

THE U.S. DEPARTMENT OF THE TREASURY

**THE CASE FOR TEMPORARY 100 PERCENT EXPENSING:
ENCOURAGING BUSINESS TO EXPAND NOW BY LOWERING THE
COST OF INVESTMENT**

A Report By The U.S. Department of the Treasury's Office of Tax Policy

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**The Case for Temporary 100 Percent Expensing:
Encouraging Business to Expand Now By Lowering the Cost of Investment**

100 percent expensing of qualified capital – also known as 100 percent bonus depreciation – through 2011 would:

- ***Accelerate \$150 billion in tax cuts to 2 million businesses:*** 100 percent expensing will accelerate \$150 billion in tax cuts to 2 million businesses – providing \$200 billion in relief over the next two years when combined with small business expensing and bonus depreciation provisions the President signed into law last month.
- ***Lower the average cost of capital for business investment by more than 75 percent:*** Through temporary 100 percent expensing, Treasury estimates that businesses' average cost of capital on new investments will fall from 7.18 percent to 1.68 percent – providing an incentive to pursue a broader range of investments through the end of 2011
- ***Produce about \$50 billion in new investment:*** Studies of similar tax cuts in the past have found they encouraged businesses to increase targeted investments. Based on the results of one such study, Treasury estimates 100 percent expensing could support \$50 billion in new investment, while other outside estimates have projected an even larger impact.

Since Day One, The President Has Enacted Targeted Tax Cuts To Encourage Private-Sector Investment:

Since taking office, the President has signed into law a number of tax cuts that provide incentives for private sector investment – including 16 tax cuts targeted at small businesses. For example:

- **The Recovery Act and Expansion of Net Operating Loss (NOL) Carryback Advanced \$109 Billion in Business Tax Cuts in 2009 and 2010:** The American Recovery and Reinvestment Act (Recovery Act) included major tax cuts for businesses, including 50 percent bonus depreciation, which allowed for an immediate deduction of half the cost of certain investments. Along with the additional expansion of the NOL carryback period that the President signed last November, these actions advanced more than \$109 billion of business tax cuts in 2009 and 2010.
- **The Small Business Jobs Act Accelerated \$55 Billion in Tax Relief Through the Next Year:** On September 27, President Obama signed the Small Business Jobs Act, which extends the Recovery Act provision for 50 percent bonus depreciation through 2010 and increases the amount of investments that small businesses can immediately expense through 2011. In total, the bill accelerates \$55 billion of tax relief through next year.

100 Percent Expensing Is the Next Step to Get Business Investment Off the Sidelines: The President's proposal allows businesses to deduct immediately the full cost of qualified capital investments made between September 8, 2010 – when the proposal was announced – and the end of 2011. Full expensing will:

- **Accelerate An Additional \$150 Billion in Tax Relief Over the Next Two Years:** 100 percent expensing would put an additional \$150 billion in tax relief in the hands of businesses over the next two years – for a total of \$200 billion in relief when combined with expensing provisions in the Small Business Jobs Act.
- **Provides Tax Cuts to 2 Million Businesses:** The President's proposal is expected to provide tax cuts to 2 million businesses, small and large.
- **Recover Much of the Cost Over Time:** The President's proposal allows businesses to receive deductions up front that they would otherwise receive over several years – encouraging investment now, while also allowing much of the reduced revenues to be recouped in future years. In total, the net cost of the proposal is expected to be less than \$30 billion over ten years.

100 Percent Expensing Lowers Businesses' Cost of Capital by an Average of Over 75 Percent: Implementing temporary 100 percent expensing of capital investments will:

- **Lower the Average Cost of Capital for Business Investment:** Treasury analysis finds that temporary 100 percent expensing reduces the average cost of capital across all business investment from 7.18 percent to 1.68 percent. This reflects a reduction in the rate of return a business must expect – before taxes – for it to choose to invest, thus expanding the range of investments it would be willing to make by the end of 2011.

Example of How 100 Percent Expensing Provides an Incentive to Invest: Consider a business that makes \$1 million of additional investments in new equipment that typically have a 7-year recovery period. Under current law, the business would only be able to deduct a fraction of its investment each year – about \$143,000 in the first year, for example. At a tax rate of 35 percent, that would reduce the business' taxes in the first year by \$50,000. By contrast, under immediate 100 percent expensing, the business could deduct all \$1 million in the first year – reducing the business' taxes by \$350,000.

Not only does this provide the business with more cash on hand this year – money that can be used to expand and hire new workers – but because businesses value cash today more than cash in the future, immediate expensing also makes the investment more attractive. For example, using a “discount” rate of 6 percent, the value of deducting \$1 million in the first year might be worth the full \$350,000 for the business – but the value of deducting it over the entire 7-year recovery period would only be about \$303,000, reflecting the added incentive the business receives with immediate expensing. The incentive only grows more powerful as the recovery period grows longer, and for long-lived investments that are made based on expectations of demand over a number of years, tax incentives to invest now can have particularly strong effects on investment timing.

100 Percent Expensing Builds Off the Demonstrated Effectiveness of Past Expensing Programs: Evidence from past, less substantial changes in bonus depreciation shows that expensing can have “a powerful effect on the composition of investment” while in effect. For example:

- **Previous Research on More Modest Bonus Depreciation Policies Found A Significant Impact on Investment.** One recent study found that the 2002 and 2003 bonus depreciation policies – which provided a smaller incentive for investment than the President's proposal – had “noticeable effects on the economy,” with “capital that benefited substantially from the policy” seeing “sharp increases in investment.” An estimate applying the results of that study to today's economy and taking account of the President's more generous proposal suggests that 100 percent expensing would increase investment by roughly \$50 billion next year, while other outside estimates have projected an even larger impact.
- **100 Percent Expensing Increases the Impact on Investment and Growth Compared to Past Provisions:** By providing for 100 percent expensing through the end of 2011, the President's proposal expands the incentives for new investment compared to partial bonus depreciation, increasing its likely effectiveness compared to past proposals.
- **Expensing Disproportionately Helps Industries Especially Hard-Hit by the Recession:** The President's proposal would spur investments at a time when spending on equipment and software has not yet recovered compared to pre-recession levels.

Introduction

President Obama has proposed to allow businesses and investors to deduct immediately the full cost of most investments in new depreciable tangible property, other than buildings, for purposes of computing taxable income. This policy – known as 100 percent expensing or 100 percent bonus depreciation – would apply to productive capital investments by businesses large and small in items ranging from new delivery trucks or factory machinery. Normally, the costs of such productive assets are capitalized (i.e., they are not deductible immediately as “ordinary business expenses”) because they provide benefits for years into the future. The capitalized costs generally are recovered through regular depreciation deductions taken over a specified number of years.

Depreciation deductions are intended to assist in the proper measurement of taxable income by reflecting predictable reductions in the value of installed income-producing property that occur due to normal wear-and-tear and obsolescence. A policy of allowing an immediate deduction (or “expensing”) of investment costs has an alternative rationale, which is to lower the effective tax rate on income derived from business investments, and thereby encourage additional demand for capital goods. Furthermore, a policy of allowing expensing only on a temporary basis is directed specifically at investments that might be made sooner in order to enhance aggregate demand for goods and services during a period of slower growth. By providing an immediate window of opportunity in which the costs of investing in qualified property are lower, a temporary expensing policy encourages firms to shift investment that might otherwise be put off to later years into the temporary, lower cost window. By shifting investment demand in this manner, it is intended that aggregate economic activity will increase during the current slower-growth period, and thereby speed and enhance economic recovery and job growth.

Effectiveness of 100 Percent Expensing in the Current Environment

Enactment of temporary 100 percent expensing would likely have a noticeable effect on the economy in the short term. There is significant economic slack in equipment-producing industries, as investment fell below replacement levels during the recession and businesses have remained cautious about investing during the current recovery.

Economists have studied the effects of previous expensing proposals from national accounts data and found effects that range from near zero to noticeably positive. One recent study of the less-generous bonus depreciation policies in 2002 and 2003, suggests that they had “noticeable effects on the economy,” with “capital that benefited substantially from the policy” seeing “sharp increases in investment.” The study also estimated that, for the economy as a whole, the policies may have increased GDP by \$10 to \$20 billion and been responsible for the creation of 100,000 to 200,000 jobs. Extrapolating from that study to today’s economy and taking account of the President’s more generous proposal suggests that 100 percent expensing

would increase investment by roughly \$50 billion next year.¹ Other outside estimates have suggested an even larger impact.²

These empirical findings are consistent with theoretical research, which suggests that businesses will have strong incentives to make investments sooner in response to a temporary expensing provision. The current proposal for 100 percent bonus depreciation should have a larger impact on the economy than past enactments of bonus depreciation, which allowed for only 30 or 50 percent immediate expensing.

Similarly, the Congressional Budget Office (CBO) notes that a temporary expensing policy would lead some businesses to accelerate their purchases of capital goods and that the policy would have its biggest impact just before it expired, as firms would accelerate equipment purchases from subsequent years to take advantage of the credit. The CBO estimates that allowing full or even partial expensing would raise output cumulatively between 2010 and 2015 by \$0.20 to \$1.00 per dollar of total budgetary cost.³

The proposal for 100 percent bonus depreciation comes at an appropriate moment in the business cycle, when firms may be cautious about expanding due to concerns about future demand. Business spending on equipment and software fell almost 20 percent during the recession (from the end of 2007 through the middle of 2009). At this rate, business investment was not even high enough to replace depreciating capital; the net stock of business equipment and software actually fell in 2009, for the first time since World War II. Despite increasing since the middle of 2009, equipment and software spending has not fully recovered (and is still more than 7 percent below 2007Q4).

Providing incentives to invest in productive assets would help to maintain the recovery and would likely help the manufacturing sector, which is currently below normal levels of capacity utilization. Capacity utilization in durable goods manufacturing averaged 70 percent in 2010Q3, well below the more than 76 percent average during the past 20 years.

¹ Temporary Investment Tax Incentives: Theory with Evidence from Bonus Depreciation. Christopher L. House and Matthew D. Shapiro *American Economic Review* 2008, 98:3, 737–768. See also their National Bureau of Economic Research Working Paper No. 12514, p. 32, for estimates of the effect on investment. Professors House and Shapiro estimate that a 50 percent bonus depreciation plan would increase investment by 1.8 percent in the first quarter and continue to rise thereafter for the rest of the year. If we assume 1.8 percent higher investment and use today’s investment levels, and double the bonus depreciation amount, we estimate that investment would rise by around \$50 billion.

² See, for example, Kevin A. Hassett and Glenn Hubbard, “Obama Discovers Incentives,” *Wall Street Journal*, Sept. 10, 2010.

³ Statement of Douglas W. Elmendorf, Director, Congressional Budget Office, “Policies for Increasing Economic Growth and Employment in the Short Term”, prepared for the Joint Economic Committee U.S. Congress February 23, 2010.

Temporary versus Permanent Expensing

The economic effects of a temporary expensing proposal may differ from those of a permanent expensing provision. Whether temporary or permanent, as described below, the ability to expense depreciable capital implies that the effective tax rate on the normal return earned from a qualified investment will be zero, or near zero. Income earned from short-lived property such as high-tech manufacturing equipment, is effectively taxed at the same rate as income earned from long-lived property, like an electric utility distribution plant; it is zero, or near zero, in both cases. Under a temporary expensing policy, however, assets with different rates of depreciation may be treated differently because of incentives created by moving from one tax regime to the other. A permanent expensing policy provides no incentive to shift investment over time because businesses receive the same potential benefits from one year to the next. A temporary provision, however, creates an incentive to shift investment into the window of opportunity, and, moreover, this incentive is greater for long-lived property.

If a future expensing policy is anticipated prior to its effective date, then there is an incentive to delay investment until the more favorable tax regime becomes effective (which is why the President's proposal is intended to be effective from the announcement date). If a temporary expensing policy is ending, then an incentive exists to shift investment from the future into the tax benefit window. These timing incentives are greatest for long-lived property because the value of a long-lived asset (not including any tax benefits from immediate expensing) is determined primarily by anticipated returns to capital that are long-term and therefore outside of the policy window, so the investment's current value is little affected by short-run considerations and events. For example, an advance by one year in the timing of a 20-year asset does not materially affect the value of the 20 years of cash flows that are expected by the business; the relatively small perturbation in the stock of capital over a short window of opportunity will have only a small effect on future cash flows. On the other hand, the value of a three-year asset could be materially impacted by shifting investment through time, since a larger proportion of its future cash flow is affected by changes in the current stock of capital.⁴ This result is dependent on the length of the temporary tax benefit window, since the longer an expensing policy is in place, the greater will be the impact of that policy on the stock of capital and, thus, on the value of new investments.

The incentive effect to shift investment through time has also been modeled as a temporary reduction in the cost of capital at the end of the window of opportunity (and an increase in the cost of capital in the period before the start of the window of opportunity, if the

⁴ In economic parlance, the temporary investment demand for the long-lived asset is highly elastic, and the amount of new investment shifted into the window of opportunity is determined mainly by the elasticity of supply for the long-lived capital good. The elasticity of the demand curve for the short-lived asset is far less, and so a given change in the tax cost of investing (shifting that demand curve) will have a smaller quantitative effect on the amount of equilibrium investment.

change in policy is anticipated beforehand).⁵ Cost of capital, net of depreciation, is defined as the minimum real pre-tax anticipated rate of return required by owners of capital in order to undertake an investment of given risk. Table 1 shows estimates of the cost of capital for a qualifying equipment aggregate in the final year of a period of temporary bonus depreciation, where it is believed the expensing policy will end at the end of the year. Table 1 shows these results for 30 percent, 50 percent, and 100 percent bonus depreciation regimes. The “Temporary” columns in Table 1 indicate the strong incentive effect of 100 percent bonus depreciation to shift investment into the tax benefit period. The temporary cost of corporate capital actually becomes negative for qualified investments, and the cost of capital for all corporate capital falls to less than one percent. This larger impact of the temporary expensing provisions reflects the fact that purchases of productive assets within the window are far more valuable than similar purchases of capital assets made just outside the window (and the after-tax rate of return on similar assets must be similar to prevent arbitrage). Note that the effect for long-lived corporate structures is greater than that for short-lived corporate equipment, consistent with the discussion above. The average cost of capital for all business capital is reduced to only 1.7 percent under a temporary proposal for 100 percent bonus depreciation compared to over 7 percent without bonus depreciation. So, for example, an average business that expects it could receive a 6.5 percent rate of return on an investment might choose to invest before the end of 2011 under a 100 percent expensing regime, even though it would likely not invest in the absence of expensing.

How Expensing Lowers Effective Tax Rates and the Cost of Capital

Allowing 100 percent bonus depreciation is economically equivalent to full expensing of depreciable asset purchases, because it allows a complete write-off of the cost of eligible property in the year in which the property is placed in service.⁶ Expensing a capital expenditure means the government effectively finances a portion of the investment’s cost (in the form of a reduction in current taxes). For example, consider a company operating in flow-through tax form (e.g., a partnership or S corporation), the profits of which are taxed at a 25 percent tax rate. Pursuant to 100 percent bonus depreciation, the company effectively shares 25 percent of any qualifying investment’s cost with the Federal government. The Federal government also receives, through income taxes, 25 percent of cash receipts (net of non-depreciation expenses) generated by the investment, so, in effect, there is no tax imposed on the income representing the taxpayer’s investment “share” of the return from a marginal investment that a business is otherwise indifferent about making (unless tax rates change over time). Thus, for non-corporate businesses (which incur only a single level of tax), the expected income from an on-the-margin expensed investment in depreciable property is taxed at an effective rate of zero, and the

⁶ There are some important differences between the President’s 100 percent bonus depreciation proposal and the current small business expensing provision. See Appendix 1 for a comparison of 100 percent bonus depreciation and small business expensing provisions.

minimum pre-tax rate of return required from such an investment is equal to the after-tax rate of return demanded by the firm to induce it to invest in tangible property. In other words, with full expensing, there is no additional tax burden imposed on a firm's marginal investment activity in qualified assets. However, income tax will still be paid on rates of return greater than the required rate of return (so-called above normal returns). With a zero effective tax rate, the tax system does not discriminate between different types of qualified depreciable property; expensing thus is "neutral" as regards assets with differing rates of depreciation, even if the correct values of those rates of depreciation are unknown.

The above analysis applies to any so-called "pass through" business, which does not pay an entity-level tax (e.g., the corporate income tax). For a corporation, the analysis is similar, although the multiple levels of taxation on corporate income complicate the matter. In the case of corporations, taxes on dividends and capital gains may raise the effective tax rate above zero, but the advantages of debt-financing under a corporate tax (if the combined tax rate on corporate earnings exceeds the shareholder's tax rate on interest) may actually reduce the overall effective tax rate under expensing below zero (depending, in part, on the degree to which the investment is financed using debt).

Impact on Effective Tax Rates

Table 1A shows estimates of the marginal effective tax rate for various types of qualifying property under a single year temporary bonus depreciation policy, where it is believed the expensing policy will end at the end of the year. Table 1A shows these results for 30 percent, 50 percent, and 100 percent bonus depreciation regimes. The estimates indicate the strong incentive effect under 100 percent bonus depreciation to shift investment into the tax benefit period. The temporary marginal effective tax rate for qualified corporate investments is negative, and largely so, and the marginal effective tax rate for all corporate capital (including both qualifying property and property not qualifying for bonus depreciation) is reduced to less than three percent. The marginal effective tax rate for all business capital, in both corporate and noncorporate form, is reduced to only 4 percent under a temporary proposal for 100 percent bonus depreciation – 86 percent less than the tax rate with no depreciation.⁷

Impact on the Cost of Capital

As stated above, the cost of capital, net of depreciation, is the minimum real pre-tax anticipated rate of return required by owners of capital in order to undertake an investment of given risk: the lower the cost of capital, the greater the probability that a given investment will be seen as being profitable and therefore will be made. Figure 1 shows graphically the impact on the corporate cost of capital for a number of assets with different depreciation recovery periods

⁷ See Auerbach and Hassett (1992). Such estimates assume that taxpayers truly expect the program to end, and do not expect it to be revived any time soon. To the extent this is not a widely shared perception, the relevant marginal effective tax rates will be significantly higher.

under current law, assuming a regime of 30 percent, 50 percent, and 100 percent bonus depreciation, as estimated by the Treasury's Office of Tax Analysis. The figure indicates the percent difference in the cost of capital between current law without bonus depreciation and the bonus depreciation alternative. The general upward slopes of the curves indicate that short-lived assets are generally more heavily taxed under current law than are long-lived assets.

Table 1 reports the cost of capital for aggregate types of assets under current law without bonus depreciation and under the three separate bonus depreciation regimes. Under a temporary 100 percent bonus depreciation tax regime, the cost of corporate capital varies among qualified assets, but would be at least 150 percent lower than under current law without bonus depreciation. Because other corporate assets are not qualified, however, the impact on corporate investments overall is less, albeit still quite substantial – about an 87 percent drop in the required pre-tax return. The cost of capital for investments by non-corporate firms would also fall substantially from current law (a decrease of 59 percent). For all business investment, as estimated here, temporary full expensing would result in a cost of capital in 2011 that is about 77 percent less than without bonus depreciation.

Previous Experience with Bonus Depreciation

Bonus depreciation has been used effectively to spur economic growth in the past. In particular, during periods where economic uncertainty has negatively affected investment activity, even lesser amounts of accelerated depreciation have had a measurable effect. For example, when businesses were afraid to spend or invest after the terrorist attacks of September 11, 2001, Congress enacted a provision that allowed an additional first-year depreciation deduction for “qualified property” equal to 30 percent of a newly acquired asset's cost.⁸ Regular depreciation deductions were then computed on the remaining 70 percent of the capitalized cost of qualified property.⁹ In 2003, the bonus depreciation deduction was increased to 50 percent for qualified property acquired after May 5, 2003, and before January 1, 2005. While this general

⁸ Specifically, qualified property included (and still includes) property that has a recovery period for tax depreciation purposes of 20 years or less, purchased computer software, water utility property, and qualified leasehold improvements. For the property to qualify for bonus depreciation, the original use of the property must begin with the taxpayer and the property must be acquired and placed in service within certain time periods (which have changed over the years). Qualified property does not include property predominantly used outside the U.S. Certain assets having relatively long production periods were given an additional year to be placed in service, but only the portion of basis attributable to the period before January 1, 2005, qualified for bonus depreciation. Qualified property to be used in the designated New York Liberty Zone was given a December 31, 2006, placed-in-service deadline. The New York Liberty Zone provision also allowed bonus depreciation for the rehabilitation or replacement of buildings that had been destroyed or condemned as a result of the September 11, 2001, terrorist attack. An additional three years was allowed for completion of such investment.

⁹ The degree of expensing under “30-percent” bonus depreciation is actually greater than 30 percent. For example, property normally depreciated using a seven-year recovery period is allowed a first-year allowance equal to 1/7, or 14.286 percent, of a property's initial cost. Since this allowance is applied to the asset's adjusted basis after accounting for the 30-percent “bonus” allowance, the full first-year write-off for seven-year property is 40 percent (30 percent, plus $(1/7) \times (1-30 \text{ percent})$ of the property's cost. Similarly “50-percent” bonus depreciation yields first-year write-offs that typically are greater than 50 percent.

provision was allowed to terminate at the end of 2004, 50 percent bonus depreciation was extended to qualified property placed in service in the Gulf Opportunity Zone (GO Zone) in the aftermath of Hurricanes Katrina, Rita, and Wilma.¹⁰ In response to the recession that started in 2007, Congress reinstated 50 percent bonus depreciation for qualified property acquired and placed in service in 2008, and the American Recovery and Reinvestment Tax Act of 2009 extended its availability to qualified property placed in service through 2009. More recently, the Small Business Jobs Act, which the President signed into law last month, extended 50 percent bonus depreciation through 2010. In September, the President proposed to increase the rate of bonus depreciation to 100 percent for property acquired after September 7, 2010, and to extend the placed-in-service deadline to December 31, 2011.

Preliminary data from the 50 percent bonus depreciation in effect in 2008 demonstrate that in one year alone, businesses took almost \$204 billion in deductions.¹¹ A study of large corporations (those claiming depreciation deductions in excess of \$100,000) under the 2001-2004 period of bonus depreciation at 30 percent and 50 percent found that firms electing to use bonus depreciation were much more likely to have positive net income; indeed, the average net income of firms not utilizing any bonus depreciation was negative in 2002 and 2003 and only slightly positive in 2004. The study also reported that net operating loss deductions and tax credits reduced the tax liability of firms not using bonus depreciation by about 60 percent, compared to a 30 percent reduction for firms using bonus depreciation, so that businesses not using bonus depreciation generally had other means by which their tax liabilities could be reduced or eliminated.

Among businesses claiming some bonus depreciation, bonus deductions were elected for between 71 percent (in 2002) and 77 percent (in 2004) of eligible investment.¹² Reasons why these “take up rates” were not closer to 100 percent are not completely known. There may also have been issues related to how the eligible investment data were estimated.¹³ Firms may have been reluctant to claim bonus depreciation because it provided limited benefits for financial

¹⁰ The Gulf Opportunity Zone bonus depreciation provision also applied to investments in buildings placed in service on or before December 31, 2008. In 2008, similar rules were extended to any federally declared disaster occurring before January 1, 2010, where taxpayers had approximately three years to acquire qualifying property (four years in the case of buildings).

¹¹ See Table 2, attached, for corporate deductions of \$132 billion; pass-through business entities took an additional \$72 billion for a total of \$204 billion.

¹² Knittel (2007, Table 5). These “take-up rates” for bonus-using firms imply that take-up rates (in terms of dollars of eligible investment) were between 54 percent (in 2002) and 61 percent (in 2004) of all eligible investment, taking into account firms that elected not to participate at all in bonus depreciation. Preliminary corporate tax data indicate even lower overall take-up rates for 2008.

¹³ For example, to estimate eligible investment, it was assumed that 5 percent of all investment was ineligible used property. This percentage may have been an underestimate.

reporting purposes¹⁴ or because State income tax laws were not conformed to this aspect of Federal income tax law.

The 100 percent bonus depreciation proposal should provide a large enough incentive to encourage higher take-up and overcome many of these obstacles that kept firms from taking full advantage of the earlier incentives, moving take-up rates closer to 100 percent.

Use of Bonus Depreciation by Industry

The greatest bonus depreciation deductions have occurred in those industries that have the largest investments in depreciable property.¹⁵ In 2008, manufacturers claimed 22 percent of all bonus depreciation deductions, while the information industry and utilities claimed 15 percent and 11 percent of bonus depreciation deductions, respectively. Service industries (other than finance, real estate, and leasing) claimed more than 14 percent of such deductions. Percentages reflecting each industry's ratio of bonus depreciation deductions to gross income, before deductions, are reported in the final column of Table 2. By this measure, the most intensive claimants of bonus depreciation allowances include rental and leasing firms, utilities, and mining and oil and gas extraction companies, followed by those in the wholesale trade and information industries.

Conclusion

By substantially lowering the cost of capital for depreciable investments, the President's proposal for temporary 100 percent bonus depreciation is designed to shift investment into 2010 and 2011 that might otherwise be put off to later years. The increased investment activity is intended to spur the growth of incomes and jobs for Americans. To maximize the effectiveness of the incentive to contribute to the recovery, it has an expiration date at the end of 2011.

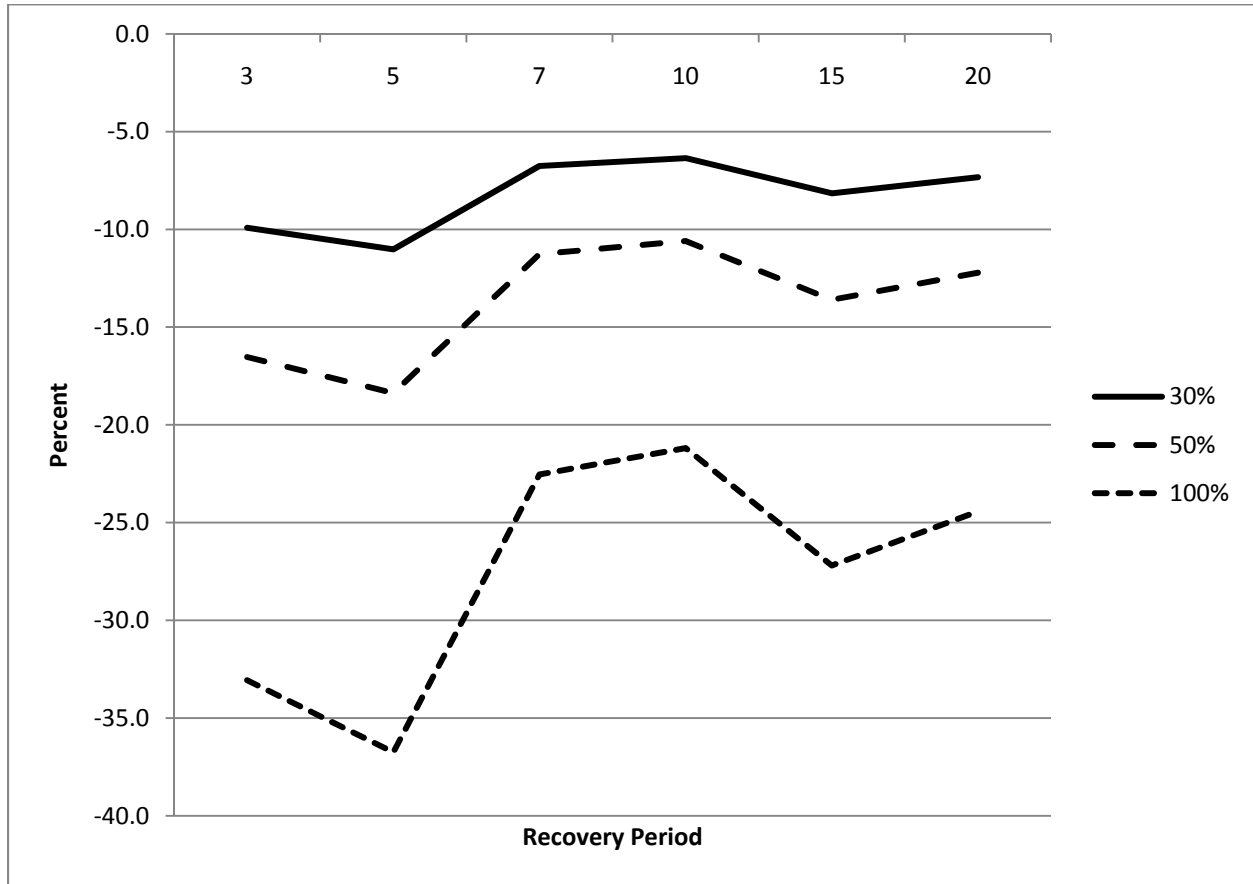
The weight of the empirical evidence is that temporary partial expensing under 30 percent and 50 percent bonus depreciation in the past has produced a positive investment response. Temporary 100 percent bonus depreciation will have a much larger impact on companies' costs of capital, as shown in Table 1, and should therefore produce an even greater investment response in 2011, especially for longer-lived assets.

¹⁴ Hulse and Livingstone (2010, 11).

¹⁵ See Table 2 of this Report.

Figure 1

Percent Difference in the Corporate Cost of Capital under Bonus Depreciation
Relative to Without Bonus Depreciation
By Current Law MACRS Recovery Period



Assets with a 3-year recovery period include computer software and are depreciated using the straight-line method under current law without bonus depreciation. All other assets are depreciated using a declining-balance method: assets with 5-year, 7-year, and 10-year recovery periods are depreciated using the 200 percent declining balance method; and assets with 15-year, and 20-year recovery periods are depreciated using the 150 percent declining balance method.

The user cost of capital is calculated assuming that firms have an additional depreciation deduction of 30 percent, 50 percent, or 100 percent of the cost of new capital goods in the first year the asset is placed in service. Under 30 percent and 50 percent expensing, the remaining 70 percent or 50 percent of the cost, respectively, is recovered as under current law.

The user cost of capital is calculated assuming that firms and investors expect no change in tax laws.

Table 1
Cost of Capital Under Permanent and Temporary Bonus Depreciation¹

| Sector and Asset Type | Without Bonus Depreciation | With Bonus Depreciation | | | | | |
|---|----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------------|--------------------------|
| | | 30 Percent | | 50 Percent | | 100 Percent | |
| | | Permanent | Temporary ² | Permanent | Temporary ² | Permanent | Temporary ² |
| Corporate Business <i>Percent Difference³</i> | 7.37% | 7.16% -2.9% | 5.43% -26.3% | 7.02% -4.8% | 4.16% -43.6% | 6.66% -9.6% | 0.98% -86.7% |
| Qualified Bonus Assets | | | | | | | |
| Equipment <i>Percent Difference³</i> | 6.82% | 6.31% -7.4% | 3.50% -48.6% | 5.97% -12.4% | 1.30% -81.0% | 5.13% -24.7% | -4.23% -162.0% |
| Structures <i>Percent Difference³</i> | 6.49% | 6.08% -6.3% | 0.093% -85.7 | 5.81% -10.5 | -2.79% -142.9% | 5.13% -21.0% | -12.06 -285.8% |
| Noncorporate Business <i>Percent Difference³</i> | 6.87% | 6.80% -0.9% | 4.15% -39.6% | 6.76% -1.5% | 3.78% -44.9% | 6.66% -3.0% | 2.81% -59.1% |
| Total Business <i>Percent Difference³</i> | 7.18% | 7.02% -2.1% | 4.93% -31.2% | 6.92% -3.6% | 4.01% -44.1% | 6.66% -7.2% | 1.68% -76.5% |

Source: Office of Tax Analysis

¹ Cost of capital is measured net of depreciation.

² Cost of capital for the final year of temporary bonus depreciation, prior to transitioning back to a regime without bonus depreciation. See Auerbach and Hassett (1992).

³ Percent difference in the cost of capital under respective bonus depreciation schedule (i.e., 30-, 50-, or 100-percent) relative to the cost of capital without bonus depreciation.

Table 1A
Effective Marginal Tax Rates Under Temporary Bonus Depreciation¹

| Sector and Asset Type | Without Bonus Depreciation | With Bonus Depreciation | | |
|---------------------------------------|----------------------------|-------------------------|----------------|-----------------|
| | | 30 Percent | 50 Percent | 100 Percent |
| Corporate Business | 31.02% | 24.29% | 19.12% | 2.46% |
| Qualified Bonus Assets | 23.92% | 5.38% | -13.00% | -120.5% |
| Equipment | 25.41% | 6.45% | -12.63% | -129.88% |
| Structures | 21.66% | 3.76% | -13.55% | -106.28% |
| Noncorporate Business | 25.69% | 13.35% | 11.38% | 5.61% |
| Total Business | 29.05% | 20.59% | 16.49% | 3.96% |
| <i>Percent Difference²</i> | | <i>-29.1%</i> | <i>-43.2%</i> | <i>-86.4%</i> |

Source: Office of Tax Analysis

¹ Effective marginal tax rates are calculated using a weighted average of current- and future-period user costs of capital under temporary bonus depreciation. Temporary bonus depreciation is assumed to last for one year. The effective tax rates under temporary bonus depreciation are lower than under permanent expensing because firms and investors must account for the anticipated reversion of the present value of depreciation back to its previous level. Current- and future-period user costs are weighted using a set of empirical weights that depend on the costs of adjustment. Auerbach and Hassett (1992) estimate the weight on future user costs for total equipment spending. A higher weight (and hence higher adjustment costs) is assumed for structures. See Auerbach and Hassett (1992) and Cohen, Hansen, and Hassett (2002).

² Percent difference in the effective marginal tax rate under the respective bonus depreciation schedule (i.e., 30-, 50-, or 100-percent) relative to the effective marginal tax rate without bonus depreciation.

Table 2
Distribution of 50-Percent Bonus Depreciation Deductions for Corporations by Industry – Preliminary 2008 Data

| | Bonus Depreciation | | Gross Income | | Ratio |
|---|---------------------------|----------------|-----------------------|----------------|-----------------------------|
| | Deductions (\$billion) | Share of Total | Amount (\$billion) | Share of Total | Deductions/ Gross Income |
| Agriculture, Forestry, Fishing and Hunting | 0.5 | 0.4% | 37.0 | 0.4% | 1.4% |
| Mining, Quarrying, and Oil and Gas Extraction | 8.5 | 6.4% | 235.7 | 2.4% | 3.6% |
| Utilities | 14.8 | 11.1% | 318.5 | 3.2% | 4.6% |
| Construction | 1.7 | 1.3% | 134.3 | 1.4% | 1.2% |
| Manufacturing | 29.1 | 22.0% | 2,369.9 | 24.1% | 1.2% |
| Wholesale Trade | 12.8 | 9.7% | 525.9 | 5.3% | 2.4% |
| Retail Trade | 11.0 | 8.3% | 697.2 | 7.1% | 1.6% |
| Transportation and Warehousing | 6.5 | 4.9% | 421.1 | 4.3% | 1.5% |
| Information | 20.2 | 15.3% | 883.6 | 9.0% | 2.3% |
| Finance and Insurance | 5.4 | 4.1% | 1,733.6 | 17.6% | 0.3% |
| Real Estate and Rental and Leasing | 7.6 | 5.7% | 157.5 | 1.6% | 4.8% |
| Services | 14.1 | 10.7% | 2,316.1 | 23.6% | 0.6% |
| Professional, Scientific, and Technical Services | 3.0 | 2.3% | 453.3 | 4.6% | 0.7% |
| Management of Companies and Enterprises | 4.4 | 3.4% | 1,001.3 | 10.2% | 0.4% |
| Administrative and Support and Waste Management and Remediation Services | 1.3 | 1.0% | 166.1 | 1.7% | 0.8% |
| Educational Services | 0.3 | 0.2% | 22.8 | 0.2% | 1.2% |
| Health Care and Social Assistance | 1.9 | 1.4% | 374.6 | 3.8% | 0.5% |
| Arts, Entertainment, and Recreation | 0.7 | 0.5% | 41.4 | 0.4% | 1.6% |
| Accommodation and Food Services | 2.2 | 1.7% | 201.1 | 2.0% | 1.1% |
| Other Services | 0.4 | 0.3% | 55.6 | 0.6% | 0.7% |
| Total | 131.9 | 100.0% | 9,830.6 | 100.0% | 1.3% |

Source: Office of Tax Analysis

Appendix 1: Comparison of 100 Percent Bonus Depreciation to Small Business Expensing

Allowing 100 percent bonus depreciation is economically equivalent to full expensing of depreciable asset purchases because it allows a complete write-off of the cost of qualified property in the year in which the property is placed in service. Nevertheless, there are several differences between the current 100 bonus depreciation proposal and the small business expensing provision that has been available for eligible investment since 1958.¹⁶

First, the small business expensing provision contains several limitations on its use that the bonus depreciation provision does not. As enacted in the Small Business Jobs Act of 2010 (P.L. 111-240), enacted September 27, 2010, the small business expensing provision (applicable through 2011) begins to phase out for taxpayers having more than \$2 million in annual eligible investment, and may be taken only up to \$500,000 of eligible investment. The expensing deduction is limited further by the amount of income derived from the active conduct of a trade or business (i.e., the deduction cannot generate a net operating loss), although any unused expensing allowance thus limited may be carried forward indefinitely. Bonus depreciation, on the other hand, is not limited by the size of a taxpayer's investments in qualified property. It also applies to all of the taxpayer's qualified property, not only \$500,000 of such. Furthermore, bonus depreciation deductions are not limited by taxable income. Instead, the bonus depreciation deduction can create or increase the size of a taxpayer's net operating loss, which generally can be carried back for up to two years, and carried forward for up to twenty years. Thus, unlike small business expensing, the bonus depreciation deduction may immediately benefit a taxpayer with a current net operating loss, provided the taxpayer has sufficient positive taxable income in the two prior taxable years.

Second, although the definition of eligible investment under small business expensing is similar to the definition of qualified property under the bonus depreciation provisions, differences do exist. The small business expensing provision enacted by the Small Business Jobs Act of 2010 allows expensing for certain restaurant buildings and for certain improvements to retail properties that are not qualified investments under bonus depreciation. However, small business expensing may not extend to certain real property (other than buildings) that qualifies under the bonus depreciation rules. Bonus depreciation, but not small business expensing, may apply to depreciable property used for the production of income, but not used in a trade or business. Also, bonus depreciation applies only to new property, while small businesses may expense newly purchased but previously used assets as well.

Other differences between these provisions exist. For instance, small business expensing deductions are exempt from uniform capitalization requirements that generally apply to inventory-using and other asset-producing industries, while bonus depreciation allowances can

¹⁶ Under section 179 of the Internal Revenue Code, eligible investment (or "Section 179 property") generally includes tangible depreciable property and certain purchased computer software. Section 179 property must be acquired by purchase for use in the active conduct of a trade or business.

be required to be capitalized into inventory costs or the costs of other assets produced by a taxpayer. The two provisions also differ in their treatment of automobiles and light trucks, with more generous rules for the amounts that can be expensed under bonus depreciation.¹⁷ Election and recapture rules also differ between the two provisions.

¹⁷ Depreciation allowances and the small business expensing deduction for automobiles and light trucks are subject to specified annual dollar limits. Under 50-percent bonus depreciation, however, the first-year limit is raised by \$8,000 – a benefit not extended to small business expensing. The small business expensing provision also limits the expensing of large sport utility vehicles that are not otherwise subject to the annual deduction limits to \$25,000 per vehicle. Bonus depreciation does not contain an equivalent limitation for sport utility vehicles.

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