

The Section 179 and Section 168(k) Expensing Allowances: Current Law and Economic Effects

(name redacted)

Analyst in Public Finance

Updated May 1, 2018

Congressional Research Service

7-....

www.crs.gov

RL31852

Summary

Expensing is the most accelerated form of depreciation. Section 179 of the Internal Revenue Code allows a taxpayer to expense (or deduct as a current rather than a capital expense) up to \$1 million of the total cost of new and used qualified depreciable assets it buys and places in service in 2018, within certain limits. Firms unable to claim this allowance may recover the cost of qualified assets over longer periods, using the depreciation schedules from Sections 167 or 168. While the Section 179 expensing allowance is not expressly targeted at smaller firms, the limits on its use effectively tend to confine its benefits to such firms.

Section 168(k) allows taxpayers to expense 100% of the cost of qualified assets bought and placed in service between September 28, 2017, and December 31, 2022. There is considerable overlap between the property eligible for the Section 179 and Section 168(k) expensing allowances.

Since 2002, the two allowances have been used primarily as tax incentives for stimulating the U.S. economy. Several studies have assessed the economic effects of the 30% and 50% bonus depreciation allowances from 2002 to 2004 and from 2008 to 2010. Their findings suggested that accelerated depreciation did affect investment in qualified assets, but that it was a relatively ineffective tool for stimulating the U.S. economy during periods of weak or negative growth.

Available evidence also suggests that the expensing allowances have a moderate effect at best on the level and composition of business investment and its allocation among industries, the distribution of the federal tax burden among different income groups, and the cost of tax compliance for smaller firms. The allowances of course have advantages and disadvantages. On the one hand, an expensing allowance simplifies tax accounting, and a temporary allowance has the potential to stimulate increased business investment in favored assets in the short run by reducing the user cost of capital, increasing the cash flow of investing firms, and giving firms an incentive to make qualifying investments before the incentive expires. On the other hand, an expensing allowance is likely to interfere with an efficient allocation of capital among investment opportunities by diverting capital away from more productive uses with relatively low after-tax returns.

In December 2017, the House and the Senate agreed on a measure (H.R. 1, P.L. 115-97) to revise key parts of the federal tax code. The new tax law made significant changes to both Section 179 and Section 168(k).

In the case of the Section 179 expensing allowance, P.L. 115-97 permanently raised the maximum allowance to \$1 million, and the phaseout threshold for the allowance to \$2.5 million, beginning in 2018; it also indexed both amounts for inflation starting in 2019. The act also expanded the definition of qualified property to include qualified improvement property, specified improvements (e.g., new roofs and heating systems) to nonresidential real property, and property used in connection with lodging. In another change, the \$25,000 expensing limit for heavy-duty sport utility vehicles imposed in 2003 was indexed for inflation starting in 2019.

In the case of the bonus depreciation allowance, P.L. 115-97 increased it to 100% for qualified property acquired and placed in service between September 28, 2017, and December 31, 2022; the allowance is scheduled to phase out to 0% starting in 2027. In addition, the placed-in-service deadlines for property with relatively long production periods and for noncommercial aircraft were set one year longer. The wording of the final bill led to the unintended result that qualified improvement property became ineligible for bonus depreciation, as it no longer had a 15-year recovery period. As things now stand, such property is treated as 39-year nonresidential real property, unless Congress alters the language.

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Introduction

Under current tax law, firms may expense (or deduct as a current rather than a capital expense) up to \$1 million of the total cost of new and used qualified assets they purchase and place in service in tax years beginning in 2018 under Section 179 of the federal tax code. They also have the option under Section 168(k) of expensing the entire cost of qualified assets they acquire and place in service between September 28, 2017, and December 31, 2022. Many of the assets that qualify for the Section 179 expensing allowance are also eligible for the Section 168(k) expensing allowance (which is also known as bonus depreciation).

Expensing is the most accelerated form of depreciation. It has the potential to stimulate business investment by reducing the cost of capital for favored investments and by increasing the cash flow of firms undertaking such investments. As a result, economists view the two allowances as significant investment tax subsidies, especially since firms are allowed to take advantage of both allowances in the same tax year.

P.L. 115-97 (known informally as the Tax Cuts and Jobs Act of 2017) made several notable changes in both tax provisions. Specifically, the new tax law permanently increased the annual dollar limitation for expensing under Section 179 to \$1 million, raised the phaseout threshold to \$2.5 million, indexed both amounts for inflation, and expanded the range of assets eligible for the allowance. P.L. 115-97 also increased the Section 168(k) bonus depreciation allowance to 100% of the cost of eligible assets acquired and placed in service from September 28, 2017, through the end of 2022 and made certain changes in the property eligible for the allowance.

This report examines the current status, legislative history, and main economic effects (including their efficacy as a tool for economic stimulus) of the Section 179 and bonus depreciation allowances.

Current Expensing Allowances

Section 179

Section 179 of the Internal Revenue Code (IRC) is a permanent tax provision. It gives firms in all lines of business and all sizes the option, within certain limits, of expensing the cost of new and used qualified property in the tax year when the assets are placed in service. Business taxpayers that cannot (or choose not to) claim the allowance may recover capital costs over longer periods and at slower rates by claiming the appropriate depreciation deductions under the Modified Accelerated Cost Recovery System (MACRS) or Alternative Depreciation System (ADS).

Maximum Expensing Allowance

The maximum Section 179 expensing allowance is set at \$1 million for qualified assets bought and placed in service in 2018 and thereafter. (See **Table 1** for the annual expensing allowances from 1987 to 2018.)

Qualified Property

Under current law, new and used tangible property—as specified in Section 1245(a)(3)—qualifies for the allowance if it is depreciable under Section 168 (which contains the MACRS) and acquired for use in the active conduct of a trade or business. For the most part, this property consists of machinery and equipment used in manufacturing, mining, transportation,

communications, the generation and transmission of electricity, gas and water distribution, and sewage disposal. Research and bulk storage facilities do qualify for the allowance, as do single-purpose agricultural structures, storage facilities for petroleum products, and railroad grading and tunnel bores. In addition, the cost of off-the-shelf computer software used in a business or trade that is acquired and placed in service in tax years starting in 2003 may be expensed under Section 179. Improvements to the interior of nonresidential real property, as well as fire protection and alarm systems, security systems, roofs, and heating, ventilation, and air conditioning systems installed in such property, are also eligible for Section 179 expensing.

Limitations on Use of the Section 179 Allowance

Use of the allowance is subject to two limitations: an investment (or dollar) limitation and an income limitation.

Under the dollar limitation, the maximum allowance a taxpayer is permitted to claim in a tax year is reduced, dollar for dollar but not below zero, by the amount by which the aggregate cost of the qualified property a firm buys and places in service during that year exceeds a phaseout threshold. That threshold is set at \$2,500,000 in 2018 and thereafter (see **Table 1** for the limitations going back to 1987). As a result, a taxpayer may claim no Section 179 expensing allowance in 2018 when the total cost of qualified property it acquires and places in service equals or exceeds \$3,500,000.

The income limitation bars a taxpayer from claiming a Section 179 allowance greater than its taxable income (including wages and salaries) from the active conduct of a trade or business. The limitation is determined after the application of the investment limitation. So, if a company has \$50,000 in taxable income in 2018 from its business and may claim a Section 179 allowance of \$75,000 under the investment limitation, it could expense no more than \$50,000 of the cost of qualified property and recover the remaining \$25,000 through the MACRS or carry it forward to a future tax year when the company is able to deduct it under Section 179.

Taxpayers are not allowed to carry forward any allowance from the current tax year that cannot be used because of the investment limitation, but they may carry forward indefinitely allowances that cannot be used because of the income limitation.

Table 1. Maximum Expensing Allowance and Investment Limitation from 1987 to 2018

Year	Maximum Expensing Allowance	Investment Limitation
1987-1992	\$10,000	\$200,000
1993-1996	\$17,500	\$200,000
1997	\$18,000	\$200,000
1998	\$18,500	\$200,000
1999	\$19,000	\$200,000
2000	\$20,000	\$200,000
2001 and 2002	\$24,000	\$200,000
2003	\$100,000	\$400,000
2004	\$102,000 ^a	\$410,000 ^a
2005	\$105,000 ^a	\$420,000 ^a
2006	\$108,000 ^a	\$430,000 ^a

2007	\$125,000	\$500,000
2008 and 2009	\$250,000	\$800,000
2010 to 2017	\$500,000 ^a	\$2,000,000
2018 and thereafter	\$1,000,000	\$2,500,000

Source: Internal Revenue Service revenue procedures dating back to 1987.

- a. The maximum allowance and investment limitation were both indexed for inflation from 2004 to 2006, and they are indexed for inflation from 2016 and thereafter.

Claiming the Allowance

To claim the allowance, a taxpayer must specify on Form 4562 the items to which the election applies and the portion of the cost of each item that is deducted immediately. Historically, an election to claim the Section 179 allowance could be revoked only with the consent of the Internal Revenue Service (IRS). Congress suspended this rule for tax years beginning in 2002 to 2014 and repealed it through the PATH Act for tax years beginning in 2015 and thereafter. Repeal of the rule means that taxpayers may revoke any part of an election to expense qualified property without the IRS's consent, regardless of whether the election is made on an original or amended return (IRS regulation 1.179-5). To revoke an election, a taxpayer merely submits an amended return for the tax year in question using a different depreciation method.

Bonus Depreciation Allowance

Businesses may also claim a 100% expensing (or bonus depreciation) allowance under Section 168(k) for eligible property acquired and placed in service after September 27, 2017, and before January 1, 2023. The allowance is equal to 100% of the cost of qualified property. Under current law, this rate is to remain in effect through 2022; it is scheduled to decrease to 80% in 2023, 60% in 2024, 40% in 2025, 20% in 2026, and 0% for property acquired and placed in service in 2027 and thereafter. Qualified property with relatively long production times is allowed an extra year of bonus depreciation over this period.

The initial bonus depreciation allowance (BDA) was set at 30% and applied to qualified property acquired and placed in service between September 12, 2001, and December 31, 2004. In 2003, Congress raised the allowance to 50% of the cost of qualified property acquired and placed in service from 2003 to 2005. It expired at the end of 2005. Congress reinstated it in 2007 for property acquired and placed in service in 2008 (or 2009 for property with long production times and certain aircraft). Owing to several subsequent extensions and enhancements, a BDA of 50% or 100% was available for property acquired and placed in service in 2009 to 2015.

Like the Section 179 expensing allowance, the Section 168(k) allowance accelerates the depreciation of qualified property, lowering the cost of capital for investment in those assets and boosting the cash flow of businesses making such investments. Congress created the allowance to spur increased business investment during periods of negative or sluggish economic growth, such as the severe recession that lasted from late 2007 to mid-2009 and the relatively weak recovery that persisted into early 2014.

The BDA applies to new or used qualified property.¹ In general, this is property that is eligible for depreciation under the MACRS with recovery periods of 20 or fewer years, off-the-shelf computer software, and qualified improvement property (which is considered 15-year property

¹ Before the enactment of P.L. 115-97, the BDA applied to new property only.

even though eligible improvements apply to nonresidential real property that is depreciated over 39 years). In a change in the BDA enacted in P.L. 115-97, property acquired and placed in service after September 27, 2017, by rate-regulated utilities that provide electrical power and water, sewage disposal, the local distribution of gas or steam, or the transportation of gas or steam by pipeline no longer qualifies for the BDA.

Option to Exchange the BDA for Unused Credits

From 2008 and through 2015, C corporations had the option under Section 168(k)(4) of cashing in some or all of their alternative minimum tax (AMT) and research tax credits carried over from tax years before 2006, in lieu of taking the BDA. Corporations choosing the accelerated credit also had to use the straight-line method over MACRS recovery period for the bonus depreciation property to recover its cost. The credit was refundable and limited to a corporation's bonus depreciation amount. This amount was equal to 20% of the difference between the bonus depreciation and regular depreciation a company could claim for the current tax year and the depreciation it could claim for that year without bonus depreciation. From 2008 to 2010, the bonus depreciation amount was limited to the lower of (1) 6% of the sum of its carried-forward (or unused) AMT and research tax credits from tax years before 2006, or (2) \$30 million. For bonus depreciation property placed in service from 2011 to 2015, corporations could claim the accelerated credit for unused AMT credits from tax years before 2006 only. The credit was provided indirectly through an increase in the limitations on the use of the AMT credit (under Section 53(c)) and the research tax credit (under Section 38(c)); the increase was treated as a refundable overpayment of tax.

A corporation was most likely to claim the initial version of the credit if it was both cash-strapped and at risk of incurring a net operating loss if it were to claim bonus depreciation. Since the maximum credit a corporation could take in tax years beginning on or after April 1, 2008, and before January 1, 2016, was \$30 million, it had to place in service in a tax year \$150 million in bonus depreciation property to equal that amount (20% of \$150 million = \$30 million). The corporation also needed \$500 million in unused AMT and research tax credits from tax years beginning before 2006 to reach the \$30 million ceiling (6% of \$500 million = \$30 million).

Different rules applied in 2016 and 2017. C and S corporations were allowed to claim a refundable and accelerated AMT credit under Section 168(k)(4), instead of taking bonus depreciation for qualified property they acquire and place in service during that period. The method for calculating the credit was complicated, and the rules for electing it varied for taxpayers in different circumstances. Taxpayers taking the credit had to recover the cost of their bonus depreciation property using the straight-line method over the MACRS recovery period. The amount of the credit was equal to a taxpayer's "bonus depreciation amount," which in turn was equal to 20% of the difference between the regular and bonus depreciation the company could claim in the year the property was placed in service and the total depreciation the company could claim that year without bonus depreciation. A company's bonus depreciation amount could not exceed its "maximum increase amount (MIA)," which was the lower of (1) 50% of the firm's minimum tax credit under Section 53(b) for the first tax year ending after December 31, 2015, or (2) its minimum tax credit for the current year, as determined by the company's adjusted net minimum tax (as defined in Section 53(d)) for tax years ending before 2016.

There was a simple rationale for the credit: for companies that invest in bonus depreciation property, it was intended to provide roughly the same net tax benefit to a profitable corporation that paid the AMT as it did to a corporation with an NOL.

P.L. 115-97 repealed the corporate AMT and the option to exchange a BDA for unused AMT credits for tax years beginning in 2018.

Interaction with Other Depreciation Allowances, Including the Section 179 Allowance

In general, a company that invests in assets eligible for both the Section 179 and Section 168(k) expensing allowances is required to recover their cost in a prescribed order. The Section 179 expensing allowance has to be taken first, lowering the company's basis in the asset by that amount. The taxpayer then may apply the bonus depreciation allowance to any remaining basis amount, further reducing the company's basis in the property. Finally, the company is allowed to claim a depreciation allowance under the MACRS for any remaining basis, using the double declining balance method.

A simple example illustrates how this process works. Assume that the only investment a company makes in a tax year is the acquisition of 10 new machine tools at a total cost of \$700,000. Such a purchase qualifies for both the Section 179 expensing allowance (\$500,000) and the BDA (50% of acquisition cost) for that year. Therefore, it is required to recover that cost for federal tax purposes in the following order:

- First, the company claims a Section 179 expensing allowance of \$500,000 on its federal tax return for that year, lowering its basis in the property to \$200,000 (\$700,000-\$500,000).
- Then it claims a bonus depreciation allowance of \$100,000 (\$200,000 x 0.5), further lowering its basis to \$100,000 (\$200,000-\$100,000).
- Next, the company claims a deduction for depreciation under the MACRS on the remaining \$100,000. Given that the MACRS recovery period for machine tools is five years and five-year property is depreciated using the double-declining-balance method, the company takes an additional depreciation allowance equal to 20% of \$100,000, or \$20,000, under the half-year convention.
- The company then recovers the remaining basis of \$80,000 (\$100,000-\$20,000) by taking MACRS depreciation deductions over each of the next five years at rates of 32%, 19.2%, 11.52%, 11.52%, and 5.76%, respectively.
- As a result, the company is able to deduct nearly 89% of the purchase price of the machine tools it buys in the year they are placed in service.

Legislative History of the Two Expensing Allowances

Section 179

The Section 179 expensing allowance has been a permanent fixture of the federal tax code since September 1958. It started out as a first-year depreciation allowance that Congress included in the Small Business Tax Revision Act of 1958 (P.L. 85-866). Its purpose then was no different from its purpose today: to reduce the tax burden on small business owners, stimulate small business investment, and simplify tax accounting for smaller firms. The original deduction was limited to \$2,000 (or \$4,000 in the case of a married couple filing a joint return) of the cost of new and used

business machines and equipment with a tax life of six or more years that were acquired and placed in service in a tax year.

No change was made in the allowance until the enactment of the Economic Recovery Tax Act of 1981 (ERTA; P.L. 97-34). ERTA raised the expensing allowance to \$5,000 and laid down a timetable for a gradual increase in the allowance to \$10,000 by 1986. In spite of the 150% increase in the allowance for single filers, few firms took advantage of it. Some attributed the tepid response to the limitations on the use of an investment tax credit that ERTA established. A business taxpayer could claim the investment tax credit only for the portion of an eligible asset's cost that was not expensed, so the full credit could be used only if the company claimed no expensing allowance. For many firms, the tax savings from the credit outweighed the tax savings from a combination of the credit and the allowance.

To stem the rise in the federal budget deficit in the early 1980s, Congress passed the Deficit Reduction Act of 1984 (P.L. 98-369). Among other things, the act postponed from 1986 to 1990 the scheduled increase in the expensing allowance to \$10,000. Still, use of the allowance rose markedly following the repeal of the investment tax credit by the Tax Reform Act of 1986.

The allowance rose to \$10,000 in 1990, as scheduled, and remained at that level until the passage of the Omnibus Budget Reconciliation Act of 1993 (OBRA93; P.L. 103-66). OBRA93 increased the allowance to \$17,500 (as of January 1, 1993) and created a variety of tax benefits for impoverished areas known as “enterprise” zones and “empowerment” zones (or EZs for both). The benefits included an enhanced expensing allowance for qualified assets placed in service in such a zone.² To be designated an EZ, an area had to meet certain eligibility criteria relating to population, poverty rate, and geographic size.

With the enactment of the Small Business Job Protection Act of 1996 (SBJPA, P.L. 104-188), the regular expensing allowance again was placed on a timetable for scheduled increases. Specifically, the act allowed the allowance to rise to \$18,000 in 1997, \$18,500 in 1998, \$19,000 in 1999, \$20,000 in 2000, \$24,000 in 2001 and 2002, and \$25,000 in 2003 and thereafter.

The Community Renewal Tax Relief Act of 2000 (P.L. 106-554) added “renewal communities” (RCs) to the list of economic development areas and granted businesses located in them the same tax benefits available to businesses in EZs, including an enhanced expensing allowance. In addition, it added a premium of \$35,000 to the regular allowance for qualified assets placed in service in economic development areas (including RCs).

To lessen the economic losses associated with the terrorist attacks of September 11, 2001, Congress established a variety of tax benefits through the Job Creation and Worker Assistance Act of 2002 (P.L. 107-147). The benefits were intended to encourage new business investment in the area in lower Manhattan in New York City that bore the brunt of the aerial attacks on the World Trade Center. Owners of firms located in the “Liberty Zone” were allowed to claim the same enhanced expensing allowance for qualified investments that was available to small business owners in EZs and RCs.

After the SBJPA, no changes were made in the regular allowance until the passage of Jobs and Growth Tax Reduction and Reconciliation Act of 2003 (JGTRRA). Under the act, the allowance rose four-fold to \$100,000 (as of May 6, 2003), stayed at that amount in 2004 and 2005, and then reset in 2006 and beyond at its level before JGTRRA (\$25,000). JGTRRA also raised the phaseout threshold to \$400,000 from May 2003 to the end of 2005, indexed the regular allowance

² Firms placing qualified assets in service in an EZ were allowed to claim a maximum allowance that was \$20,000 greater than the allowance available in other areas, with a phaseout threshold that was twice as large as that available in other areas.

and the threshold for inflation in 2004 and 2005, and added off-the-shelf software for business use to the list of depreciable assets eligible for expensing in the same period.

The American Jobs Creation Act of 2004 (AJCA; P.L. 108-357) extended the changes made by JGTRRA through the end of 2007.

In an effort to aid the recovery of the economies in the areas of Louisiana, Mississippi, and Alabama struck by Hurricane Katrina in 2005, Congress passed the Gulf Opportunity Zone Act of 2005 (P.L. 109-135). Among other things, the act created a “Gulf Opportunity Zone” (GOZ) in those areas and offered a variety of tax incentives to boost business investment in the GOZ, including an enhanced expensing allowance for qualified assets purchased on or after August 28, 2005, and placed in service by December 31, 2007. The GOZ allowance could be as much as \$100,000 above the regular allowance, and its phaseout threshold was \$600,000 greater than the threshold for the regular allowance. It also applied to a wider range of tangible depreciable assets than the regular allowance did.

The Tax Increase Prevention and Reconciliation Act of 2005 (P.L. 109-222) extended the changes in the allowance made by JGTRRA through 2009.

In the U.S. Troop Readiness, Veterans’ Care, Katrina Recovery, and Iraq Appropriations Act, 2007 (P.L. 110-28), Congress further extended those changes through 2010, raised the maximum allowance to \$125,000 and the phaseout threshold to \$500,000 for tax years beginning in 2007 to 2010, and indexed both amounts for inflation in that period. The act also extended through 2008 the special GOZ allowance.

In an effort to stimulate more business investment in the midst of a severe economic downturn, Congress increased the allowance to \$250,000 and the phaseout threshold to \$800,000 for qualified assets bought and placed in service in 2008 in the Economic Stimulus Act of 2008 (ESA, P.L. 110-185). Under the act, those amounts were supposed to reset at \$125,000 and \$500,000 in 2009 and 2010, with adjustments for inflation.

Several laws enacted during the 111th Congress modified the Section 179 expensing allowance yet again. The American Recovery and Reinvestment Act of 2009 (P.L. 111-5) extended the enhanced allowance from ESA through 2009, and the Hiring Incentives to Restore Employment Act of 2010 (P.L. 111-147) further extended it through 2010.

Under the Small Business Jobs Act of 2010 (P.L. 111-240), the expensing allowance increased to \$500,000, and the phaseout threshold to \$2 million, for tax years beginning in 2010 and 2011. Starting in 2012 and thereafter, the maximum allowance was scheduled to reset at \$25,000 and the phaseout threshold at \$200,000. The act also expanded the definition of qualified property to include qualified leasehold improvement property, qualified retail improvement property, and qualified restaurant property; in 2010 and 2011, a business could write off up to \$250,000 of the annual cost of such property under Section 179.

The Tax Relief, Unemployment Compensation Reauthorization, and Job Creation Act of 2010 (P.L. 111-312) increased the maximum allowance to \$125,000 and the phaseout threshold to \$500,000 for qualified assets acquired and placed in service in 2012, indexed those amounts for inflation, set the maximum allowance at \$25,000 and the phaseout threshold at \$200,000 beginning in 2013 and thereafter, and extended the eligibility of off-the-shelf computer software for the allowance through 2012.

As a result of the American Taxpayer Tax Relief Act of 2012, the maximum expensing allowance rose to \$500,000, and the phaseout threshold to \$2 million, in 2012 and 2013. The act also made purchases of off-the-shelf software eligible for the allowance in 2013 and extended through 2013

the maximum annual \$250,000 expensing allowance for qualified improvement property that first became available in 2010.

In December 2014, Congress extended through 2014 the Section 179 expensing allowance that was available in 2012 and 2013 by passing the Tax Increase Prevention Act of 2014 (P.L. 113-295).

Nearly one year later, Congress again extended the \$500,000 allowance and \$2 million phaseout threshold from 2012 and 2013. Under the Protecting Americans from Tax Hikes Act of 2015 (PATH Act, P.L. 114-113), the Section 179 expensing allowance was permanently set at \$500,000, and the phaseout threshold at \$2 million, starting in 2015. Both amounts were indexed for inflation beginning in 2016. Off-the-shelf computer software and leasehold, restaurant, and retail improvement property became permanently eligible for the allowance. And the dollar limit on the amount of improvement property that could be expensed in a tax year was lifted.

Congress made additional changes in Section 179 with the passage of a tax revision bill (P.L. 115-97) in December 2017. Under the new tax law, the maximum expensing allowance rises to \$1 million, and the phaseout threshold to \$2.5 million, and both amounts are indexed for inflation starting in 2019. In addition, the law expands the definition of qualified real property for the Section 179 allowance to include the following improvements to nonresidential real property: roofs; heating, ventilation, and air conditioning units; fire protection and alarm systems; and security systems. It also repeals the previous exclusion of property connected to lodging and indexes for inflation the \$25,000 expensing limit for heavy-duty motor vehicles.

Bonus Depreciation Allowance

The Job Creation and Worker Assistance Act of 2002 (P.L. 107-147) created the BDA. It was equal to 30% of a company's adjusted basis in new qualified property acquired and placed in service between September 12, 2001, and December 31, 2004. A one-year extension of that deadline was available for property with MACRS recovery periods of 10 or more years and lengthy production periods, as well as for certain aircraft.

Under the Jobs and Growth Tax Relief Reconciliation Act of 2003 (P.L. 108-27), Congress raised the allowance to 50% of a company's adjusted basis in qualified property acquired and placed in service after May 5, 2003, and before January 1, 2006. Once again, an extended deadline was available for property with relatively long production times.

The Economic Stimulus Act of 2008 renewed the 50% BDA that expired at the end of 2005. It applied to qualified property acquired and placed in service in 2008.

Later in 2008, Congress passed the Housing Assistance Tax Act of 2008 (P.L. 110-289). It included a provision that gave C corporations only the option to exchange any BDA they could claim for property acquired and placed in service between April 1 and December 31, 2008, for a refundable tax credit equal to the lesser of \$30 million or 6% of the sum of any research and AMT credits carried forward from tax years before 2006.

The American Recovery and Reinvestment Act of 2009 (P.L. 111-5) extended the 50% BDA and the optional refundable credit through 2009.

Congress further extended the 50% allowance and the credit to qualified property acquired and placed in service in 2010 by passing the Small Business Jobs Act of 2010 (P.L. 111-240).

Under the Tax Relief, Unemployment Compensation Reauthorization, and Job Creation Act of 2010 (P.L. 111-312), the BDA rose to 100% for qualified property acquired and placed in service from September 9, 2010, to December 31, 2011. The act also established a 50% allowance for

property acquired and placed in service in 2012. But it limited the optional refundable credit to unused AMT credits from tax years before 2006; unused research tax credits from the same period could no longer be monetized in this manner.

The American Taxpayer Relief Act of 2012 (ATRA) extended the 50% BDA through 2013. ATRA also extended the optional refundable credit through 2013 for AMT credits carried forward from tax years before 2006.

The Tax Increase Prevention Act of 2014 (TIPA) extended the 50% BDA through 2014.

In December 2015, Congress passed the Protecting Americans from Tax Hikes Act of 2015 (PATH Act, P.L. 114-113). Among other things, it extended the BDA through 2019. In 2015 to 2017, the allowance was equal to 50% of the cost of qualified property acquired and placed in service during that period; the rate was scheduled to drop to 40% in 2018, and then to 30% in 2019. No allowance was available in 2020 and thereafter. The act also extended through 2019 the optional refundable credit. Unlike the credit that was available from 2008 to 2015, there was no specified dollar limit on the amount that could be claimed in lieu of the BDA. The credit a corporation could claim was equal to its bonus depreciation amount; this amount, in turn, could not exceed the lower of 50% of the corporation's AMT credit under Section 53(b) for its first tax year ending in 2016, or the AMT credit for the current tax year calculated by taking into account only the adjusted new minimum tax (as defined in Section 53(d)) for tax years ending before January 1, 2016. In addition, the PATH Act extended the BDA to domestic planted or grafted trees or vines that bore fruits or nuts and had a preproduction period of over two years from the time of planting or grafting to the time of bearing fruits or nuts.

Congress made a number of significant changes in the BDA in P.L. 115-97. Specifically, the act set the rate for the BDA at 100% for qualified property acquired and placed in service between September 28, 2017, and December 31, 2022. The rate then is scheduled to decrease to 80% for property placed in service in 2023, 60% for property placed in service in 2024, 40% for property placed in service in 2025, 20% for property placed in service in 2026, and 0% starting in 2027 and thereafter. Each placed-in-service date is extended one year for long-production property and certain aircraft. Eligible property includes trees and vines that bear fruits and nuts. As a result of unintentional language in the final bill, qualified improvement property is not eligible for the BDA until Congress amends the law to assign a 15-year recovery period to such property. Under the act, the property of rate-regulated utilities acquired and placed in service after September 27, 2017, is not eligible for the BDA. But used qualified property acquired and placed in service in the same period does qualify for the allowance. The same is true for film and television productions and live theatrical productions released or broadcast after September 27, 2017. And the option to claim a refundable AMT credit in lieu of a BDA is repealed for tax years starting in 2018 and thereafter.

Economic Effects of the Section 179 and Bonus Depreciation Allowances

Many lawmakers view the Section 179 expensing and bonus depreciation allowances as effective policy tools for promoting the growth of small firms and stimulating the economy during periods of slow or negative growth. And many business owners think of the two allowances as valuable and desirable instruments for increasing their cash flow and simplifying tax accounting.

But many economists have a more nuanced understanding of the effects of those allowances. In their view, the disadvantages of the allowances may outweigh the advantages. Specifically, they

maintain that the allowances have the potential to promote an inefficient allocation of capital among domestic industries and investment opportunities, and to lessen the federal tax burden on upper-income business owners, who account substantial shares of noncorporate business profits and corporate stock ownership and dividends. At the same time, many economists acknowledge that expensing can reduce the cost of tax compliance, especially for smaller firms. These effects correspond to three traditional criteria used by economists to evaluate actual or proposed tax policies: efficiency, equity, and simplicity.

Each effect is examined below. The discussion begins with a review of what is known about the effectiveness of the Section 179 expensing and bonus depreciation allowances as policy instruments for economic stimulus.

Accelerated Depreciation as a Policy Tool for Economic Stimulus

Since 2003, Congress has passed eight bills that either temporarily enhanced the Section 179 expensing allowance and its phaseout threshold or included a temporary or permanent extension of an already enhanced allowance. And since 2002, 10 bills have been enacted that extend or enhance the bonus depreciation allowance. Each extension or enhancement was largely intended to spark increases in business investment in equipment and machinery, relative to a baseline reflecting prior law. When Congress first took these steps in 2002 and 2003, many assumed the measures would boost short-term business investment in qualified assets, imparting a needed boost to domestic GDP. This expectation rested on the knowledge that expensing lowered the user cost of capital for investment in such assets and expanded the cash flow of companies that relied on internal sources of financial capital to make such investments.

The user cost (or rental price) of capital is one of the key influences on business investment decisions. It combines the opportunity cost of an investment (i.e., the highest pretax rate of return a company could earn by investing in a low-risk asset like a U.S. Treasury bond) with its direct costs, such as depreciation, the actual cost of the asset, and income taxes.³ In effect, the user cost of capital determines the after-tax rate of return an investment must earn in order to be profitable—and thus worth undertaking. In general, the larger the user cost of capital, the fewer projects companies can profitably undertake, and the lower their desired capital stock. In theory, when a change in tax law decreases the user cost of capital, businesses can be expected to increase the amount of capital they wish to own, boosting business investment in the short run, all other things being equal.

How does expensing affect the user cost of capital? As the most accelerated form of depreciation, expensing lowers this cost by reducing the tax burden on the discounted returns to an eligible investment. This reduction can be considerable.⁴ Expensing the cost of an asset is equivalent to

³ The user cost of capital is the real rate of return an investment project must earn to break even. In theory, a firm will undertake an investment provided the after-tax rate of return exceeds the user cost of capital. Rosen has expressed this cost in terms of a simple equation. Let C stand for the user cost of capital, a for the purchase price of an asset, r for the after-tax rate of return, d for the economic rate of depreciation, t for the corporate tax rate, z for the present value of depreciation deductions flowing from a \$1 investment, and k for the investment tax credit rate. Then $C = a \times [(r + d) \times (1 - (t \times z) - k)] / (1 - t)$. Under expensing, z is equal to one. By inserting assumed values for each variable in the equation, one sees that C increases as z gets smaller. Thus, of all possible methods of depreciation, expensing yields the lowest user cost of capital. For more details, see Harvey S. Rosen, *Public Finance*, 6th Ed (New York: McGraw-Hill/Irwin, 2002), pp. 407-409.

⁴ In a 1995 study, Douglas Holtz-Eakin compared the cost of capital for an investment under two scenarios for cost recovery. In one, the corporation making the investment used expensing to recover the cost of the investment; and in the other, the cost was recovered under the schedules and methods permitted by the modified accelerated cost recovery system. He further assumed that the interest rate was 9%, the inflation rate 3%, and the rate of economic depreciation

the U.S. Treasury providing a firm with a tax rebate equal to the firm's marginal tax rate multiplied by the cost of the asset. It leads to a marginal effective tax rate of 0% on the returns to eligible investments.

Several studies have concluded that investment in equipment is somewhat sensitive to changes in the user cost of capital. Estimates of the price elasticity of demand for equipment (which measures the percentage change in spending on equipment divided by the percentage change in its user cost of capital) range from -0.25 to -0.66. Some economists argue that the elasticity is probably close to -0.50,⁵ though a recent study of the impact of bonus depreciation that took into effect frictions in the financing of investment came up with a much larger elasticity estimate: 1.6.⁶ An elasticity of that size means that a 10% decline in the user cost of capital should result in a 16% rise in business spending on equipment in the short run, all other things being equal.

Another significant influence on business investment decisions is cash flow.⁷ There are several reasons why a company may finance new investments largely or entirely from retained earnings. It may wish to limit the company's exposure to external debt and the risk of default it carries. Or the company may have to rely on retained earnings since it has limited access to debt and equity markets. Younger firms investing in the development of new commercial technologies may find it hard to raise the needed capital in debt or equity markets when the owners know more about the sales and growth potential of their services and products than investors and lenders do. For companies in such a situation, the cost of internal funds would be lower than the cost of external funds, so they clearly would be better off financing new investments out of retained earnings. Expensing can increase a profitable firm's cash flow in the short run because it allows the firm to deduct the full cost of qualified assets in the tax year when they are placed in service, reducing its tax liability. But expensing has no such benefit for firms with net operating losses.

While cash flow's role as a driver of business investment makes sense in theory, its actual contribution to such investment has proven difficult to measure or verify in practice. The contribution of cash flow to business investment (especially small business investment) remains unclear. A few studies have found a significant positive correlation between changes in a firm's net worth and its investment spending, and this correlation was strongest for firms with limited or no access to debt and equity markets.⁸ Yet these findings do not prove that firms with relatively high retained earnings relative to net worth invest more than firms with relatively low or negative amounts. A strong correlation between two factors does not necessarily mean that one caused the other. In the case of cash flow and business investment, a plausible explanation for the strong correlation was that firms with relatively high cash flows invested more, on average, than firms with relatively low cash flows for reasons that have nothing to do with the relative cost of internal and external funds.⁹ What can be said with certainty is that the relationship between cash flow

for the asset acquired through the investment 13.3%. Not only did expensing substantially reduce the cost of capital, its benefit was proportional to the firm's marginal tax rate. Specifically, Holtz-Eakin found that at a tax rate of 15%, expensing lowered the cost of capital by 11%; at a tax rate of 25%, the reduction was 19%; and at a tax rate of 35%, the cost of capital was 28% lower. See Douglas Holtz-Eakin, "Should Small Businesses Be Tax-Favored?" *National Tax Journal*, September 1995, p. 389.

⁵ See Jonathan Gruber, *Public Finance and Public Policy* (New York: Worth Publishers, 2005), p. 675.

⁶ Eric Zwick and James Mahorn, "Tax Policy and Heterogeneous Investment Behavior," *American Economic Review* 2017, vol. 107, no. 1, p. 242.

⁷ In the realm of business finance, the term "cash flow" can take on different meanings. Here it denotes the difference between a firm's revenue and its payments for all the factors or inputs used to generate its output, including capital equipment.

⁸ For a review of the recent literature on this topic, see R. Glenn Hubbard, "Capital Market Imperfections and Investment," *Journal of Economic Literature*, vol. 36, March 1998, pp. 193-225.

⁹ Harvey S. Rosen and Ted Gayer, *Public Finance*, 8th edition (New York: McGraw-Hill Irwin: 2008), p. 448.

and business investment is complicated, and that additional research may be needed to assess the impact of the former on the latter.

In theory, full or partial expensing should boost business investment in qualified assets relative to a baseline scenario with no expensing. This raises the question of how effective (and cost-effective) the Section 179 and bonus depreciation allowances have been in stimulating business investment, especially during the severe recession of 2007 to 2009.

Several studies have analyzed the effects of the allowances on short-run business investment. Their findings indicated that the allowances did spur a rise in business investment in equipment and standardized software. But the studies differed over the extent of this increase, among other things.

According to the results of a 2005 study by Matt Knittel from the Department of the Treasury, small businesses did not increase their use of the Section 179 expensing allowance and the bonus depreciation allowance after both were expanded in 2003.¹⁰ Specifically, Knittel found that the share of small firms claiming the Section 179 allowance changed little from 2001 or 2002 to 2003, when it rose from \$25,000 to \$100,000. Similarly, 39% of noncorporate business owners and 54% of small corporations claimed bonus depreciation in 2002, but these shares actually decreased to 33% for noncorporate business owners and 49% for small corporations in 2003, even though the bonus depreciation allowance rose from 20% of the cost of qualified assets placed in service in 2002 to 30% in 2003.

A 2006 study by Darrel Cohen and Jason Cummings found that although over half of all C and S corporations claimed bonus depreciation from 2002 to 2004, only 10% of those companies deemed the allowances an important consideration in determining the timing or amount of qualifying investments.¹¹ These findings raised the possibility that many of the investments that benefited from bonus depreciation would have been undertaken without it, but their timing was altered so they would qualify for the allowance. Moreover, the study showed that bonus depreciation had no discernible effect on investment in short-lived assets, such as computer hardware and software.

In another 2006 study, Christopher House and Matthew Shapiro estimated that bonus depreciation had a minor impact on gross domestic product and employment in 2002 and 2003. According to their findings, bonus depreciation “probably” led to a cumulative increase in GDP of 0.07% to 0.14%, and in total employment of 100,000 to 200,000 workers, during that period.¹² In a related analysis, House and Shapiro also found that the allowance had a strong impact on investment in qualified assets relative to other assets, and on investment in longer-lived qualified assets relative to those with relatively short depreciation lives. They estimated an investment price-elasticity of supply for those capital goods that ranged from 6% to 14%.¹³

¹⁰ Matthew Knittel, “Small Business Utilization of Accelerated Tax Depreciation: Section 179 Expensing and Bonus Depreciation,” *National Tax Journal Proceedings-2005, 98th Annual Conference*, 2005, pp. 273-286.

¹¹ Darrel S. Cohen and Jason Cummins, *A Retrospective Evaluation of the Effects of Temporary Partial Expensing*, Federal Reserve Board, Finance and Economics Discussion Series, Working Paper No. 2006-19 (Washington: April 2006), <http://www.federalreserve.gov/pubs/feds/2006/200619/200619pap.pdf>.

¹² Christopher House and Matthew D. Shapiro, *Temporary Investment Tax Incentives: Theory with Evidence from Bonus Depreciation*, National Bureau of Economic Research, working paper no. 12514 (Cambridge, MA: September 2006), p. 2. <http://www.nber.org/papers/w12514>.

¹³ Christopher House and Matthew D. Shapiro, “Temporary Tax Incentives: Theory with Evidence from Bonus Depreciation,” *American Economic Review* 2008, vol. 98, no. 3, p. 762.

In a 2007 study, Knittel estimated that the take-up rate for the bonus depreciation allowance among corporations from 2002 to 2004 was substantially below 100%, but that the rate did rise over that period.¹⁴ The take-up rate measures (as its name implies) the share of eligible investment for which the allowance was claimed. According to the results of the study, the take-up rate ranged from 54% in 2002 to 61% in 2004 for C corporations and from 65% in 2002 to 70% in 2004 for S corporations. Though the analysis did not investigate why so many corporations opted to forgo bonus depreciation when they could have taken it, Knittel cited two possible explanations. First, many corporations had net operating losses from 2002 to 2004, so bonus depreciation offered no immediate benefit to them, or to companies that had loss or credit carry-forwards or claimed new credits. Second, many states disallowed bonus depreciation allowances for the purpose of computing state income tax liability, and that may have deterred some companies from claiming it for federal income tax purposes. Knittel also found that the take-up rate was highest for industries where a small number of companies accounted for most of the investment in long-lived assets, such as telecommunications.

A 2017 study of the impact of bonus depreciation on business investment by Eric Zwick and James Mahon came up with strikingly different results.¹⁵ Using a model that accounted for “frictions” or imperfections in capital markets, they estimated that the allowance had a significant impact on investment in qualifying assets, boosting it by 10.4% from 2001 to 2004, and by 16.9% from 2008 to 2010. These estimates were consistent with the response found by House and Shapiro but greater than the results of other studies of the impact of bonus depreciation on business investment. Zwick and Mahon noted that their analysis produced higher estimates of the effects of the allowance because it allowed for financial frictions, which caused firms to “sharply discount future deductions, making bonus depreciation more appealing. The study also found that small and medium-sized firms were much more responsive to bonus depreciation than larger firms. Finally, firms that relied on internal cash reserves were more responsive to the incentive than firms that used debt and equity to finance new investments in qualified property.”¹⁶

There are at least five reasons why it is likely that the allowances had a modest impact on the U.S. economy as a whole since the early 2000s. First, the design of each allowance limits their impact on the level of overall economic activity. Neither allowance applies to investments in inventory, structures, and land. And the Section 179 allowance phases out once a company’s total investment in qualified assets in a tax year exceeds a specified dollar amount (\$2.5 million in 2018).

Second, spending on the assets eligible for the two expensing allowances tends to account for a relatively small slice of U.S. business investment. One measure of this relationship is the value of depreciation allowances claimed by businesses in a tax year. According to IRS data, corporations claimed a total of \$621.0 billion in depreciation allowances in the 2013 tax year. Of that amount, Section 179 allowances amounted to \$13.2 billion (or 2.1% of the total amount) and bonus depreciation allowances came to \$217.1 billion (or 35.0% of the total amount).¹⁷ In total, the two allowances represented less than 40% of total corporate depreciation allowances that year.

¹⁴ Matthew Knittel, *Corporate Response to Accelerated Depreciation: Bonus Depreciation for Tax Years 2002-2004*, Department of the Treasury, Office of Tax Analysis, Working Paper 98 (Washington: May 2007), <https://www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/WP-98.pdf>.

¹⁵ Eric Zwick and James Mahon, “Tax Policy and Heterogeneous Investment Behavior,” *American Economic Review* 2017, vol. 107, no. 1, pp. 218-219.

¹⁶ *Ibid.*, p. 219.

¹⁷ See <http://www.irs.gov/uac/EOI-Tax-Stats-Corporation-Depreciation-Data>.

Third, expensing is likely to impart less of a stimulus when an economy is mired in a recession than when it is expanding. This is because business investment generally is driven more by current economic conditions and the short-term outlook for sales and earnings than it is by tax considerations. An increase in expensing when an economy is contracting and many companies are burdened with excess capacity and increasing debt is likely to affect the timing of some planned investments. Still, the increase by itself is unlikely to spur a permanent increase in the domestic capital stock under those conditions. Some companies may accelerate planned investments to take advantage of the enhanced expensing, but that does not necessarily mean that a short-term increase in net investment reflects an increase in the desired capital stock of the many companies experiencing declines in profits or financial losses.

Fourth, an investment tax subsidy like expensing offers no immediate benefit to companies with NOLs. In this case, a company claiming an expensing allowance would simply increase the size of its NOL.

Fifth, the firm-level benefit from the Section 179 expensing and Section 168(k) bonus depreciation allowances depends on the length of a qualified asset's recovery period. The House-Shapiro study found that the bonus depreciation allowances enacted for 2002 and 2003 boosted business investment, but the increase was concentrated among long-lived equipment. And the Cohen-Cummins study concluded that the same provisions had no effect on investment in eligible short-lived assets. This difference in investment stemmed from the fact that the net present value of the tax benefit was proportional to the recovery period of the qualified assets.

The forces shaping the stimulative potential of Section 179 expensing and bonus depreciation have affected their cost-effectiveness as a means of boosting economic activity. Other approaches may produce better results, especially those that quickly put more money in the hands of unemployed individuals. A 2010 analysis by the Congressional Budget Office (CBO) shed light on the comparative benefits of alternative policies for economic stimulus. For example, it estimated that increasing financial aid to the unemployed would have increased GDP from \$0.70 to \$1.90 for each \$1.00 of budgetary cost from 2010 to 2015; by contrast, allowing full or partial expensing of investment costs would have raised GDP from \$0.20 to \$1.00 for each \$1.00 of budgetary cost.¹⁸

Efficiency Effects

Efficiency lies at the core of economic theory and analysis. It refers to the allocation of resources in an economy and how that allocation affects the welfare of consumers and of producers. An allocation of resources is considered efficient when it yields the greatest possible economic surplus (which is the total value to consumers of the goods and services they purchase minus the total cost to sellers of providing the goods and services), given existing constraints on the supply of labor and capital and the productivity of that capital. But when the allocation becomes inefficient, some of the possible gains from exchanges among buyers and sellers are not realized. For example, an allocation of resources is deemed inefficient when most suppliers of a good fail to produce it at the lowest marginal cost permitted by current technology. In this case, a shift in supply from high-cost producers to low-cost producers, driven by consumers seeking greater value, would lower the economic cost of providing the good, perhaps increasing any economic surplus.

¹⁸ Congressional Budget Office, *Policies for Increasing Economic Growth and Employment in the Short Term*, Statement of Douglas W. Elmendorf, Director, before the Joint Economic Committee, February 9, 2010, table 1, p. 11.

Expensing is equivalent to exempting from taxation the normal returns on investment. As such, it would be the preferred method of capital cost recovery under a consumption tax, such as a flat tax or a value-added tax. But under an income tax, expensing becomes a tax preference because it allows those normal returns to go untaxed. When this happens, new opportunities for tax arbitrage open up. Expensing allows taxpayers to borrow funds to purchase new depreciable assets, deduct the full cost of those assets in the year they are placed in service, and deduct interest payments on the debt incurred to acquire the assets, leading to a negative marginal effective tax rate on the returns to those investments.

How does the expensing allowance affect the allocation of capital within an economy? In theory, all taxes, except lump-sum taxes, generate inefficient economic outcomes because they influence the decisions of consumers and producers in ways that leave one group or the other, or both, worse off. Income taxes have this effect because they distort the economic choices facing individual and business taxpayers, leading them to allocate resources on the basis of how the taxes affect the costs and benefits of the goods and services they buy and sell, rather than according to their actual costs and benefits. Such a distortion entails what economists call a deadweight loss: a condition where the amount of revenue raised by a tax is less than the loss of economic welfare associated with it.

The Section 179 expensing and bonus depreciation allowances distort the allocation of resources in an economy by driving a wedge between the return on investment in favored assets and the return on investment in all other assets. Other things being equal, expensing increases the after-tax rates of return for investments in favored assets relative to the after-tax rates of return for investments in all other assets. As a result, it could encourage inefficient levels of investment in favored assets, at least in the short run, depriving more productive investments with lower after-tax rates of return of needed capital.

In general, how beneficial is expensing to companies? One way to illustrate the potential tax benefit is to show how expensing affects the marginal effective tax rate on the returns to an investment. This rate encapsulates the tax provisions that affect the returns on an investment and is calculated by subtracting the expected after-tax rate of return on a new investment from the expected pretax rate of return and dividing by the pretax rate of return. Under expensing, the pretax and after-tax rates of return are the same for the investment, which means that expensing produces a marginal effective tax rate of 0%.

This equivalence reflects a key effect of expensing: it reduces the total after-tax return over the life of an eligible asset and its total cost by the same factor: an investor's marginal tax rate.¹⁹ For example, if a small business owner's income is taxed at a rate of 35%, and the entire cost of a depreciable asset is expensed, the federal government effectively becomes a partner in the investment with a 35% interest. Through the tax code, the federal government assumes 35% of the cost of the asset by allowing its entire cost to be deducted in the first year of use, but it shares in 35% of the income earned by the investment in subsequent years, assuming no change in the owner's tax rate. By the same token, expensing allows the small business owner to receive 65% of the returns from the investment over its lifetime but to bear only 65% of the cost.

Is there evidence that the two Section 179 expensing and bonus depreciation allowances have caused shifts in the size and composition of the domestic capital stock in recent decades? This question is difficult to answer, largely because no studies have been done that assess the impact of either allowance on capital formation in the period they have been available. Given that the expensing allowance lowers the cost of capital and can boost the cash flow of firms claiming it,

¹⁹ Raquel Meyer Alexander, "Expensing," in *The Encyclopedia of Taxation and Tax Policy*, Joseph J. Cords, Robert D. Ebel, and (name redacted), eds. (Washington: Urban Institute Press, 2005), p. 129.

and that investment in many of the assets eligible for the allowance seems at least somewhat sensitive to changes in the cost of capital, it would be reasonable to conclude that the allowance may have caused domestic investment in those assets to be greater than it otherwise would have been.²⁰

But it can also be argued that much of this additional investment would have taken place in any event, and that the main effect of expensing is to accelerate the timing of those investments so the firms making them can take advantage of the tax subsidy.²¹ Most economists would agree that investment in the assets eligible for the Section 179 expensing allowance is driven more by expectations for future growth in sales and profits by firms that purchase these assets, the nature of the assets, and conditions in debt and equity markets than by tax considerations.²² This view finds some support in the available data on use of the expensing allowance: although 22% of corporations filing federal tax returns claimed the allowance from 1999 through 2003, the total value of Section 179 property placed in service was equal to 5% of gross domestic investment in equipment and computer software.²³

When seen through the lens of economic theory, expensing has efficiency effects that may worsen the deadweight loss associated with the federal tax code. Under the reasonable assumption that the amount of capital in the economy is fixed in the short run, a tax subsidy like the allowance is likely to divert some capital away from relatively productive uses and into tax-favored ones. According to standard economic theory, in an economy free of significant market failures and ruled by competitive markets, a policy of neutral or uniform taxation of capital income minimizes the efficiency losses associated with business income taxation. But the Section 179 and Section 168(k) allowances encourage firms to invest in a specific set of assets. As such, they represent a departure from the norm of neutral taxation.

In addition, expensing arguably distorts a firm's incentives to grow. Like any subsidy targeted at firms of a certain size, the Section 179 allowance gives smaller firms an incentive to limit their investment so they can continue to benefit from the allowance. Such an effect is the result of the rise in the marginal effective tax rate on the income earned by qualified assets over the allowance's phaseout range (\$2.5 million to \$3.5 million in 2018). Douglas Holtz-Eakin, a former director of the Congressional Budget Office, has labeled this incentive effect a "tax on growth by small firms."²⁴

²⁰ Two studies from the 1990s found that a 1% decline in the user cost of capital was associated with a rise in business equipment spending of 0.25% to 0.66%. See CRS Report RL31134, *Using Business Tax Cuts to Stimulate the Economy*, by (name redacted), available to congressional clients upon request.

²¹ There is some anecdotal evidence to support this supposition. At a recent hearing held by the House Small Business Subcommittee on Tax, Finance, and Exports, Leslie Shapiro of the Padgett Business Services Foundation stated that expensing "may be an incentive in making decisions to buy new equipment, but it's not the dominant force." His firm provides tax and accounting services to over 15,000 small business owners. See Heidi Glenn, "Small Business Subcommittee Weighs Bush's Expensing Boost," *Tax Notes*, April 7, 2003, p. 17.

²² See Roger W. Ferguson, Jr., "Factors Influencing Business Investment," speech delivered on October 26, 2004, available at <http://www.federalreserve.gov/boarddocs/speeches/2004/20041026/default.htm>.

²³ Various data on business claims for the expensing allowance were obtained via email from the Statistics of Income Division at IRS on March 21, 2006.

²⁴ U.S. Congress, Senate Committee on Finance, *Small Business Tax Incentives*, hearings on S. 105, S. 161, S. 628, S. 692, S. 867, and H.R. 1215, 104th Cong., 1st sess., June 7, 1995 (Washington: GPO, 1995), pp. 11-12.

Equity Effects

Equity is another basic concept in economic analysis. It generally refers to the distribution of income among the individuals or households.

In the field of public finance, equity usually denotes the distribution of after-tax income among households or individuals. Economists who analyze the equity effects of income taxes focus on two kinds of equity: horizontal equity and vertical equity. A tax is considered horizontally equitable if it imposes similar burdens on individuals with similar incomes or living standards. And a tax system is said to be vertically equitable if the burdens it imposes vary according to an individual's or household's ability to pay. The principle of vertical equity provides the intellectual foundation for a progressive income tax system. Under such a system, an individual's tax liability, measured as a fraction of income, rises with income.

The current federal income tax system may lean more in the direction of vertical equity than horizontal equity. Many individuals with similar incomes before taxes end up in the same tax bracket. But because of existing tax preferences (e.g., deductions, preferential rates, deferrals, exclusions, exemptions, and credits), a substantial number of individuals with similar before-tax incomes end up being taxed at different effective rates. At the same time, the income received by those with relatively high pretax incomes is generally taxed at higher rates than the incomes of those with relatively low pretax incomes.

How does the expensing allowance affect vertical and horizontal equity?

To answer this question, one must consider who the main recipients of the tax benefits associated with the expensing allowance are and how those benefits affect the recipients' federal income tax burden. The main direct tax benefit from the allowance is a reduction in the *marginal effective tax rate* on the income earned by eligible assets. How much of a reduction depends on the proportion of an asset's cost that is expensed. As was noted earlier, if the entire cost is expensed, then the marginal effective rate on the returns falls to zero.

Yet the allowance does not change the *actual marginal rates* at which this income is taxed. Accelerated depreciation does not reduce the federal taxes paid on the stream of income earned by an asset over its useful life. Rather, it delays or defers the payment of taxes on that income by enabling firms to take a larger share of depreciation deductions for the asset in its first year or two of use than would be possible under the MACRS. This front loading of depreciation allowances increases the present discounted value of the tax savings from depreciation relative to other depreciation schedules such as the MACRS.

Most assets eligible for the Section 179 allowance are held by smaller firms. Therefore, any gains in profits due to the allowance go to small business owners. Since the tax benefits associated with capital income tend to be concentrated in upper-income households, it can be argued that the expensing allowance tilts the federal income tax away from vertical equity. The allowance lowers the effective tax burden on small business income relative to other sources of income. While this effect makes investment in qualified assets more attractive, it does not change the fact that the allowance itself has no effect on the nominal taxes paid by small business owners over time on the income from eligible assets. Over the useful life of such an asset, the stream of depreciation deductions remains the same, regardless of whether its cost is expensed or not. As a result, it seems fair to conclude that the allowance has no lasting effect on the distribution of after-tax incomes.

Tax Administration

Yet another policy issue raised by the Section 179 and Section 168(k) expensing allowances concerns their impact on the cost of tax compliance for business taxpayers.

Most public finance economists agree that a key element of a desirable income tax system is that it imposes relatively low costs for administration and compliance. Research indicates that those costs hinge on three factors: (1) the records that must be kept in order to comply with tax laws, (2) the complexity of those laws, and (3) the types of income subject to taxation.

Most public finance economists would also agree that the federal income tax system fails this test on all counts. In their view, the costs of complying with tax laws and regulations and of collecting income taxes and enforcing compliance with those laws are needlessly high, and the primary cause is the growing complexity of the federal tax code. P.L. 115-97 appears to have done little to counter that trend and may have worsened it, particularly with regard to the new 20% deduction for passthrough business income under Section 199A.

A large number of small business owners have long complained about the costs imposed on them by the record keeping and filings required by federal income and employment taxes. The two expensing allowances address this concern by simplifying tax accounting for depreciation. It takes less time and less paperwork to write off the entire cost of a depreciable asset in its first year of use than it does to write off that cost over a longer period using allowable depreciation schedules. But this advantage does come with a cost of its own: the rules governing the use of the allowances complicate the tasks of administering and complying with the tax code.

Tax simplification is a long-standing policy objective for many small business owners. The relatively high cost of complying with federal tax laws for many small businesses lies behind this stance. According to a study prepared for the Office of Advocacy at the Small Business Administration (SBA), the estimated cost per U.S. employee for tax compliance in 2000 was \$665 for all firms, \$1,202 for firms with fewer than 20 employees, \$625 for firms with 20 to 499 employees, and \$562 for firms with 500 or more employees.²⁵ Similarly, a study by four researchers of 2004 business tax return data, which was included in the proceedings of the National Tax Association's 100th Annual Conference on Taxation, found that the direct monetary cost per employee of complying with the federal income tax ranged from \$805 for firms with less than \$10,000 in total assets to \$264 for firms with more than \$1 million in assets.²⁶ And a 2010 study by two economists from Lafayette College (also prepared for the SBA) estimated that the federal tax compliance cost per employee in 2008 was \$1,584 for firms with fewer than 20 employees, \$760 for firms with 20 to 499 employees, and \$517 for firms with 500 or more employees.²⁷ These findings demonstrate that the cost of business tax compliance is inversely proportional to firm size.

²⁵ W. Mark Crain and Thomas D. Hopkins, *The Impact of Regulatory Costs on Small Firms* (Washington: Office of Advocacy, Small Business Administration, 2001), p. 32.

²⁶ Donald DeLuca, John Guyton, Wu-Lang Lee, John O'Hare, and Scott Stilmar, "Estimates of U.S. Federal Income Tax Compliance Burden for Small Businesses," *Proceedings 100th Annual Conference 2007*, National Tax Association (Washington, DC: 2008), p. 82.

²⁷ W. Mark Crain and Nicole V. Crain, *The Impact of Regulatory Costs on Small Firms* (Washington: Office of Advocacy, Small Business Administration: 2010), p. 13.

Author Contact Information

(name redacted)
Analyst in Public Finance
[redacted]@crs.loc.gov, 7-....

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