The Effects of Temporary Partial Expensing on Investment Incentives in the United States

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INTRODUCTION

On March 9th, President Bush signed the Job Creation and Worker Assistance Act of 2002. The Act included a temporary increase in depreciation allowances for business spending on equipment and software (E&S) in the form of 30 percent partial expensing. In this paper we explore the impact of the Act on the marginal cost of equipment investment and find that it increases the incentive to invest in equipment significantly. We also investigate whether the temporary nature of the Act increases or decreases the stimulus associated with the tax reduction. We find that the Act provided more immediate stimulus than a permanent tax cut would have for base case parameters, but that this conclusion is not theoretically robust.

SUMMARY OF NEW TAX LAW

Among the bill's key components are temporary tax cuts for new business investment, a temporary relaxation of carry back and carry–forward rules for the tax treatment of operating losses, and extra unemployment insurance benefits.[1]

The changes in business taxes in the Act generally apply to two groups of taxpayers: those who acquired new depreciable property (including vehicles used more than 50 percent for business) after September 10, 2001, and those who have (or are carrying over) a net operating loss for a tax year ending in 2001 or 2002.

As with pre–existing law, the bill allows depreciation to be calculated using straight–line or declining balance methods. The Act also permits applying the 200–percent and 150–percent declining balance methods, with a half–year convention in the first year, switching to the straight–line method for the taxable year in which the depreciation deduction would be maximized.

The big bonus of the Act is that it allows 30 percent of the adjusted basis of qualified equipment investment to be written off in the first year, with the remaining 70 percent written

[1] For a complete description of the Act's provisions, see www.house.gov/jct/pubs.html.

off as under pre–existing law.[2] This additional first–year deduction is allowed for both regular tax and alternative minimum tax purposes. The investments need to have been acquired between September 10, 2001 and September 11, 2004, and placed into service before January 2005. (An extension of the placed in service date is provided for selected property with a recovery period of ten years or longer and certain transportation properties).[3] Other changes include an increase in the annual depreciation deductions with respect to passenger automobiles by $4,600 in the first year (not indexed for inflation). This means that the first year allowance for automobiles placed in service in 2001 is $7,660. (The regular first year depreciation allowance is $3,060).

For a property to qualify for the additional first–year deduction it must satisfy the following standards: fulfill the requirements of MACRS,[4] have a recovery period of 20 years or less, be a water utility or computer software property (other than software covered by section 197) or be a qualified leasehold improvement to an interior portion of a nonresidential building. Our subsequent analysis focuses on the 30 percent partial expensing provision of the Act.

TAXES AND THE USER COST OF CAPITAL

To evaluate the impact of the new expensing provision on the incentive to invest, we utilize results derived in Hall and Jorgenson (1967), Auerbach (1983, 1989), and Auerbach and Hassett (1992).

Taxes and the User Cost of Capital with no Adjustment Costs

In this section we consider the case of no adjustment or installation costs. We also assume that there is no time necessary to plan or build additions to the capital stock and no investment tax credit. Finally, it is assumed initially that firms and investors expect tax laws to remain unchanged, an assumption that is relaxed below. Under these conditions, Hall and Jorgenson (1967) show that maximization of the present discounted value of after–corporate–tax cash flow over an infinite horizon implies that the pretax nominal value of the gross marginal product of capital today equals today's user cost of capital, C, where:

$$[1] \quad C = p\,T\,[\rho + \delta - E(\Delta p/p)]$$

$$[2] \quad T = (1 - \tau Z)\,/\,(1 - \tau).$$

In these two equations, p denotes the price of new capital goods, $E(\Delta p/p)$ the percentage change in the price of capital goods expected over the period, ρ the nominal after–tax cost of funds (debt plus equity), δ the rate of physical depreciation, τ the corporate income tax rate, Z the present value of depreciation allowances

[2] Taxpayers with sufficiently small amounts of annual investments may expense up to $24,000 (for fiscal years beginning in 2001 / 2002) and $25,000 (for fiscal years 2003 and thereafter) of tangible personal property that is purchased for use in the active conduct of a trade or business. The new law continues to allow taxpayers to expense these amounts, but the amount is subtracted from the cost basis before the new 30 percent deduction is taken.

[3] To qualify for the extended placed in service date, the property is required to have a production period exceeding two years or an estimated production period exceeding one year and a cost exceeding $1 million. Special rules limit the amount of costs eligible for the additional first year depreciation.

[4] The Modified Accelerated Cost Recovery System (MACRS) applies to most tangible depreciable property. Under MACRS, depreciation deductions are not determined by measuring the actual (or expected) change in the value of each asset as it ages. Rather, depreciation deductions are specified by statute and are calculated using each asset's cost recovery period and applicable depreciation method. Depreciation deductions are based on the historical cost of the asset and they are not indexed for inflation.

per dollar invested, and T summarizes the tax information relevant for our discussion.[5] As noted by Auerbach (1983), $\delta - E(\Delta p/p)$ is the expected *net* rate of decline of the asset's value or the rate of economic depreciation, i.e., the rate of physical depreciation offset by the expected capital gain.

Loosely, equation [1] implies that the firm's optimum value of the marginal product of capital must be sufficient to cover investors' required rate of return, economic depreciation and taxes. Equation [2] implies that a higher corporate income tax rate boosts taxes on income generated by the new capital and hence the user cost of capital (assuming $Z < 1$).[6] In addition, a more favorable system of tax depreciation (i.e., a higher value of Z) lowers the tax term and hence the cost of capital.

Moreover, for our purposes it is useful to recognize that pT is the price of new capital goods adjusted for taxes. For example, the price of capital goods is effectively reduced because businesses can deduct the dollar cost of the capital from other income for tax purposes; as this is a deduction (rather than a tax credit) which occurs over time, it is necessary to net the present value of the tax savings (i.e., $p\tau Z$) against the purchase price to generate the tax–adjusted price. It is reasonable to suppose that firms and investors have anticipations about changes over the coming period in the tax–adjusted price of new capital goods. This is not only because of expected changes in the before–tax price but in the relevant tax law as well. It can be shown that this leads to a more general form of equation [1]:

$$[1a] \quad C = p\,T\,[\rho + \delta - E(\Delta p/p) - E(\Delta T/T)]$$

where $E(\Delta T/T)$ denotes the anticipated percentage increase in the tax term over the period. Equation [1a] can be re–written as follows:

$$[1b] \quad C = pT(\rho + \delta) - TE(\Delta p) - pE(\Delta T).$$

All three terms on the right hand side are denominated in dollars. The first term represents the effective dollar cost of capital owing to the cost of debt and equity finance and to physical depreciation. The second term, which reduces the user cost, is the appreciation in the effective price of capital over the period, owing to an anticipated increase in the before–tax price of capital goods given a current tax law. The final term, introduced to help understand the more complicated user cost formulation in the next section, represents the change in the effective price of capital in the current period, owing to anticipated increases in the tax term (T) in the next period, given the before–tax price of capital. In the subsequent analysis of the new tax law the final term captures the changes to tax depreciation rules anticipated in the period prior to their expiration (in which case it is expected that the tax term will increase, putting downward pressure on the user cost in that period).

The new law, discussed in detail above, increases Z by allowing purchases of new equipment and software to receive a tax deduction of 30 percent of the cost in the first year the asset is placed in service. The remaining 70 percent is recovered according to pre–existing law; for purposes of our calculations, it is assumed that all firms use the double–declining balance method, with half–year convention in the first year. Thus for a \$1 investment in an asset with a tax service life of L years, al-

[5] The term in brackets can be restated in real terms by subtracting output price inflation from the nominal cost of funds and adding it to the expected change in the price of capital goods.

[6] A higher corporate tax rate increases the before–tax marginal product of capital necessary to yield an acceptable after–tax rate of return to investors, thereby increasing the user cost. This is however partially offset by an increase in the value of depreciation deductions. The offset is complete if $Z = 1$, i.e., if all capital outlays can be immediately expensed.

lowable depreciation in the first year, D_1, is equal to .30 + (0.5)(2 / L)(0.7). For an asset with a tax life of L = 7 years, D_1 = 0.4 under the new law, substantially bigger than the .143 value under pre–existing law. It naturally follows that the depreciation amount is smaller under the new law in the subsequent years (because total depreciation taken over the asset's tax life adds up to $1).

Table 1 compares tax depreciation patterns per dollar invested under the old and new laws for assets with 3–year, 5–year, and 7–year lives. The present value of the depreciation stream, Z, is given at the bottom of each column where an annual discount rate of 7.5 percent has been used (with no discounting in the first year). The higher values of Z imply that T and hence the user cost of capital are both reduced under the new law. Indeed, the user cost is reduced by 2.4 percent relative to the pre–existing law for assets with 7–year lives, 1.8 percent for assets with 5–year lives, and 1.0 percent for assets with 3–year lives.

To provide more detail, Table 2 provides the levels of the user costs for the different asset classes. The second column provides the user cost under the old law, the third column provides the user cost for the new law under the assumption that the partial expensing provision is permanent (this also is the user cost in the first two years under the temporary provision of the new tax law), and the final column provides the user cost in the transition year where firms will see an especially strong reduction because the tax law is expected to change in the following year. (Details underlying estimates in the third column are given in the next section.) Clearly, the incentive to invest in the last year receives a large stimulus because of the race to invest before the tax benefit expires.

To get a rough sense of how much investment spending occurs in the 3–year, 5–year, and 7–year tax life categories, we use National Income and Product Account detailed data for nominal outlays on equipment and software in 2001. These data imply that roughly 20 percent of nominal E&S spending (essentially software) occurred in the 3–year category, 40 percent in the 5–year category, and 40 percent in the 7–year category.

Taxes and the User Cost of Capital with Adjustment Costs

In the previous sub–section, it was assumed that a firm faces no cost in adjust-

TABLE 1
DEPRECIATION ALLOWANCES: OLD LAW VS. PARTIAL EXPENSING
(PER DOLLAR INVESTED)

	7–year tax life assets		5–year tax life assets		3–year tax life assets	
Year	Old law	New law	Old law	New law	Old law	New law
1	.1429	.40	.20	.44	.3333	.5333
2	.2448	.1714	.32	.224	.4445	.3111
3	.1749	.1225	.192	.1344	.1481	.1037
4	.1249	.0876	.1152	.0806	.0741	.0519
5	.0893	.0625	.1152	.0806		
6	.0893	.0625	.0576	.0404		
7	.0893	.0625				
8	.0446	.0310				
Z	.8363	.8855	.8829	.9180	.9346	.95428
% ΔT		–2.43		–1.78		–1.02
		(–1.76)		(–1.26)		(–0.71)

Notes:
1. Z denotes present discounted value of depreciation allowances per dollar invested, using an annual discount rate of 7.5 percent (with no discounting in the first year). Figures in parentheses use an annual discount rate of 5.0 percent.
2. $T = (1 - \tau Z) / (1 - \tau)$, where the corporate tax rate, τ, is 0.35. %ΔT is the percent change in T.

TABLE 2
LEVEL OF THE USER COST OF CAPITAL
(IN PERCENT)

Tax Life	Old Law	New Law	In Transition Year
7 years	21.71	21.18	18.53
5 years	27.29	26.80	24.90
3 years	40.37	39.96	38.91

Notes:
1. All estimates assume a nominal discount rate of 7.5 percent per annum.
2. The level of the user cost in column 2 (labeled "old law") and column 3 (labeled "new law") assumes laws are permanent.
3. Column 4 (labeled "transition year") presents the level of the user cost in the final year (i.e., year $s = 3$) of the temporary partial expensing provision; details are provided in the next section.

ing its stock of capital to the desired level. The fact that firms do not instantaneously change their capital stocks in response to changes in the incentives to invest suggests that the costs of adjustment are empirically important. Theoretical models that incorporate adjustment costs commonly assume that the cost of adjustment rises at an increasing rate with the level of capital expenditures, implying that it is desirable for the firm to spread the expenditures over time. Moreover, expectations of future changes in incentives to invest lead to immediate changes in investment in order to minimize the adjustment costs incurred in closing the gap between the current and future desired capital stocks.

Indeed, Auerbach and Hassett (1992) show that in the presence of adjustment costs the optimal level of investment at date t varies inversely with the weighted average of the current and expected future user costs of capital, $C_t^* = E_t \, \Sigma \, w_{s-t} \, C_s$, where the weights, w_i, sum to unity (and the summation runs from $s = t$ to infinity). Since the weights also decline exponentially, expected changes in the distant future will have relatively small effects on the current value of the user cost, C_t^*. Also, the weights vary with the marginal cost of adjustment. Intuitively, with low adjustment costs the weight applied to near–term values of the user cost is relatively high so that current investment is not much affected by expected future values of the cost of capital. At the limit, with no adjustment costs, we have the Hall–Jorgenson case in which current investment depends only on the current cost of capital. By contrast, high adjustment costs lower the weight applied to relatively near–term levels of the user cost relative to levels in the more distant future, implying a greater sensitivity of current investment to future user costs.

The expression for the weighted sum of user costs has some straightforward implications. If the user cost suddenly changed today—for example, because of a change in tax law—and this change were expected to last indefinitely, then the weighted average is simply the new current value (because the weights add to unity). However, if today's change in the user cost is not expected to persist—for example, because the change in tax law is expected to be temporary—then the user cost relevant for current investment must reflect this anticipation. The incentive for intertemporal substitution of investment in the case of a temporary change in the tax law is attenuated however by adjustment costs; normally, the former effect dominates and boosts investment during the period that the new tax incentive is in play. But, for high enough adjustment costs, a temporary tax change may have a minimal impact on current investment.

To understand this analytic point, we first re–write the expression for the user cost at date s (equation [3] is essentially equation [1a] with time subscripts and with static expectations about the pre–tax price of capital goods):

[3] $$C_s = p_s \, T_s \, [(\rho + \delta) + (\Gamma_{s+1} - \Gamma_s) / (1 - \Gamma_s)]$$

[4] $$T_s = (1 - \Gamma_s) / (1 - \tau)$$

[5] $$\Gamma_s = \tau \, Z_s.$$

As before, the parameters τ, ρ, and δ are held constant in these three equations.

To apply equations [3] – [5] to the new law, we take each time period to be a year, assume that the new law came as a surprise, and initially assume that firms and investors anticipate that the favorable partial expensing provision will remain in effect only 3 years. Thus, in both the first year (s = 1) and the second year (s = 2), when there is no anticipated change in tax law, $C_1 = C_2 = pT_{new}(\rho + \delta)$, where T_{new} captures the tax savings associated with the new higher present value of depreciation allowances during the three years that the tax provision remains in effect. In the third and final year, firms and investors must account for the anticipated reversion of the present value of depreciation allowances back to its previous lower level. Thus using equation [3], $C_3 = p\,T_{new}[\rho + \delta + (\Gamma_4 - \Gamma_{new}) / (1 - \Gamma_{new})]$, where $\Gamma_{new} = \tau Z_{new}$ and $\Gamma_4 = \tau Z_{old}$. But $\Gamma_4 < \Gamma_{new}$, so the user cost of capital in the third year is less than it is in the first two years because of the anticipated reduction in the present value of depreciation allowances (see Table 2 for estimates of the user costs in each year). In the fourth year and beyond, the user cost reverts back to its former higher value. Intuitively, investment in years one to three should be boosted by the incentive effect of lower user costs, with the largest effect being realized in the third year as investment is pulled forward in time when capital is at its cheapest.[7]

The previous discussion highlights a very intuitive possibility, that a temporary tax cut might have a smaller impact on current investment than a permanent one. Mechanically, this might happen if the weight on the future user costs is high enough relative to the weight on the near–term user costs. Theoretically, however, the possibility of this result depends crucially on arbitrary assumptions concerning the adjustment cost function. For example, in a q model of investment with convex adjustment costs, Abel (1982) argues that a temporary tax change has–*at least as large* an effect as a permanent tax change of equal size on current investment, ruling out the possibility that the permanent effect is larger. Auerbach (1989), however, unambiguously finds that a reversal is possible. In the Auerbach and Hassett (1992) framework, a reversal is not possible, by construction, since there is a rather low upper bound on the weight applied to future user costs. The crucial factor determining the difference in results appears to be the assumption that adjustment costs depend on the level of investment rather than the ratio of investment to capital. In the latter case, a reversal is possible, in the former, it is not. Thus the relationship between the weighted average of the entire stream of user costs in the temporary and permanent tax change cases is ambiguous in theory.

IMPACT OF TEMPORARY PARTIAL EXPENSING ON THE USER COST

In this section we provide estimates of the percentage change in the user cost of capital (per dollar invested) resulting from the temporary partial expensing provision. This is a partial equilibrium exercise, in which changes in firms' capital stocks have no effect on market interest rates or prices of new capital goods. However, we do allow for the possibility that businesses hold expectations with certainty that the ending date of the temporary tax provision may be either sooner or later than the September 2004 date written into the current statute. Indeed, from the viewpoint

[7] Although we are modeling the partial expensing provision as a complete surprise, many firms may well have anticipated it in advance. That is, in the months prior to enactment there may have been an expectation of Γ rising from Γ_{old} to Γ_{new}. As shown by Auerbach (1989), this would likely, but not unambiguously, restrain investment prior to enactment (as firms waited to take advantage of the lower effective cost of new capital) unless firms also expected the provision to be made retroactive, as it was.

of businesses there may be a probability distribution of ending dates, for example, a 50 percent chance that the law will end as currently scheduled and a 50 percent chance that it will be extended indefinitely. This latter possibility turns out to be a probability–weighted average of the corresponding ending dates held with complete certainty.

To provide concrete estimates, we need to make assumptions about the total real debt plus equity cost of funds ($\rho - \pi$), the rate of physical depreciation (δ), and the rate of output price inflation, π (which affects the nominal interest rate, ρ, used for discounting the old and new nominal depreciation allowances taken from Table 1). We construct the combined cost of debt and equity funds as described in detail in Cohen, Hassett, and Hubbard (1999); in the benchmark case, we assume that the expected rate of inflation (of both output and new capital goods prices) is 3 percent per annum, implying a nominal discount rate of about 8½ percent per annum. For capital goods with tax–service lives of L years, we assume for simplicity that $\delta = 1/L$; the resulting physical depreciation rates are quite similar to the corresponding economic rates of depreciation estimated by Hulten and Wykoff (1981).

These estimates are substituted into equation [3] to get period–by–period values for the user cost of capital, C_s, which in turn are substituted into the weighted average of the current– and future–period user costs to get $C_t^* = \Sigma\, w_{s-t}\, C_s$. Of course, this requires a set of empirical weights, which as discussed above, depend on the costs of adjustment. We vary these in the table within the range that is admissible in the Auerbach and Hassett (1992) model. The larger the value the higher the costs of adjustment and hence the smaller is the weight, w_{s-t}, given to near–term user costs relative to those in the more distant future.[8] Auerbach and Hassett (1992) estimate that Ω is roughly 0.5 for total equipment spending.

Table 3 and Table 4 summarize our key findings for assets with 3–year, 5–year, and 7–year lives. Table 4 provides the simple arithmetic difference between the user costs, as this is most relevant for determining the impact of the bill on interasset distortions.

For each type of asset we provide an estimate of adjustment cost parameters in column (1) that characterize very low adjustment costs (omega = .3) through high adjustment costs (omega = .7). We find that there is a significant difference in the

TABLE 3
PERCENTAGE CHANGE OF USER COST WITH RESPECT TO OLD LAW

Asset Life	(1) Omega*	(2) New Law	(3) 1–year	(4) Permanent	(5) Uncertain policy**
7 year	.3	–3.56	–11.64	–2.8	–3.18
	.5	–4.19	–8.3	–2.8	–3.49
	.7	–3.84	–4.96	–2.8	–3.32
5 year	.3	–2.49	–6.99	–2.06	–2.28
	.5	–2.78	–5.01	–2.06	–2.42
	.7	–2.53	–2.99	–2.06	–2.29
3 year	.3	–1.32	–2.94	–1.18	–1.25
	.5	–1.39	–2.11	–1.18	–1.29
	.7	–1.23	–1.25	–1.18	–1.21

*Omega is the weight on future user costs from Auerbach and Hassett (1992); the nominal discount rate is about 8.5 percent per annum.
**Users believe there is a 50 percent chance of the new law becoming permanent and a 50 percent chance of it remaining a temporary tax break.

[8] The relationship between the user cost weights, w_{s-t} (for $s \geq t$), and Ω is as follows: $w_0 = 1 - \Omega$ and $w_{s-t} = w_{s-t-1}\Omega$ for $s > t$.

TABLE 4
CHANGE OF USER COST WITH RESPECT TO OLD LAW

Asset Life	(1) Omega*	(2) New Law	(3) 1–year	(4) Permanent	(5) Uncertain policy**
7 year	.3	–0.0079	–0.0258	–0.0062	–0.00705
	.5	–0.0093	–0.0184	–0.0062	–0.00775
	.7	–0.0085	–0.011	–0.0062	–0.00735
5 year	.3	–0.0069	–0.0194	–0.0057	–0.0063
	.5	–0.0077	–0.0139	–0.0057	–0.0067
	.7	–0.007	–0.0083	–0.0057	–0.00635
3 year	.3	–0.0054	–0.012	–0.0048	–0.0051
	.5	–0.0057	–0.0086	–0.0048	–0.00525
	.7	–0.005	–0.0051	–0.0048	–0.0049

*Omega is the weight on future user costs from Auerbach and Hassett (1992); the nominal discount rate is about 8.5 percent per annum.
**Users believe there is a 50 percent chance of the new law becoming permanent and a 50 percent chance of it remaining a temporary tax break.

impact of the law both across different asset–life categories, and within asset–life categories across different adjustment costs. For example, with base–case adjustment costs (omega = .5), column (2) of Table 3 shows that the new law provides a 4.19 percent reduction in the weighted user cost for 7–year assets, a 2.78 percent reduction for 5–year assets, and a 1.39 percent reduction for 3–year assets. Within the 7–year asset class, the reduction in the user cost for equipment with high adjustment costs (omega = .7) is 3.84 percent, 0.35 percentage points lower than the base case (omega = .5). This lower effect is quite plausible intuitively. When adjustment costs are high, the firm does not want to vary its capital stock too much from the long–run target after the temporary measure expires. Hence, the investment stimulus today is relatively small.

We should note that the variation across assets of the reduction in the user cost shown in Table 4 (which occurs for different asset categories with either the same or different adjustment costs and for the same asset category with different adjustment costs) does not imply that the total distortion to the tax system is necessarily higher everywhere. Indeed, the tax system would have no distortions across the types of business equipment capital if full expensing were allowed; so partial expensing will for the most part reduce equipment distortions. To the extent that the partial expensing is temporary, however, then this need not be the case. In particular, distortions across adjustment cost types, both within and between asset–life categories, are increased because the variation in user–cost impacts arises largely from the new law's temporary nature (seen by comparing columns 2 and 4, as discussed below).[9]

To shed light on the impact of different duration of new law, column three indicates the effect on the forward–looking (weighted average) user cost if the Act provided a stimulus for only 1 year. For low adjustment cost equipment, this provides a dramatic increase in the level of the stimulus. For high adjustment cost equipment, the effect is less dramatic. Column 4 provides, for comparison, the

[9] Harberger (1980) demonstrates that if tax and economic depreciation are equal for all asset types, so that the tax system is neutral across asset lives before the introduction of a partial expensing provision, then the system remains neutral after introduction. Neutrality is defined by equality of marginal effective tax rates or, equivalently, of the before–tax net marginal products of capital across asset types. However, in our calculations tax and economic depreciation are not equal and so there are pre–existing distortions; further, these distortions are affected by partial expensing (even ignoring its temporary nature).

TABLE 5
PERCENTAGE CHANGE OF USER COST WITH RESPECT TO OLD LAW AND INFLATION RATES

Asset life	Annual inflation rate	New law
7	1.0	–3.31
	3.0	–4.19
	5.0	–4.90
5	1.0	–2.18
	3.0	–2.78
	5.0	–3.34
3	1.0	–1.08
	3.0	–1.39
	5.0	–1.73

Notes:
1. All calculations assume omega = 0.5.
2. The temporary partial expensing provision is assumed to end in year 4.

change in the user cost associated with a permanent 30 percent expensing. Column 5 provides the current user cost if equipment investors expect that the law will be become permanent before expiration with a 50 percent probability. The results fall between the current and permanent user costs elsewhere in the table.

We performed a number of sensitivity checks of our analysis and found that, in some cases, relatively small changes in parameters could significantly alter our assessment of the scale of the user cost effect of the Act. Given a key finding in Cohen, Hassett, and Hubbard (1999) that the user cost is quite sensitive to variations in the rate of inflation, we examined the impact of the new law on the user cost of different inflation rates, with results gathered in Table 5. In particular, with very low inflation (1 percent per annum), firms would lose very little of the value of their deductions to inflation over time, and the benefit of partial expensing would be significantly reduced.

CONCLUSION

Empirical work on equipment investment has indicated that changes in the user cost of investment can have significant impacts on investment activity (see Hassett and Hubbard (2002) for a recent literature review). Our analysis suggests that the impact of the Job Creation and Worker Assistance Act of 2002 on the incentives to invest could be significant. By reducing the user cost for equipment and software, partial expensing provides the incentives to stimulate current investment, an impact that likely is further strengthened by the temporary nature of the provision. Certain types of capital receive rather large reductions in the user cost; as a result, the Act provides the ingredients to serve as an effective countercyclical policy tool, albeit with the potential to temporarily open up distortions across different types of capital. The impact of the Act will be less than our base case scenario, however, to the extent that expected inflation is low, or adjustment costs high.

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