases,” Resources for the Future, Climate Issues Brief 17, 1999, and Warwick J. McKibbin and Peter J. Wilcoxon, “Climate Change after Kyoto: A Blueprint for a Realistic Approach,” *Brookings Review*, vol. 20 (Spring 2002).

20. If transition relief were granted to the most affected parties and inclusive of the effect on government purchases, the net effect on revenue would be reduced. For various methods of providing transition relief and the costs involved, see Congressional Budget Office, “Shifting the Cost Burden of a Carbon Cap-and-Trade Program,” July 2003.