REDUCING DEPRECIATION ALLOWANCES TO FINANCE A LOWER CORPORATE TAX RATE

Jane G. Gravelle

This paper considers the tradeoffs in using revenues from slowing depreciation deductions to lower the corporate tax rate. It estimates how much the rate could be lowered and the resulting effective tax rates on different types of assets. Two issues arise: the overall effect on marginal tax burdens and the challenges of using a provision that largely reflects timing effects to finance a steady state rate reduction.

Considerable interest has been expressed in corporate income tax reform that broadens the base and lowers the rate. This interest is, in part, motivated by a desire to attract investment to the United States. Both President Obama and congressional leaders have expressed an interest in corporate tax reform that would lower the rate but be revenue neutral. The most important source of base broadening among tax expenditures is accelerated depreciation on equipment, which accounts (after being purged of the effects of temporary bonus depreciation) for about a quarter of corporate tax expenditures (Gravelle, 2010). As a corporate tax expenditure, accelerated depreciation is about twice as large as each of the next largest tax expenditures (deferral of tax on income earned abroad and the production activities deduction).

This paper analyzes the economic and revenue effects of reducing accelerated depreciation to finance a corporate rate cut. It considers two broad changes in depreciation: moving to the "alternative depreciation system," the standard against which tax expenditures are measured, and the more limited approach of increasing tax lives, that is part of the budget options presented by the Congressional Budget Office (2011), hereafter the "CBO budget option."

The first section of the paper briefly describes the current rules and the two alternative options. The second section examines the relationships between the effective tax rates on investments of different durabilities to the statutory tax rate under the current and new depreciation systems, without considering statutory rate changes. The third

---

Jane G. Gravelle: Congressional Research Service, Washington, DC, USA (jgravelle@crs.loc.gov)

section estimates how much rates could be cut while remaining revenue neutral under various scenarios. It also highlights an important aspect of revenues from base broadening through accelerated deprecation, namely that the revenues raised in the short run will be much larger than those in the long run. The next section briefly reviews some specialized capital cost recovery provisions. The final section concludes.

I. THE PROPOSALS

Under current law, assets are depreciated based on their assignments to a fixed number of classes of assets. Equipment is assigned to 3, 5, 7, 10, 15, or 20-year classes. Most equipment assets are depreciated over five or seven years; the more important assets in the longer-lived classes are public utility production facilities. Nonresidential structures are depreciated over 39 years and residential structures are depreciated over 27.5 years.

Assets are assigned to these broad categories based on their class life under the prior depreciation system, the asset depreciation range (ADR). This pre-existing system separated assets into many more categories, based on either the type of asset or the industry in which assets were used.

Depreciation methods can be straight line (equal amounts deducted in each year) or they can be accelerated (larger shares deducted in the earlier years). Accelerated depreciation methods are declining balance methods, where a larger share is deducted than in the case of straight line, but is taken as a percentage of the undepreciated balance. The first four classes are eligible for double declining balance (twice as large a deduction in the first year) and the other equipment classes are eligible for 150 percent declining balance.

The alternative depreciation method uses the longer ADR class lives and straight line methods. It primarily affects equipment, since the life for nonresidential buildings is 40 years and they are currently depreciated at about the same rate. (An exception is for certain leasehold and restaurant facilities that have a shorter life). Thus, there is a negligible change for nonresidential buildings.

The CBO budget option would apply to equipment and would increase the 3, 5, 7, 10, 15, and 20 year lives to 4, 8, 11, 20, 30, and 39 years. Depreciation methods would not be altered. This approach is more limited and raises a smaller amount of revenue. According to estimates by the Joint Committee on Taxation, adopting the alternative depreciation system would raise $514 billion in the first 10 years (Joint Committee on Taxation, 2010a), while the CBO budget option would raise $241 billion over nine years (Congressional Budget Office, 2011). It also retains the more limited categories of assets as under current law.

II. EFFECTIVE TAX RATES

The changes affect the relationship between the effective and the statutory tax rate (currently at 35 percent for most corporate income). Table 1 reports the estimated effective tax rates on business equipment and structures, with assets arrayed in order

Table 1

Effective Tax Rates by Asset Type, No Change in Statutory Tax Rate

Asset Type	Current Law (Percent)	Alternative Depreciation (Percent)	CBO Budget Options (Percent)
Equipment			
Autos	35	39	44
Office/computing equipment	31	39	41
Trucks, buses, trailers	30	34	39
Aircraft	30	44	38
Construction machinery	24	31	32
Mining/oilfield equipment	29	42	37
Service industry equipment	29	37	37
Tractors	27	37	35
Instruments	28	42	36
Other	27	39	35
General industrial quipment	26	38	33
Metalworking machinery	24	34	31
Electric transmission equipment	34	43	42
Communications equipment	19	34	26
Other electrical equipment	24	36	31
Furniture and fixtures	23	33	30
Special industrial equipment	21	34	28
Agricultural equipment	21	31	28
Fabricated metal	30	39	38
Engines and turbines	36	41	43
Ships and boats	17	27	25
Railroad equipment	18	29	24
Structures			
Mining/oil and gas	7	16	8
Other	40	41	40
Industrial	37	37	37
Public utility	27	31	33
Commercial	36	36	36
Farm	26	30	33

Note: Rates are based on author's calculations, assuming a 5 percent real discount rate and a 2 percent inflation rate.

of durability, retaining the current 35 percent rate. These effective tax rates measure the estimated share of the return that is collected in taxes.[1] The estimates assume a 2 percent inflation rate and a 5 percent real after-tax discount rate.

As the table indicates, most equipment assets are taxed at effective tax rates that are below the statutory rate. The effective tax rates range from 17 percent to 36 percent, but the majority of assets are taxed at effective rates below 30 percent. Among structures, only public utility structures (which are treated as long lived equipment by the tax code), farm structures (which are allowed a 20-year life), and mining structures (largely oil and gas drilling where a significant share of costs can be deducted immediately) receive benefits. Buildings, in general, are taxed at or above statutory rates. The analysis does not adjust for the special treatment of leasehold and restaurant property.

Table 2 shows the weighted average for the assets in Table 1, for equipment, structures, and equipment and structures combined. The effective tax rate for equipment is 26 percent, 9 percentage points below the statutory rate. The effective tax rate for structures is higher, but still below the statutory rate, largely because of the treatment of public utility plants. Overall, the estimated effective tax rate is 30 percent.

Both plans set the effective tax rate close to the statutory tax rate on average, for both categories. Effective tax rates, as expected, are higher for equipment under the alternative system, although the differences are not in proportion to the revenue loss, suggesting that the revenue effects do not bear a close relationship to effective tax rate changes. This lack of correspondence partially reflects the difference between gross investment weights (which affect revenue cost) and capital stock weights used in constructing effective tax rates (which should reflect net investment).

The table does not include residential structures, which are not very important for the corporate sector. Assuming an economic depreciation rate of 2.5 percent, the effective tax rate on residential structures is 30 percent under current law and 33 percent under the alternative depreciation system.

Table 2

Aggregate Effective Tax Rates, No Change in Statutory Tax Rate

Asset Type	Current Law (Percent)	Alternative Depreciation (Percent)	CBO Budget Options (Percent)
Equipment	26	36	34
Structures	32	34	34
Total	30	35	34

Note: Rates are based on author's calculations, assuming a 5 percent real discount rate and a 2 percent inflation rate.

---

[1] Gravelle (1994) provides details on the methodology, assumptions, and tax rules that are still currently applicable.

In 1986 when the current system was put into place, it was designed to produce tax rates close to the statutory rate, by setting depreciation rules so that the present value of tax depreciation was equal to the present value of economic depreciation. Since the depreciation system is not indexed for inflation (i.e., depreciation deductions are based on original cost and lose value over time when inflation is present), the rate of recovery should be somewhat accelerated to make up for the loss in present value due to the lack of inflation indexing. At the time the system was developed, the expected inflation rate was about 5 percent. Currently, a more reasonable expectation is 2 percent, which is incorporated in the estimates in Table 2.

The lower effective tax rate for equipment relative to structures under current law is partly a result of that decline in the inflation rate, which has a larger effect on shorter lived assets. In addition, offsetting the gain for buildings from lower inflation was an increase in the write-off period for buildings from 31.5 years to 39 years in 1993.

As indicated in Table 3, which shows the effects of eliminating and doubling the assumed rate of inflation, the tax rates under all of the regimes will differ if the inflation rate changes. For example, if inflation moves up to 4 percent the effective tax rate would be higher than the statutory rate under either reform option, especially for equipment. Unless the depreciation deductions are indexed for inflation, the level of inflation will affect tax rates.

III. HOW MUCH RATE REDUCTION COULD BE ACHIEVED?

How much could the corporate tax rate be cut under a revenue neutral reform of the corporate tax through revisions in depreciation? This question is not as straightforward as it appears.

Table 3

Effective Tax Rates: Sensitivity to Inflation Expectations

Inflation Rate and Asset Type	Current Law (Percent)	Alternative Depreciation (Percent)	CBO Budget Options (Percent)
0 Percent Inflation			
Equipment	21	30	29
Structures	28	30	30
Total	26	30	30
4 Percent Inflation			
Equipment	30	41	39
Structures	35	36	36
Total	33	38	38

Note: Rates are based on author's calculations, assuming a 5 percent real discount rate.

Table 4 reports two sets of revenue estimates along with corporate tax revenues as forecast by the Congressional Budget Office (2011). A simple calculation based on adding up the revenue gains and the corporate revenues, taking their ratio, and dividing the current 35 percent rate by one plus the ratio indicates that the 35 percent rate could be cut to almost 30 percent under the alternative depreciation system, half of the reduction to a 25 percent tax rate targeted by many proposals. For the CBO budget option, the rate would be cut by about half as much.

These estimates are too optimistic for three reasons. First, the revenue gains in the budget horizon are much larger than those in the long run, and a much smaller gain would be obtained under the constraint of permanent revenue neutrality. Second, a portion of the depreciation gain is collected from unincorporated business, and if that gain is used to reduce corporate tax rates, there will be a loss in corporate revenues (although it will be accompanied by an increase in noncorporate revenues). Finally, corporate income tax revenues are the result of multiplying corporate taxable income by the corporate tax rate and then subtracting credits. To the extent that credits do not decline with corporate rate cuts, it would be appropriate to target tax before credits, and the revenue gains would be a smaller portion of those taxes, permitting a smaller rate reduction.

Table 4

Revenue Estimates

Fiscal Year	Revenue Gains under Alternative Depreciation ($Billions)	Revenue Gains under CBO Budget Options ($Billions)	Total Corporate Tax Revenues ($Billions)
2011	13.7		201
2012	40.6	0.0	279
2013	61.8	5.2	343
2014	73.5	16.8	428
2015	78.1	26.4	398
2016	75.8	30.4	370
2017	69.1	34.1	413
2018	58.1	36.2	417
2019	51.4	33.9	420
2020	46.5	30.3	420
2021		28.1	437

Sources: Estimates of the effects of the alternative depreciation system are based on Joint Committee on Taxation (2010a); estimates of the effects of the CBO Budget Option and Revenues are based on Congressional Budget Office (2011).

The most important of these issues is the difference between the short run and long run revenue gain. This pattern can be seen in the estimates in Table 4, which rise and then begin to fall over the 10-year period analyzed.

Figures 1–4 show graphically the revenue patterns and steady state revenues for the two largest categories of equipment: seven-year property and five-year property. Figure 1 shows the effects by calendar year of extending the life of seven-year property as included in the CBO budget option under the assumption of a 3 percent real growth rate and a 2 percent inflation rate. All estimates use a half year convention (half of the first year's depreciation is deducted in the year of acquisition). Each year is deflated (expressed in current year income levels) by both inflation and real growth to capture the relationship to corporate revenues. The revenue gain reaches its steady state in year 12, outside of the normal 10-year budget horizon.

Figure 2 provides the same estimates for both an increase in the life and a switch from double declining balance to straight line methods. This treatment is more representative of what might be expected in the alternative depreciation system. The gains are larger but the pattern is similar to that in Figure 1.

Figures 3 and 4 provide the same information for the other major category of equipment assets, the five-year category. These assets reach their steady state in year 9.

Clearly, a corporate tax shift that is revenue neutral over the 10-year budget horizon will lose revenue on a permanent basis. One could also imagine an option that is revenue
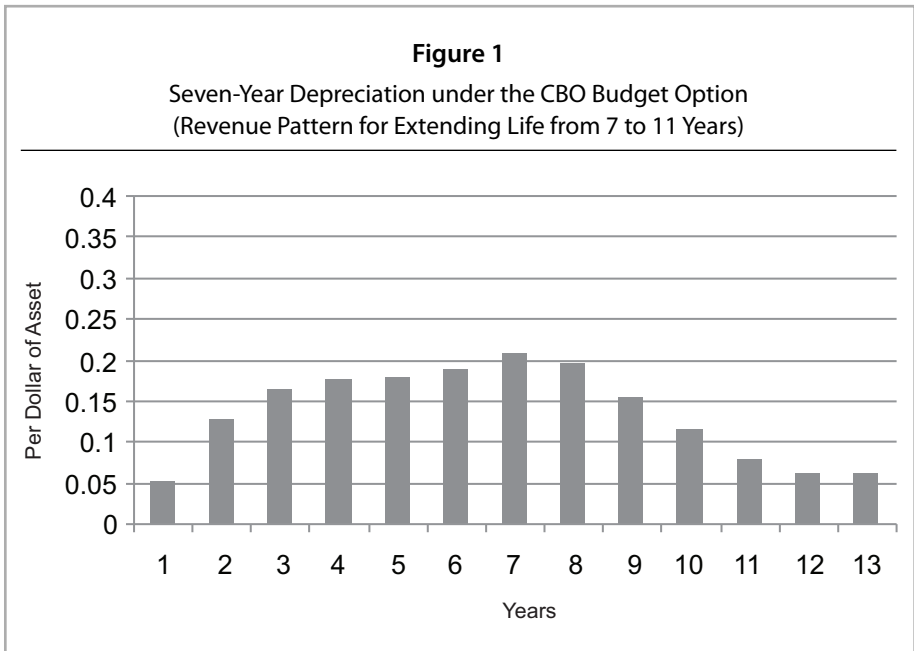

Figure 1

Seven-Year Depreciation under the CBO Budget Option
(Revenue Pattern for Extending Life from 7 to 11 Years)

Figure 2

Seven-Year Depreciation with Switch to Straight Line Method
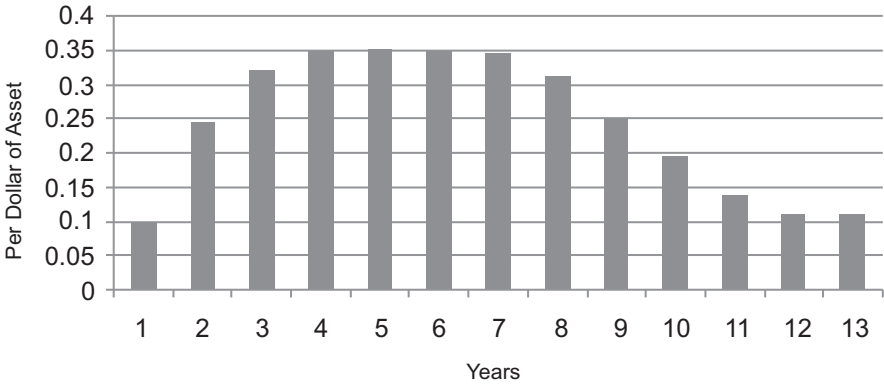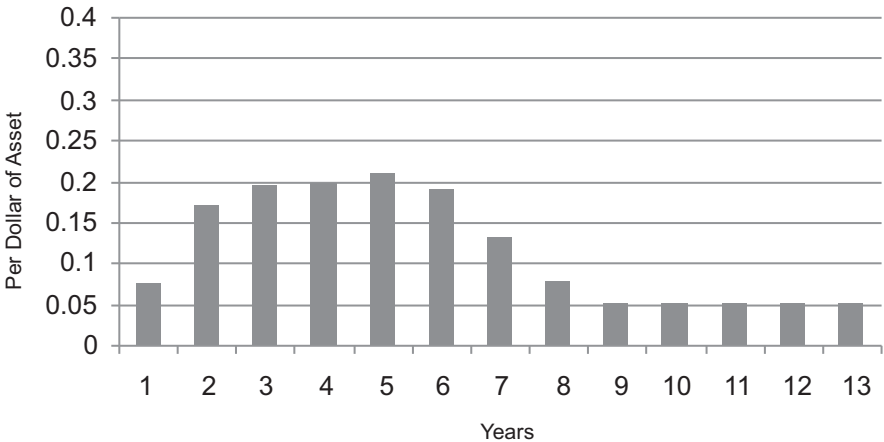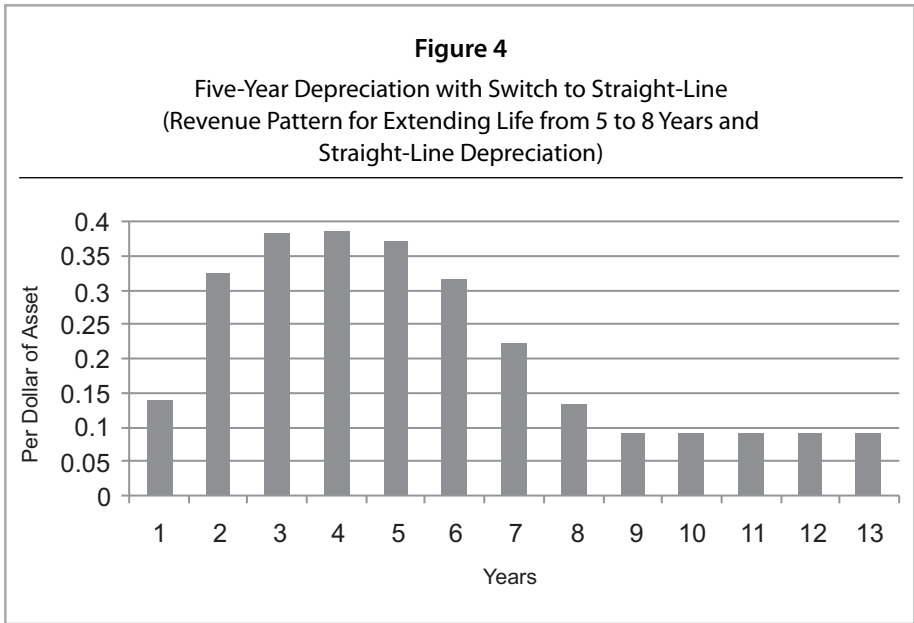(Revenue Pattern for Extending Life from 7 to 11 Years and
Straight-Line Depreciation)

Figure 3

Five-Year Depreciation in the CBO Budget Option
(Revenue Pattern for Extending Life from 5 to 8 Years)

Figure 4

Five-Year Depreciation with Switch to Straight-Line
(Revenue Pattern for Extending Life from 5 to 8 Years and
Straight-Line Depreciation)

neutral in present value, which would gain enough in the short run to offset a loss in the long run. In that case, the revenue gain would be measured using the change in the present value of the depreciation deductions.

For the four examples above, Table 5 presents the ratio of the steady state revenue gain to the budget window average gain, and also the ratio of the present value of the revenue gain to the budget window average gain. For the seven-year case the ratio of the steady state gain to the present value gain is 39 percent, and for the five-year case this ratio is 37 percent. These ratios are not affected much by the choice of depreciation method. The ratio is larger the longer lived the asset. Table 5 also shows the ratio of the present value revenue gain to the average revenue gain, and indicates that it is not much larger than the ratio of the steady state revenue gain to the budget window average gain. That is, if the corporate tax is made revenue neutral in the steady state, the result will not be much different from the effects of defining revenue neutrality in present value terms.

Calculations using the tax expenditure estimates by Gravelle (2010) suggest that the ratio of the steady state revenue gain to the average gain under the 10-year horizon for the alternative depreciation system is 0.54; this value is used in the remaining calculations in the study. Since the evidence in Table 5 indicates that the method of depreciation (which is the major difference between the alternative depreciation system and the CBO budget option) does not affect that ratio, the same ratio is used for the CBO budget option.

Table 5

Steady State and Present Value Amounts Compared to Budget Window

Asset Class (7 Year to 11 Year; 5 Year to 8 Year)	Ratio of Steady State Revenue Gain to Budget Window Average Gain	Ratio of Present Value Revenue Gain to Budget Window Average Gain
7 Year	0.392	0.498
7 Year Straight Line	0.397	0.501
5 Year	0.372	0.482
5 Year Straight Line	0.370	0.481

Note: Figures are based on author's calculations, assuming a 3 percent real growth rate and a 2 percent inflation rate.

Table 6 shows the statutory tax rates that could be achieved under a revenue neutral change for both the budget horizon estimates and in the steady state. It also shows the effects of excluding revenue gains obtained under the individual income tax through the taxation of unincorporated businesses. Based on tax expenditure estimates, corporations account for 78 percent of depreciation deductions.

As indicated in this table, with both corrections, the corporate tax rate could be reduced by 2.2 percentage points rather than 4.7 percentage points under the alternative depreciation system. For the CBO budget option, the reduction falls from 2.2 percentage points to 0.9 percentage points.

Table 6

"Revenue Neutral" Statutory Tax Rates

Basis for Estimate	Alternative Depreciation System	CBO Budget Options
Budget Horizon, All Depreciation	30.3	32.8
Budget Horizon, Corporate Depreciation	31.3	33.3
Steady State, All Depreciation	32.3	33.8
Steady State, Corporate Deprecation	32.8	34.1

Notes: The new corporate tax rate is the current rate divided by 1 plus the ratio of the revenue gain to corporate revenues. For the 10-year budget horizon, the rate is derived from the revenue gain and corporate tax revenue estimates over the first 10 years; the ratio of the revenue gain to corporate revenues is 54 percent as large for the steady state. The ratios in either case when using only corporate depreciation are multiplied by 0.78.

Table 7 reports the effective tax rates (assuming only corporate depreciation is used) for three scenarios: no rate change, revenue neutrality over the budget horizon, and revenue neutrality in the steady state. In all cases, the effective tax rate rises. Corporate tax reform will increase the cost of capital. That outcome would be expected under a present value neutral change, because the rate reduction provides a windfall benefit to existing capital, but it would also be true under either of the revenue neutrality scenarios.

As noted earlier, one other factor would cause corporate tax rates to be lower than those estimated above. Corporate tax liability includes the effects of reductions by tax credits. According to Internal Revenue Service (2007), corporate taxes before credits are 134 percent of revenue after credits. A small share of these credits are domestic credits (such as the research and experimentation credit) which would not be affected by corporate rate changes. Corporate revenue after foreign tax credits is 105.7 percent of tax after credits. Foreign tax credits could be affected for firms subject to the foreign tax credit limit (which limits credits against U.S. tax liability due to taxes paid on foreign source income).

Table 8 reports the statutory tax rates assuming that credits would not change. With both corrections and the fixed credit assumption, the reduction in the alternative depreciation system would be only 1.6 percentage points and the reduction for the CBO budget option would be 0.7 percentage points.

Table 7

Effective Tax Rates With Corporate Rate Changes

Revenue Supporting Rate and Asset Type	Current Law (35 Percent Rate) (Percent)	Alternative Depreciation (Percent)	CBO Budget Options (Percent)
No Rate Change			
Equipment	26.3	36.3	34.4
Structures	32.1	33.9	34.0
Total	30.1	34.8	34.1
10-Year Budget Horizon			
Equipment	26.3	32.5	32.7
Structures	32.1	30.1	32.3
Total	30.1	31.1	32.5
Steady State:			
Equipment	26.3	34.1	33.5
Structures	32.1	31.8	33.1
Total	30.1	32.6	33.3

Note: Rates are based on author's calculations, assuming a 5 percent real discount rate and a 2 percent inflation rate.

Table 8
"Revenue Neutral" Statutory Tax Rates, Fixed Credits

Basis for Estimate	Alternative Depreciation System	CBO Budget Option
Budget horizon, all depreciation	31.4	33.4
Budget horizon, corporate depreciation	32.1	33.7
Steady state, all depreciation	32.9	34.1
Steady state, corporate deprecation	33.4	34.3

Note: Rates are based on author's calculations, using the same assumptions as in Table 6, except the denominator for calculating the new tax rate is multiplied by 1.34.

Table 9
Effective Tax Rates With Alternative Rate Changes
(Corporate Depreciation, Fixed Credits)

	Current Law (35 Percent Rate)	Alternative Depreciation	CBO Budget Option
No Rate Change			
Equipment	26.3	36.3	34.4
Structures	32.1	33.9	34.0
Total	30.1	34.8	34.1
10-Year Budget Horizon			
Equipment	26.3	33.4	33.1
Structures	32.1	31.1	32.7
Total	30.1	31.9	32.9
Steady State			
Equipment	26.3	34.7	33.7
Structures	32.1	32.4	33.3
Total	30.1	33.2	33.5

Note: Rates are based on author's calculations, assuming a 5 percent real discount rate and a 2 percent inflation rate.

Table 9 uses these statutory rates (assuming, as in Table 7, that only corporate depreciation is used) to estimate effective tax rates. The effective tax rates on new investment rise under either scenario.

IV. OTHER CAPITAL COST RECOVERY TAX EXPENDITURES

Although accelerated depreciation for equipment is the major corporate tax expenditure related to capital cost recovery, there are other corporate tax expenditures that fall into this same category. Estimates in this section are taken from the Joint Committee on Taxation's (2010b) tax expenditure list, supplemented in some cases by their estimates of the costs of expiring provisions (Joint Committee on Taxation, 2010c). The most important, in revenue terms, are the provisions for research and experimentation, followed by credits for low-income housing. There are also some smaller provisions largely relating to energy.

Research and experimentation spending is expensed when incurred and the revenue loss from this provision was estimated at $5.8 billion for fiscal year 2013 (Joint Committee on Taxation, 2010b). A benefit of this size would permit a corporate rate reduction of about half a percentage point. Since research produces benefits that are spread over many years, the proper treatment of these expenditures is to deduct them over time. The effect of expensing is to impose a zero tax on normal returns to such expenditures. Research and development spending also benefits from a research credit, which is a temporary provision but has been extended since its adoption in the early 1980s. This provision costs about the same as research and experimentation expensing if made permanent (Gravelle, 2010). While it would be easy to eliminate the credit, it would be very difficult to determine how the costs should be depreciated. In addition, many economists believe that research should be given tax incentives and subsidies because of its spillover effects on the rest of the economy.

Although not considered a tax expenditure, the case could also be made that many advertising expenses should be capitalized and deducted over time (because they create brand values), but the complications of determining a depreciation rate would also apply in this case.

The next largest provision is the low-income housing credit, which is projected to cost $5.6 billion in fiscal year 2013 (Joint Committee on Taxation, 2010b). There is also a lot of support for retaining this provision which is allowed only if a certain portion of a building is rented with lower rents to low-income clients. This provision is viewed primarily as a benefit for low-income individuals rather than corporations. There are also some smaller credits for the rehabilitation of buildings, amounting to about $0.5 billion.

In addition, there are benefits for renewable and nonconventional energy and conservation ($2.4 billion), subsidies for fossil fuels ($2.1 billion, largely for smaller producers), and some other small items.

While there are some items that could be large enough to reduce the corporate rate slightly, neither of the larger ones (benefits for research and development and the low income housing credit) seem to be likely candidates for reform.

V. CONCLUSION

As with reform of the individual income tax, the idea of base broadening and rate reduction seems more attractive in the abstract than when specific changes are considered. Slowing depreciation as a way of broadening the base has some serious limitations. The general argument made for lowering the corporate tax rate is to encourage capital to flow into the United States. As this analysis has shown, using depreciation to pay for rate reductions would increase the effective tax rate on capital and have the opposite effect. Using a provision based on timing also risks focusing on revenue neutrality in the budget window, which would cause a loss of revenues in the longer run that we can ill afford. In any case, however, the effects are small, mainly because major steps were made to synchronize economic and tax depreciation in 1986, and that system has been eroded only in a limited way by inflation.

One argument for the depreciation revision is to move toward equalization of the effective tax rates on buildings and equipment. This change could also be made, however, by shortening the write-off period for buildings and extending it for equipment, without increasing the overall cost of capital.

If reducing accelerated depreciation is not a good option, very few provisions are left in the standard list of corporate tax expenditures. Gravelle (2010) indicates that eliminating all corporate tax expenditures (assuming that half of foreign tax credits would not change) would allow a corporate rate reduction of only 5.6 percentage points. With slightly under two percentage points attributable to reducing accelerated depreciation (using steady state estimates), a revenue neutral reduction in the corporate tax rate would leave a corporate tax rate that would still be over 31 percent. If other capital cost recovery provisions such as the low income housing credit and research and development subsidies are off the table, a rate closer to 33 percent might be feasible. Moreover, other large provisions such as the production activities deduction (worth 1.2 percentage points), and repealing last in, first out (LIFO) inventory accounting (0.8 percentage points) might be undesirable. Although the production activities deduction was criticized because of its administrative challenges and the distortions it creates across domestic industries, for purposes of encouraging capital flows into the United States it probably is relatively well targeted since it applies more frequently to multinational firms. As for LIFO inventory accounting, many economists would question whether it is a tax benefit since it corrects for inflation on average.

Gravelle (2010) suggests a possible need to look beyond traditional tax expenditures when searching for items for corporate base broadening. One source of revenue gain that could be significant is to enact the provision in The Bipartisan Tax Fairness and Simplification Act of 2010 that would not only repeal deferral of tax on foreign source income (which would generage a revenue gain about the same size as the production activities deduction), but also impose per country limits on the foreign tax credit. These two provisions would allow a corporate tax rate reduction of 4 percentage points and also be consistent with the goal of encouraging capital to flow to the United States. President

Obama's foreign tax proposals, which restrict deductions and credits associated with deferred income, would yield another percentage point of rate reduction. Other options are to raise taxes on capital gains and dividends at the individual level or restrict the use of the noncorporate form, both provisions that would not create disincentives for capital flows. Interest deductions could be restricted as well, although if debt capital is much more mobile than equity capital, this adjustment would discourage capital inflows (as could a rate reduction itself, by lowering the value of deductions for debt).

ACKNOWLEDGEMENTS

REFERENCES

Congressional Budget Office, 2011. *Reducing the Deficit: Spending and Revenue Options.* Congressional Budget Office, Washington, DC.

Gravelle, Jane G., 1994. *The Economic Effects of Taxing Capital Income*. Massachusetts Institute of Technology Press, Cambridge, MA.

Gravelle, Jane G., 2010. "Practical Tax Reform for a More Efficient Income Tax." *Virginia Tax Review* 30 (2), 389–406.

Internal Revenue Service, 2007. *Statistics of Income, Corporate Income Tax Returns for 2007*. Internal Revenue Service, Washington, DC.

Joint Committee on Taxation, 2010a. *Estimated Revenue Effects of S. 3018, The Bipartisan Tax Fairness and Simplification Act of 2010*. Joint Committee on Taxation, Washington, DC.

Joint Committee on Taxation, 2010b. *Estimates of Federal Tax Expenditures for Fiscal Years 2010–2014.* JCS-3-10. Joint Committee on Taxation, Washington, DC.

Joint Committee on Taxation 2010c. *Estimated Budget Effects of the "Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010."* JCX-54-10. Joint Committee on Taxation, Washington, DC.