BACKGROUND AND PRESENT LAW RELATING TO COST RECOVERY AND DOMESTIC PRODUCTION ACTIVITIES

Scheduled for a Public Hearing
Before the
SENATE COMMITTEE ON FINANCE
on March 6, 2012

Prepared by the Staff
of the
JOINT COMMITTEE ON TAXATION

February 27, 2012
JCX-19-12

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INTRODUCTION

The Senate Committee on Finance has scheduled a public hearing on March 6, 2012, entitled Tax Reform Options: Capital Investment and Manufacturing. This document,[1] prepared by the staff of the Joint Committee on Taxation, provides background, data, and analysis and describes present Federal income tax law relating to cost recovery and domestic production activities.

The first part of this document provides an overview of economic depreciation and of tax and financial accounting rules for cost recovery, along with an explanation of cost recovery methods. The second part of this document describes the present Federal income tax rules applicable to businesses with respect to capital cost recovery including depreciation, amortization of intangibles, expensing provisions, and recapture provisions upon sale of capital assets, as well as the present-law treatment of income from domestic production activities. A chart of statutory recovery periods under the current depreciation rules is provided. The third part of this document provides data and economic analysis relating to capital cost recovery as well as a survey of economic literature analyzing the economic effect of the Federal income tax incentives for capital investment and manufacturing.

This document does not address the concept of what is a capital expenditure as opposed to an amount that can be expensed currently (*e.g.*, as a repair and maintenance cost), nor does it address the definition of property for purposes of determining whether an expenditure incurred with respect to a property adds value to the property, prolongs the useful life of the property, or adapts the property to a new or different use.

This document does not address in detail the treatment of investment credits under present law. For a summary and analysis of present-law energy-related investment credits, see Joint Committee on Taxation, *Present Law and Analysis of Energy-Related Tax Expenditures and Description of the Revenue Provisions Contained in H.R. 1380, the New Alternative Transportation to Give Americans Solutions Act of 2011* (JCX-47-11), September 20, 2011.

[1] This document may be cited as follows: Joint Committee on Taxation, *Background and Present Law Relating to Cost Recovery and Domestic Production Activities,* (JCX-19-12) February 27, 2012. This document can be found on our website at www.jct.gov.

I. BACKGROUND

A. Economic and Tax Cost Recovery

1. Background

Economic depreciation

Cost recovery refers to the process by which a taxpayer recoups the cost of its investment in business or other income-producing property. The Federal income tax law permits this recoupment through the allowance of deductions for depreciation or amortization, or expensing (current year deduction of the cost of property). In lieu of (or in addition to) cost recovery, tax credits may be given to incentivize investment in capital assets.

Conceptually, depreciation could be viewed as reflecting the decline in value over time of business or income-producing property, as the ageing of the property causes it to lose value. In other words, depreciation could be viewed as representing the decline over time in the present value of income produced by the property, as its income-producing utility diminishes. Tax and economic depreciation can diverge.

Quantifying economic depreciation may not be a straightforward exercise. Does a decline to zero, in equal annual increments, of the cost of property over the life of the property reflect economic depreciation? This generally is the method for calculating straight-line depreciation under the tax law. Since the 1970s, economic literature has suggested a more nuanced methodology for measuring economic depreciation that diverges from straight-line depreciation over the life of the asset. Economic analysis suggests that economic depreciation may be better reflected by a constant rate of decline rather than a constant amount. Economists have assessed divergences between tax and economic depreciation, discussed further in section III, below.

Cost recovery under the income tax

Historically, depreciation deductions have been allowed under the Federal income tax system as a reasonable allowance for the exhaustion, or wear and tear (including obsolescence), of business property or of property held for the production of income.[2] Since 1981,[3] however, depreciation has been calculated under the Federal income tax system generally by applying a depreciation method to a recovery period for the category of property being depreciated.[4]

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[2] Sec. 167.

[3] Secs. 201-211 of the Economic Recovery Tax Act of 1981, Pub. L. No. 97-34. In 1981, the new depreciation system was explained in this manner: "The Act replaces the prior law depreciation system with the Accelerated Cost Recovery System (ACRS). ACRS is a system for recovering capital costs using accelerated methods over predetermined recovery periods that are generally unrelated to, but shorter than, prior law useful lives." Joint Committee on Taxation, *General Explanation of the Economic Recovery Tax Act of 1981* (JCS-71-81), December 29, 1981, pp. 75-76. The provisions have been modified legislatively several times since 1981.

[4] Sec. 168, described in sections II.A and II.B.2 of this document.

Similarly, amortization of intangible assets has, since 1993, been determined on the straight-line method over a 15-year period.[5] Some expensing is permitted for business property subject to annual dollar limitations under present law.[6] Tax credits are provided with respect to capital investment in certain types of property, including some types of energy-related property.[7]

In the absence of depreciation deductions, the decline in value of income-producing property would not be recognized as a deduction or loss in an income tax system that generally requires a recognition event − such as a sale or exchange of the property − in order for gain or loss to be taken into account for tax purposes.

Ascertaining the specific decline in value of each piece of business property for each year that the property is used in the business presents measurement difficulties. Even if the cost of the property is spread formulaically over the property's useful life in the business, administrative difficulties arise in predicting, estimating, or otherwise ascertaining the useful life of the property. These and related difficulties have made the use of a less fact-dependent depreciation system attractive to taxpayers and to the government from a tax administration standpoint. [8]

Depreciation methods can be adjusted to provide a greater or lesser degree of acceleration of cost recovery for the taxpayer with respect to the depreciable property. For example, for a given cost recovery period, a declining-balance method, in which the taxpayer's depreciation deduction is greatest in the early years of the cost recovery period and smaller in the later years, is more accelerated than the straight-line method, in which the taxpayer's depreciation deduction for the property is the same for each year in the cost recovery period. Although the same cost for the property is recovered over the same recovery period under both depreciation methods, the more accelerated method provides a larger overall cost recovery for the taxpayer. The acceleration of a greater amount of the deduction into the earlier years of the recovery period means that the present value of the tax benefit to the taxpayer is greater under the accelerated method than under the straight-line method.

A formulaic system of depreciation can serve to provide a tax incentive for capital investment to the extent the depreciation deductions are faster than the economic or financial statement depreciation of the property. For example, temporary rules providing for additional first-year depreciation (also known as bonus depreciation) were enacted several times in recent

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[5] Sec. 197, described in section II.D. of this document.

[6] Sec. 179, described in section II.C. of this document.

[7] For a summary and analysis of present-law energy-related investment credits, see Joint Committee on Taxation, *Present Law and Analysis of Energy-Related Tax Expenditures and Description of the Revenue Provisions Contained in H.R. 1380, the New Alternative Transportation to Give Americans Solutions Act of 2011* (JCX-47-11), September 20, 2011.

[8] For a more detailed overview of the evolution of the tax depreciation rules, see, *inter alia*, Boris I. Bittker and Lawrence Lokken, "Depreciation and Amortization - Introductory," *Federal Taxation of Income, Estates and Gifts* (3d. ed. 1999) par. 23.1.

legislation with the purpose of providing economic stimulus during times of economic downturn.[9]

Expensing, or allowing a deduction for the cost of business property in the year it is placed in service, provides a tax benefit of a greater present value than depreciation, including accelerated depreciation, because the full cost of the property is recovered in the first year rather than in subsequent years. Expensing the full cost of the property is economically equivalent to exempting from tax the so-called "normal" return on investment, assuming tax rates remain the same.

A tax credit can also serve as a form of cost recovery or may permit recovery of an amount different from the cost of the property. Prior to 1986, an investment tax credit was allowed for up to 10 percent of a taxpayer's investment in certain tangible depreciable property (generally not including buildings or their structural components). The taxpayer could not reduce its tax liability by more than the sum of a specified dollar amount plus a percentage of the tax liability in excess of that amount, though a carryover was provided for unused credits. The investment tax credit was repealed as part of the Tax Reform Act of 1986.[10] However, the Code currently provides tax credits for investments in specified types of property, including the rehabilitation credit, the low-income housing credit, and credits for energy-related property.[11]

2. Comparison of cost recovery methods

Examples

The following examples as provided in Tables 1-5 below illustrate the economic and tax effects of several possible methods of cost recovery:

1. straight-line depreciation, a method in which a taxpayer's depreciation deduction for a given asset is the same each year;

2. accelerated depreciation, under which a taxpayer's depreciation allowance for an asset is greatest in the first year in which the asset is used and declines over time (using the 200-percent declining balance method);

3. expensing, in which a taxpayer is permitted to deduct the entire cost of an asset in the year in which the taxpayer acquires the asset;

4. comparison of accelerated depreciation and discounted straight-line depreciation, in which a taxpayer deducts the difference between the present values of the expected future cash flows at the beginning and at the end of the year; and

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[9] Sec. 168(k), described in section II. B. of this document.

[10] Pub. L. No. 99-514, sec. 211.

[11] Secs. 47 (rehabilitation credit), 42 (low-income housing credit) and, *e.g.*, 45 (credit for electricity produced from renewable sources) and 48C (advanced energy project credit).

5. use of a tax credit to provide cost recovery or recovery of amounts different from the cost of the asset.[12]

Each example assumes the following facts.[13] A taxpayer buys a machine for $10,000. The machine is used for five years, generates $3,000 net cash flow annually, and has no salvage value. The taxpayer's tax rate is 35 percent. The discount rate is six percent. The taxpayer is assumed to derive other taxable income so that any net decrease in income tax liability (shown in each table as a negative number) attributable to the machine can be used to offset the taxpayer's tax liability from its other income sources. The present value ("PV") figures in the tables are derived by assuming that nominal dollars are paid (in the case of taxes) or received (in the case of cash flow) at the end of each year and by discounting these nominal dollars back to when the machine was purchased, the beginning of year one. Thus, nominal year-one dollars paid or received are discounted one year in deriving the present value of those dollars, nominal year-two dollars are discounted two years, and so forth.

[12] These examples provide a comparison of the cash flow and tax effects of the different methods of cost recovery. Other issues such as the relative complexity of each method, record-keeping and administrability aspects of each method, and the use of methods in combination with each other also would have to be taken into account in selecting among cost recovery methods.

[13] For the sake of simplicity, each example treats the property as if it were placed in service on the first day of the taxable year. However, under present tax law, the date the property was placed in service would be determined under the applicable placed in service convention.

Table 1.−Straight Line Depreciation

	(1) Unrecovered Cost	(2) Dollars Received	(3) Cost Recovery	(4) Taxable Income	(5) 35% Tax, (4) x .35	(6) PV of Tax Liability	(7) After-Tax Cash Flow (2) - (5)	(8) PV of After-Tax Cash Flow (7)
Year 1	$10,000	$3,000	$2,000	$1,000	$350	$330	$2,650	$2,500
Year 2	8,000	3,000	2,000	1,000	350	311	2,650	2,358
Year 3	6,000	3,000	2,000	1,000	350	294	2,650	2,225
Year 4	4,000	3,000	2,000	1,000	350	277	2,650	2,099
Year 5	2,000	3,000	2,000	1,000	350	262	2,650	1,980
End/total	$0	$15,000	$10,000	$5,000	$1,750	$1,474	$13,250	$11,162

Table 2.−Accelerated Depreciation

	(1) Unrecovered Cost	(2) Dollars Received	(3) Cost Recovery	(4) Taxable Income	(5) 35% Tax, (4) x .35	(6) PV of Tax Liability	(7) After-Tax Cash Flow (2) - (5)	(8) PV of After-Tax Cash Flow (7)
Year 1	$10,000	$3,000	$4,000	-$1,000	-$350	-$330	$3,350	$3,160
Year 2	6,000	3,000	2,400	600	210	187	2,790	2,483
Year 3	3,600	3,000	1,440	1,560	546	458	2,454	2,060
Year 4	2,160	3,000	1,080	1,920	672	532	2,328	1,844
Year 5	1,080	3,000	1,080	1,920	672	502	2,328	1,740
End/total	$0	$15,000	$10,000	$5,000	$1,750	$1,349	$13,250	$11,287

Table 3.−Expensing

	(1) Unrecovered Cost	(2) Dollars Received	(3) Cost Recovery	(4) Taxable Income	(5) 35% Tax, (4) x .35	(6) PV of Tax Liability	(7) After-Tax Cash Flow (2) - (5)	(8) PV of After-Tax Cash Flow (7)
Year 1	$10,000	$3,000	$10,000	-$7,000	-$2,450	-$2,311	$5,450	$5,142
Year 2	0	3,000	0	3,000	1,050	934	1,950	1,735
Year 3	0	3,000	0	3,000	1,050	882	1,950	1,637
Year 4	0	3,000	0	3,000	1,050	832	1,950	1,545
Year 5	0	3,000	0	3,000	1,050	785	1,950	1,457
End/total	$0	$15,000	$10,000	$5,000	$1,750	$1,122	$13,250	$11,516

Economic and tax results

Several observations can be made about the examples in Tables 1-3. First, in each example, by the end of year five, the last year in which the machine is used, the taxpayer has recovered the entire cost of the machine, $10,000. Second, measured in nominal or total combined annual dollars, the total amount of cash flow ($15,000), income after cost recovery ($5,000), and tax paid ($1,750) is the same under each of the three methods of cost recovery. Third, the amount of the taxpayer's total eventual tax liability expressed in present value terms at the outset of the taxpayer's investment − the number in column (6) of each example − varies significantly among the three examples. The present value of after-tax cash flows − the number in column (8) of each example − likewise varies among the examples. The initial present value of all future tax liabilities attributable to the income generated by the machine is greatest under straight-line depreciation, somewhat less under accelerated depreciation, and least under expensing. The present value of after-tax cash flows is the smallest under straight-line depreciation, greater under accelerated depreciation, and greater again under expensing.

The reason for these relationships is that expensing accelerates cost recovery relative to accelerated and straight-line depreciation, and accelerated depreciation yields more up-front cost recovery than does straight-line. Faster cost recovery defers the taxpayer's tax liability. For a fixed income stream, deferral of the tax increases the return to investment. In the end, the entire cost of the machine is recovered under all three methods, but front-loading of depreciation deductions and the concomitant lessening of the taxpayer's tax liability in the early years increase the present value of cash flows.

Accelerated depreciation compared with discounted straight-line depreciation[14]

In the examples above, straight-line depreciation is the least favorable method of cost recovery for taxpayers. An even less taxpayer-favorable rule might require a taxpayer to wait until an asset is used up or sold before recovering any portion of the cost of the asset. The rate of cost recovery − straight-line, accelerated, or expensing − is not the only variable that affects the present values of taxes and cash flows associated with an asset. The period over which costs are recovered also has an effect on these present values.

To analyze how closely any combination of recovery rates and periods replicates economic depreciation, the pattern of an asset's economic depreciation must be understood. Under the assumption that an asset produces level cash flows over its useful life − not always a realistic assumption because of the declining efficiency of some assets and, relatedly, because of increasing maintenance costs as some assets age − the asset declines in value more slowly in its early years than in its later years.

The value of an asset or, put differently, the amount someone would pay for the asset, at any time is the value at that time of all income the asset is expected to generate in the future. An asset's value, in other words, is the present value of its expected future cash flows. The decline

[14] Whether discounted straight-line depreciation is equivalent to economic depreciation, or not, is discussed in part III of this document.

in value of an asset from the beginning of one year to the end of that year − the asset's economic depreciation − is represented by the difference between the present values of the expected future cash flows at the beginning and at the end of the year.

Assume an asset generates $1,000 in cash flow each year for five years, and assume a discount rate of six percent. The value at the beginning of year one of the future cash flows ($1,000 each year for five years) is $4,212; this is the amount a taxpayer would pay for the asset. By the end of year one, the value of the future cash flows ($1,000 each year for four years) declines to $3,465. In its first year of use, the asset thus has declined in value by $747. The pattern of depreciation over the five years is illustrated in the following table:

Table 4.−Discounted Straight-Line Depreciation

Year	PV at Beginning	PV at End	Depreciation
1	$4,212	$3,465	$747
2	3,465	2,673	792
3	2,673	1,833	840
4	1,833	943	890
5	943	0	943

As can be seen in this table, the depreciation in the value of the asset is smallest during the first year and increases with each subsequent year. For an asset that generates constant cash flows, therefore, tax depreciation rules that matched this pattern of depreciation would backload cost recovery to a greater extent than the tax rules for straight-line depreciation do. In practice, the U.S. Bureau of Economic Analysis models economic depreciation at a constant rate. Applying a constant rate of depreciation would give the opposite type of pattern from that shown above; that is, the depreciation in the value of the asset would be largest in the first year and would decrease with each subsequent year. This is because the same rate would be applied each year to the declining value of the asset. This approach is discussed in part III, below.

Expensing as an incentive for capital investment

Seeking to match economic depreciation is only one possible goal of cost recovery rules. Another possible goal is to provide an incentive for capital investment. Expensing − under which, as illustrated previously, a current deduction is allowed for the entire cost of an asset − is one way to provide this incentive.[15] Under certain assumptions, including that tax rates are the same at the beginning and at the end of an investment, allowing a current deduction for the cost of an investment is equivalent to exempting from tax the return on the investment.

[15] Any method of cost recovery that is faster than economic depreciation provides a tax incentive for investment in the property for which the recovery method is available.

An example can illustrate this point.[16] Assume a taxpayer earns $1,000 in taxable income (in addition to taxable income from other sources) and invests the amount that remains after a 35-percent tax is imposed on the $1,000. The asset yields a 10-percent return and is sold after one year.

In the first scenario, no deduction is allowed for the cost of an investment, but the return on the investment is exempt from tax. The taxpayer therefore is taxed on the $1,000 when it is earned and is left with $650 ($1,000 - .35($1,000)) to invest. The $650 investment yields a 10-percent return. After one year, the investment has grown to $715, and when the investment is sold, the proceeds are exempt from tax.

In the second scenario, the taxpayer expenses, or deducts the full cost of, the investment, but is taxed when the proceeds from the investment are used for consumption. The deduction for the cost of the investment (which can be used as an offset against other taxable income) has the effect of eliminating the tax on the $1,000 of earnings, and the taxpayer can invest the entire $1,000. After one year, the investment is worth $1,100. The taxpayer sells the investment and pays tax at the rate of 35 percent, leaving him with $715, the same amount he would have had if the return had been exempt from tax as in the first scenario.

Tax credits as an incentive for capital investment

Expensing is one way of providing an incentive for capital investment. More generally, any schedule of recovery of capital costs that is more rapid than cost recovery provided under tax law in effect at the time creates an incentive to engage in capital investment that benefits from the more rapid recovery rules. Tax credits can serve this incentive function. For much of the period from 1962 through 1985, the income tax rules included an investment tax credit for the purchase of tangible property and certain other kinds of property for use in a business or profit-seeking activity. The credit amount initially was seven percent of the cost of the property and was increased to 10 percent.[17]

Table 5 shows the effects of a five-percent income tax credit under the assumptions used in Tables 1 through 3: a machine with a five-year life is purchased for $10,000, the machine generates annual cash flow (net of expenses) of $3,000, and the discount rate is six percent. As is shown in Table 5, the five-percent investment credit generates a $500 tax savings (five-percent of $10,000) in year one and requires the taxpayer to reduce its basis in the machine by $500 in that year (from $10,000 to $9,500). Table 5 assumes the taxpayer then is required to use straight-line depreciation in recovering its remaining cost.

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[16] The equivalence is easily seen mathematically: the final after-tax value of exempting the return from tax is given by $C * (1+r)^n * (1-t)$, where C equals the capital investment in the property, r the annual rate of return, n the number of years the investment is held, and t the tax rate. The final after-tax value of expensing is $(1-t) * C * (1+r)^n$. Note that $(1-t) * C$ represents the reduced amount that can be invested in the expensing scenario since tax must be paid first. The only difference in the two expressions is the location of the (1-t) term, and thus the expressions are mathematically equivalent when t is unchanged.

[17] The Tax Reduction Act of 1975, Pub. L. No. 94-12, sec. 301 (1975).

Table 5.−Investment Tax Credit

	(1) Unrecovered Cost	(2) Dollars Received	(3) Cost Recovery	(4) Taxable Income	(5) 35% Tax, (4) x .35	(6) PV of Tax Liability	(7) After-Tax Cash Flow (2) - (5)	(8) PV of After-Tax Cash Flow (7)
Year 1	$9,500*	$3,000	$1,900	$1,100	-$115**	-$108	$3,115	$2,939
Year 2	7,600	3,000	1,900	1,100	385	343	2,615	2,327
Year 3	5,700	3,000	1,900	1,100	385	323	2,615	2,196
Year 4	3,800	3,000	1,900	1,100	385	305	2,615	2,071
Year 5	1,900	3,000	1,900	1,100	385	288	2,615	1,954
End/total	$0	$15,000	$9,500***	$5,500	$1,425	$1,151	$13,575	$11,487

* After initial basis reduction for five-percent investment credit equaling $500.

** Including $500 investment credit.

*** Not including $500 initial basis reduction required under the investment tax credit rules.

Table 5 reveals that, under the assumptions of the depreciation examples discussed above, the combination of the investment tax credit and straight-line depreciation produces a greater present value of after-tax cash flows than does accelerated depreciation in the absence of the investment credit, and it produces slightly less present value of after-tax cash flows than does expensing. More broadly, however, through the choice of, among other features, a credit rate, an investment credit can be designed to replicate the economic and tax results of a given set of depreciation rules.

The most favorable cost recovery method described above, expensing, can, as discussed previously, have the same after-tax effects as would exempting from tax the return on an investment. Certain rules (including investment credits and deductions for interest expense) can produce a result better than exemption. From 1981 until 1986, "the tax benefits of the combination of the investment tax credit and accelerated depreciation were more generous for some equipment than if the full cost of the investment were deducted immediately − a result more generous than exempting all earnings on the investment from taxation."[18] This result had the effect of encouraging investment in equipment qualifying for generous treatment even if the investment would have been unprofitable in the absence of the tax rules.

[18] Joint Committee on Taxation, *General Explanation of the Tax Reform Act of 1986* (JCS-10-87), May 4, 1987, p. 98.

B. Financial Accounting Rules for Cost Recovery

In general

The Federal tax rules and the financial accounting rules for cost recovery differ in a variety of ways. In general, the tax cost recovery rules do not match tax depreciation with economic depreciation. In most circumstances, the tax rules permit accelerated depreciation, and in some cases require (or permit) straight-line depreciation. In certain other instances, the tax rules permit limited expensing. The financial accounting rules for cost recovery do not provide parallel rules in many cases.

Like the Federal tax rules, the financial accounting rules specify the depreciation method, the cost recovery period, and the depreciable base. Various depreciation methods are permitted under Generally Accepted Accounting Principles ("GAAP"), including the straight-line method, usage methods, and the double-declining balance method.[19] However, the straight-line method of depreciation is most often used in practice. Thus, the cost of a capital asset generally is recovered in equal expense amounts during each year of the asset's depreciable life. Under GAAP, recovery periods generally are intended to reflect an asset's useful life, and therefore often differ from the recovery periods used for tax purposes.[20] The depreciable base is the cost of the property, less the salvage value, for financial reporting purposes.

Identifiable intangible assets, other than goodwill, are amortized for financial reporting purposes over the useful life of the asset, unless that life is determined to be indefinite. The method of amortization should reflect the pattern in which the economic benefits of the intangible asset are consumed or otherwise used. However, if that pattern cannot be reliably determined, a straight-line method is permitted.[21] Any amount recognized as goodwill in a business combination cannot be amortized.[22] In addition, the cost of internally developing, maintaining, or restoring intangible assets that are not specifically identifiable, that have indeterminate lives, or that are inherent in a continuing business are recognized as an expense when incurred.

Major differences between tax and financial accounting cost recovery

Differences between financial statement and tax cost recovery arise due to the use of the salvage value in computing the depreciable base for financial statement purposes, the difference

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[19] Accounting Standards Codification ("ASC") 360-10-35: Property, Plant, and Equipment: Subsequent Measurement.

[20] Taxpayers may wish to align the recovery period with the tax rules for administrative convenience. However, if the number of years specified by the Alternative Cost Recovery System of the Internal Revenue Service for recovery deductions for an asset does not fall within a reasonable range of the asset's useful life, the recovery deductions shall not be used as depreciation expense for financial reporting purposes. ASC 360-10-35-9.

[21] ASC 350-30-35: Intangibles-Goodwill and Other: General Intangibles Other than Goodwill.

[22] ASC 350:20-25: Intangibles-Goodwill and Other: Goodwill.

in methodologies (*e.g.*, use of the straight-line method for financial statement purposes as opposed to accelerated recovery methods for tax purposes), and the inability to depreciate or amortize certain costs (*e.g.*, goodwill) for financial statement purposes or (*e.g.*, removal costs) for tax purposes. In addition, for financial reporting purposes, if the value of a tangible or intangible asset becomes impaired, the impairment loss is recognized in the current period. In contrast, for tax purposes, impairment losses generally are not recognized until the asset is disposed or abandoned.

Treatment of book-tax differences for financial accounting purposes

Because tax laws and financial accounting standards differ as to when or how some items are recognized or measured, items may be reported sooner or later or in different amounts on the tax return than in the financial statements. These items create "temporary differences," or differences between the tax basis and book basis of an asset or liability. Differences in the pattern and length of cost recovery produce only temporary book-tax differences as over the life of the property the cumulative deductions will be the same for financial statement income reporting and taxable income computation purposes.

Temporary differences do not affect the total nominal amount of tax liability reported by a corporation for the year. However, temporary differences do affect the amount of cash taxes paid by the corporation for the year. To keep the total tax expense constant, corporations record an accrued tax expense (or benefit) to reflect the portion of the year's tax expense which will be paid (or refunded) in a future year. This accrual is known as deferred tax expense (or benefit) and results in an asset (or liability) on the company's balance sheet. These balance sheet items are referred to as deferred tax assets and deferred tax liabilities.

Table 6 reflects the financial accounting results where the straight-line method of depreciation is used for both financial statement and taxable income, and the salvage value is assumed to be zero, using the same facts as those employed in Table 1, above. Because the cost recovery method and recovery period are identical, financial statement income and taxable income are equal in each year. The company's cash tax expense is equal to its financial statement tax expense, which (in the absence of permanent differences) is 35 percent of financial statement income.

Table 6.−Example Using Straight-Line Depreciation for Both Book and Tax

	(1) Book Income	(2) Taxable Income	(3) Book-Tax Difference (2)-(1)	(4) Deferred Tax Expense (3) x .35	(5) Current (Cash) Tax Expense (2) x .35	(6) Total Tax Expense (4)+(5) or 1 x .35	(7) Book Reported Average Tax Rate
Year 1	$1,000	$1,000	$0	$0	$350	$350	35%
Year 2	1,000	1,000	0	0	350	350	35%
Year 3	1,000	1,000	0	0	350	350	35%
Year 4	1,000	1,000	0	0	350	350	35%
Year 5	1,000	1,000	0	0	350	350	35%
Totals	$5,000	$5,000	$0	$0	$1,750	$1,750	35%

Table 7 below reflects the financial accounting results if accelerated depreciation is permitted for tax purposes while straight-line depreciation is used for financial accounting. While the pattern of income differs, the cumulative taxable income over the five-year period is equal to cumulative financial statement income. Because the capital costs are recovered earlier under accelerated depreciation, taxable income is less than financial statement income in the early years and greater than financial statement income in the later years.

On an annual basis, the temporary differences are accounted for by accruing deferred tax expense. For example, in year one, financial statement income exceeds taxable income by $2,000 − Table 7, column (3). That difference represents the excess of tax depreciation deductions of $4,000 − Table 2, column (2) − over financial statement depreciation expense of $2,000 − Table 1, column (2) − in year one. Because this difference will exactly offset over the life of the asset, it is also offset for financial accounting purposes when calculating income tax expense. This offset is accomplished by accruing a deferred tax expense equal to 35 percent of the difference between financial statement and tax income of $2,000, or $700 − the number in column (4). Following across the row, the $1,000 taxable loss produces a current tax benefit (negative expense) of $350 − the number in column (5). Netting the deferred tax expense of $700 against the current tax benefit of $350, the total tax expense on the financial statements in year one is $350 − the number in column (6), or 35 percent of book income − the number in column (7).

Table 7.−Example Using Straight-Line Depreciation for Book; Accelerated Depreciation for Tax

	(1) Book Income	(2) Taxable Income	(3) Book-Tax Difference (2)-(1)	(4) Deferred Tax Expense (3) x .35	(5) Current (Cash) Tax Expense (2) x .35	(6) Total Tax Expense (4)+(5) or (1) x .35	(7) Book Reported Average Tax Rate
Year 1	$1,000	-$1,000	$2,000	$700	-$350	$350	35%
Year 2	1,000	600	400	140	210	350	35%
Year 3	1,000	1,560	-560	-196	546	350	35%
Year 4	1,000	1,920	-920	-322	672	350	35%
Year 5	1,000	1,920	-920	-322	672	350	35%
Totals	$5,000	$5,000	$0	$0	$1,750	$1,750	35%

While the net present value of cash flows under the accelerated depreciation method is higher than under the straight-line method (see Tables 1 and 2, column (8)), the tax expense and average tax rates reported on the financial statements are identical under the two methods, in each year and on a cumulative basis. Similarly, use of expensing for tax purposes and straight-line depreciation for financial reporting purposes produces a higher net present value of cash flows − Table 3, column (8), but no difference in the tax expense and average tax rates reported on the financial statements.

Investment tax credit

In contrast to the straight-line depreciation, accelerated depreciation, and expensing methods of cost recovery, an investment tax credit generally reduces the total cash taxes paid over the life of an asset as well as the total tax expense and average tax rate reported on the financial statements.

Table 8 below reflects the financial accounting results of a five-percent investment tax credit, using the same facts as Table 5 above.[23] Unlike the examples of temporary book-tax differences in Tables 6 and 7, the $500 investment tax credit in year one is a permanent reduction in the company's tax expense and thus is treated as a permanent book-tax difference.

During year one, financial statement depreciation exceeds tax depreciation by $100. That difference represents the excess of financial statement depreciation expense of $2,000 − Table 1, column (2) − over tax depreciation deductions of $1,900 − Table 5, column (3) − in year one.

[23] See discussion of Table 5, above, for calculation of taxable income and current (cash) tax expense figures in Table 8.

The tax basis of the capital asset is reduced by $500 under the investment tax credit rules. Thus, the financial statement basis of the asset exceeds the tax basis of the asset by $400 at the end of year one − the number in column (4). To reflect the future financial statement depreciation expense in excess of tax deductions, a $140 deferred tax expense (35 percent of the basis difference) is accrued in year one − the number in column (5). When netted against the cash tax benefit of $115 − the number in column (6), total tax expense for year one is only $25 − the number in column (7), or 2.5 percent of year one financial statement income − the number in column (8). The average tax rate is reduced because the tax expense has been permanently reduced by the investment tax credit.

Over the life of the asset, as the temporary difference from year one reverses and the company experiences no further permanent differences, the average tax rate returns to 35 percent of financial statement income each year. However, on a cumulative basis, because the total tax expense has been reduced, the average tax rate over the life of the asset, for financial statement purposes, is reduced as well.

Table 8.−Example Using Straight-Line Depreciation for Book; Five-Percent Investment Tax Credit for Tax

	(1) Book Income	(2) Taxable Income	(3) ITC Basis Adjustment	(4) Book Tax Difference (2)-(1)+(3)	(5) Deferred Tax Expense (3) x .35	(6) Current (Cash) Tax Expense [(2) x .35] +(3)	(7) Total Tax Expense	(8) Book Reported Average Tax Rate
Year 1	$1,000	$1,100	-$500	-$400	$140	-$115	$25	2.5%
Year 2	1,000	1,100	0	100	-35	385	350	35.0%
Year 3	1,000	1,100	0	100	-35	385	350	35.0%
Year 4	1,000	1,100	0	100	-35	385	350	35.0%
Year 5	1,000	1,100	0	100	-35	385	350	35.0%
Totals	$5,000	$5,500	-$500	$0	$0	$1,425	$1,425	28.5%

C. Summary of Economic and Accounting Consequences of Cost Recovery Alternatives

As demonstrated above, straight-line depreciation, accelerated depreciation, and expensing differ between financial accounting and tax only in the timing of deductions. By altering the timing of deductions (and therefore the timing of payment of tax), these alternatives do not change the total amount of tax paid over the life of the asset or the tax expense reported in a taxpayer's financial statements, but they do have important economic effects by impacting the net present value of future cash flows from the investment. Given the facts as outlined in the examples above, use of the straight-line method produces a present value of after-tax cash flow of $11,162 as shown Table 1, column (8). This can be compared with the present value of after-tax cash flow of $11,287 as shown on Table 2, column (8) under the accelerated depreciation method, and with $11,516 as shown on Table 3, Column (8) under an expensing method.

An investment tax credit system, depending on its parameters, can be designed to produce either a higher or lower net present value of future cash flows than the timing methods described above, and therefore may be more or less desirable to taxpayers than those methods.[24] The example of a five-percent investment tax credit illustrated in Table 5 produced a present value of future cash flows of $11,487 as shown in column (8), a higher return from the investment than depreciation under the straight-line or accelerated depreciation methods, but a lower return from the investment than under the expensing method. However, while the impact on net present value of future cash flows can be higher or lower, depending on the specific parameters, the investment tax credit results in less total tax paid over the life of an asset, and a permanently lower tax expense reported in a taxpayer's financial statements as compared to the depreciation or expensing methods.

[24] Important parameters impacting the comparison include, in particular, the credit percentage and which cost recovery method is used to recover remaining basis after the credit.

II. PRIOR AND PRESENT LAW

A. Depreciation

1. Legislative background

In general

To account for the wear and tear, deterioration, or obsolescence of its property, a taxpayer is allowed to recover through annual depreciation deductions the cost of certain property used in a trade or business or for the production of income. As described in 1985, the depreciation system in place prior to 1981 provided that…

> "[c]lass lives are generally based on guideline lives established for the Asset Depreciation Range ("ADR") system of depreciation that was adopted in 1971. Under the ADR system, a present class life was provided for all assets used in the same activities, other than certain assets with common characteristics (*e.g.*, automobiles). Assets were grouped into more than 100 classes and a guideline life was determined by the former Office of Industrial Economics in the Treasury Department. The guideline lives established under the ADR system were about 30 to 40-percent shorter than the service lives found in Bulletin F, a publication concerning useful lives issued in 1942 by the Internal Revenue Service."[25]

In 1981, the prior-law ADR and useful life systems were replaced by a new system, the accelerated cost recovery system ("ACRS"),[26] which permitted "recovery of capital costs for most tangible depreciable property using accelerated methods of cost recovery over predetermined recovery periods generally unrelated to, but shorter than, [prior] law useful lives."[27] The Senate Finance Committee Report with respect to the provision explained the rationale for the change: "[t]he committee believes that the present rules for determining depreciation allowances . . . need to be replaced because they do not provide the investment stimulus that is essential for economic expansion. The real value of depreciation deductions allowed under present rules has declined for several years due to successively higher rates of inflation. . . . The committee therefore believes that a new capital cost recovery system is required which provides for the more rapid acceleration of cost recovery deductions . . . ."[28]

These rules were tightened somewhat in 1982,[29] and modified more substantially in 1986,[30] when the modified accelerated cost recovery system ("MACRS") was adopted. The

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[25] Joint Committee on Taxation, *Tax Reform Proposals: Taxation of Capital Income* (JCS-35-85), August 8, 1985, p. 48.

[26] The Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, sec. 202 (1981).

[27] S. Rep. No. 97-144, p. 48 (1981).

[28] *Ibid*. p. 47.

[29] The Tax Equity and Fiscal Responsibility Act of 1982, Pub. L. No. 97-248, sec. 206 (1982).

1986 legislation enacting MACRS further accelerated the rate of recovery of depreciation deductions from the 150-percent declining balance method to the 200-percent declining balance method for those tangible assets with the shortest class lives.[31] In addition, under the 1986 legislation, certain assets were reclassified and the number of asset classes was increased. The 1986 legislation also extended the recovery period for residential rental property to 27.5 years and to 31.5 years for nonresidential real property, and provided that their cost would be recovered using the straight-line method. The recovery period for nonresidential real property was extended to 39 years in 1993.[32]

Recovery periods

The applicable recovery period for an asset is determined in part by statute and in part by historic Treasury guidance. The "type of property" of an asset is used to determine the "class life" of the asset, which in turn dictates the applicable recovery period for the asset.

When the MACRS system was enacted in 1986, Congress explicitly categorized certain assets by type of property.[33] Further, Congress directed the Secretary of the Treasury to establish an office to monitor and analyze actual experience with respect to depreciable assets and authorized the Secretary to prescribe or modify class lives for depreciable assets, provided that the new class life reasonably reflected the anticipated useful life and the anticipated decline in value over time of the property to the industry or other group.

Exercising the authority granted by Congress, the Secretary issued Revenue Procedure 87-56,[34] laying out the framework of recovery periods for enumerated classes of assets. The Secretary clarified and modified the list of asset classes in Revenue Procedure 88-22.[35]

In November 1988, Congress revoked the Secretary's authority to modify the class lives of depreciable property as part of the Technical and Miscellaneous Revenue Act of 1988.[36] Revenue Procedure 87-56, as modified, remains in effect except to the extent that the Congress has, since 1988, statutorily modified the recovery period for certain depreciable assets, effectively superseding any administrative guidance with regard to such property.

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[30] The Tax Reform Act of 1986, Pub. L. No. 99-514, sec. 201 (1986).

[31] Under the declining balance method the depreciation rate is determined by dividing the appropriate percentage (here 150 or 200) by the appropriate recovery period. This leads to accelerated depreciation when the declining balance percentage is greater than 100.

[32] The Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, sec. 13151(a) (1993).

[33] See Table 9 which summarizes the various types of property and applicable recovery periods under MACRS.

[34] 1987-2 C.B. 674.

[35] 1988-1 C.B. 785.

[36] Pub. L. No. 100-647, sec. 6253 (1988).

2. Prior and present law

In general

For Federal income tax purposes, a taxpayer is allowed to recover through annual depreciation deductions the cost of certain property used in a trade or business or for the production of income. The amount of the depreciation deduction allowed with respect to tangible property for a taxable year is determined under MACRS whereby different types of property generally are assigned applicable recovery periods and depreciation methods.

The MACRS recovery periods applicable to most tangible personal property range from three to 20 years.[37] The depreciation methods generally applicable to tangible personal property are the 200-percent and 150-percent declining balance methods,[38] switching to the straight-line method for the first taxable year where using the straight-line method with respect to the adjusted basis as of the beginning of that year will yield a larger depreciation allowance. The recovery periods for most real property are 39 years for nonresidential real property and 27.5 years for residential rental property. Table 9 provides general rules for class lives and recovery periods as provided in section 168(e).

[37] For certain tangible assets, the recovery period is controlled by statute (see, *e.g.*, section I.E. which includes a table of statutorily defined recovery periods for specific types of property). For all other tangible assets, the recovery period is generally determined by administrative guidance (see, *e.g.*, Rev. Proc. 87-56, 1987-2 CB 674, and Appendix B of IRS Publication 946).

[38] Declining balance methods accelerate a portion of the total allowable deductions into the earlier years of the recovery period. For example, under the 200-percent declining balance method, the deduction in the first year is twice what it would be under the straight-line method, but the annual allowance amount declines over the recovery period. The allowable amount is thus smaller in the later years than the allowable amounts for those years would have been under the straight-line method.

Table 9.−General Rules for Class Lives and Recovery Periods

Type of Property	General Rule-Class Life	Applicable Recovery Period
3-year property	4 years or less	3 years
5-year property	More than 4 but less than 10 years	5 years
7-year property	10 or more but less than 16 years; also, property (other than real property) without a class life	7 years
10-year property	16 or more but less than 20 years	10 years
15-year property	20 or more but less than 25 years	15 years
20-year property	25 or more years	20 years
Water utility property	50 years	25 years
Residential rental property	40 years	27.5 years
Nonresidential real property	40 years	39 years
Any railroad grading or tunnel bore	50 years	50 years

Placed-in-service conventions

Depreciation of an asset begins when the asset is deemed to be placed in service under the applicable convention. Under MACRS, nonresidential real property, residential rental property, and any railroad grading or tunnel bore generally are subject to the mid-month convention, which treats all property placed in service during any month (or disposed of during any month) as placed in service (or disposed of) on the mid-point of such month. All other property generally is subject to the half-year convention, which treats all property placed in service during any taxable year (or disposed of during any taxable year) as placed in service (or disposed of) on the mid-point of such taxable year. However, if substantial property is placed in service during the last three months of a taxable year, a special rule requires use of the mid-quarter convention,[39] designed to prevent the recognition of disproportionately large amounts of first-year depreciation under the half-year convention.

Depreciation under the alternative minimum tax regime

In determining the amount of alternative minimum taxable income for any taxable year, taxpayers generally are required to calculate depreciation for certain assets under modified rules. Specifically, assets to which the 200-percent declining balance method is applicable under

[39] The mid-quarter convention treats all property placed in service (or disposed of) during any quarter as placed in service (or disposed of) on the mid-point of such quarter.

MACRS are depreciated using the 150-percent declining balance method for purposes of computing alternative minimum taxable income.[40]

In addition, for property placed in service after December 31, 1986 and on or before December 31, 1998, depreciation for alternative minimum tax purposes is calculated using the longer recovery periods of the alternative depreciation system described below.[41]

Alternative depreciation system

The alternative depreciation system ("ADS") is required to be used for property used predominantly outside the United States, tax-exempt bond financed property, and certain tax-exempt use property.[42] An election to use ADS is available to taxpayers for any class of property for any taxable year.[43] Under ADS, all property is depreciated using the straight-line method, over recovery periods which are generally longer than those used under MACRS. Bonus depreciation, discussed below, is not available for property required to be depreciated using ADS.[44]

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[40] Sec. 56(a)(1)(A)(ii).

[41] Sec. 56(a)(1)(A)(i).

[42] Sec. 168(g).

[43] Sec. 168(g)(7).

[44] Sec. 168(k)(2)(D)(i).

B. Additional First-Year Depreciation Deduction ("Bonus Depreciation")

1. Legislative background

For the past decade, Congress has provided additional first-year depreciation deductions for assets placed in service in certain years. The legislative history for the Jobs and Growth Tax Relief Reconciliation Act of 2003 ("JGTRRA") sets forth the rationale for extending and increasing the benefit as follows:

> "The Committee believes that increasing and extending the additional first-year depreciation will accelerate purchases of equipment, promote capital investment, modernization, and growth, and will help to spur an economic recovery. As businesses accelerate their purchases of equipment current employment will increase to produce that equipment. Current business expansion also will increase employment opportunities in the years ahead."[45]

The first instance of bonus depreciation came in the Job Creation and Worker Assistance Act of 2002,[46] which provided an additional first-year depreciation deduction equal to 30 percent of the adjusted basis of qualified property.[47] The additional first-year depreciation deduction was allowed for both regular tax and alternative minimum tax purposes for the taxable year in which the property was placed in service. The basis of the property and the depreciation allowances in the placed-in-service year and later years were appropriately adjusted to reflect the additional first-year depreciation deduction. In addition, there were no adjustments to the allowable amount of depreciation for purposes of computing a taxpayer's alternative minimum taxable income with respect to property to which the provision applies.

The bonus depreciation significantly accelerates allowable deductions. For example, a taxpayer who placed in service machinery (a seven-year asset, and assuming the half-year convention) would have deducted 40 percent (30 percent + (70 percent x 14.29 percent)) of the asset's basis during the first year. Without bonus depreciation, the same taxpayer would have deducted 14.29 percent of the asset's basis during the first year.

For property to qualify for the additional first-year depreciation deduction, it must have met all of the following requirements. First, the property must have been: (1) property to which the general rules of MACRS applied with an applicable recovery period of 20 years or less, (2) water utility property (as defined in section 168(e)(5)), (3) computer software other than computer software covered by section 197,[48] or (4) qualified leasehold improvement property (as defined in section 168(k)(3)). Second, the original use of the property must have commenced

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[45] H.R. Rep. No. 108-94, p. 23.

[46] Pub. L. No. 107-147, sec. 101 (2002).

[47] A taxpayer was permitted to elect out of the 30-percent additional first-year depreciation deduction for any class of property for any taxable year.

[48] See section II.D. for a discussion of section 197.

with the taxpayer on or after September 11, 2001. Third, the taxpayer must have acquired the property within the applicable time period. Finally, the property must have been placed in service before January 1, 2005. An extension of the placed-in-service date of one year (to January 1, 2006) was provided for certain property with a recovery period of ten years or longer and certain transportation property.[49]

The applicable time period for acquired property was: (1) after September 10, 2001, and before September 11, 2004, and no binding written contract for the acquisition was in effect before September 11, 2001, or (2) pursuant to a binding written contract which was entered into after September 10, 2001, and before September 11, 2004.[50]

The second instance of bonus depreciation came in JGTRRA,[51] which provided an additional first-year depreciation deduction equal to 50 percent of the adjusted basis of qualified property.[52] Qualified property was defined in the same manner as for purposes of the 30-percent additional first-year depreciation deduction, except that the applicable time period for acquisition or self construction of the property and the placed-in-service date requirement were modified. Property for which the 50-percent additional first-year depreciation deduction was claimed was not eligible for the 30-percent additional first-year depreciation deduction.

To qualify for the 50-percent additional first-year depreciation deduction, the property must have been acquired after May 5, 2003 (the date of enactment of JGTRRA), and before January 1, 2005, and no binding written contract for the acquisition was in effect before May 6, 2003. With respect to property that was manufactured, constructed, or produced by the taxpayer for use by the taxpayer, the taxpayer must have begun the manufacture, construction, or production of the property after May 5, 2003.

This provision also extended the 50-percent additional first-year depreciation deduction to certain property with a recovery period of 10 years or longer and certain transportation property placed in service prior to January 1, 2006 (instead of January 1, 2005).[53]

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[49] In order for the property to qualify for the extended placed in service date, the property was required to have a production period exceeding two years or an estimated production period exceeding one year and a cost exceeding $1 million.

[50] For self-constructed property, the taxpayer must have begun the manufacture, construction, or production of the property after September 10, 2001, and before September 11, 2004.

[51] Pub. L. No. 108-27, sec. 201 (2003).

[52] A taxpayer was permitted to elect out of the 50-percent additional first-year depreciation deduction for any class of property for any taxable year.

[53] A special rule limits the amount of costs eligible for the additional first-year depreciation. With respect to such property, only progress expenditures properly attributable to the costs incurred before January 1, 2005 shall be eligible for the additional first-year depreciation deduction. Further, the Gulf Opportunity Zone Act of 2005, Pub. L. No. 109-35, sec. 105 (2005), provided an extension to January 1, 2007 for taxpayers unable to meet the January 1, 2006 deadline because of Hurricane Katrina, Rita, or Wilma.

The American Jobs Creation Act of 2004 ("AJCA")[54] expanded the definition of eligible property to include certain leasehold improvements and qualified restaurant property. The AJCA also made the long production period extended placed-in-service dates available for certain noncommercial aircraft.[55]

The Economic Stimulus Act of 2008[56] reinstated 50-percent bonus depreciation for property acquired after December 31, 2007, and before January 1, 2009, so long as no binding written contract for the acquisition was in effect before January 1, 2008.[57] With respect to property that was manufactured, constructed, or produced by the taxpayer for use by the taxpayer, the taxpayer must have begun the manufacture, construction, or production of the property after December 31, 2007. Similar to earlier provisions, an extension of the placed-in-service date of one year (*i.e.*, January 1, 2010) was provided for certain property with a recovery period of 10 years or longer and certain transportation property. However, only costs incurred before January 1, 2009 were eligible for the additional first-year depreciation.

The American Recovery and Reinvestment Act of 2009[58] extended the additional first-year depreciation deduction for one year, generally through 2009 (through 2010 for certain longer-lived and transportation property). The Small Business Jobs Act of 2010[59] extended the additional first-year depreciation deduction for another year, generally for assets placed in service through 2010 (through 2011 for certain long-lived property and transportation property).

The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 ("2010 Tax Relief Act")[60] extended and expanded the additional first-year depreciation deduction. The additional first-year depreciation deduction is equal to 100 percent of the adjusted basis of qualified property placed in service after September 8, 2010 (the date the 2010 Tax Relief Act was introduced), and before January 1, 2012 (before January 1, 2013, for certain longer-lived and transportation property) if it meets the requirements for the additional first-year depreciation and also meets the following requirements. First, the taxpayer must acquire the property after September 8, 2010 and before January 1, 2012.[61] Second, the taxpayer must place

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[54] Pub. L. No. 108-357, sec. 211 (2004).

[55] Pub. L. No. 108-357, sec. 336 (2004).

[56] Pub. L. No. 110-185, sec. 103 (2008).

[57] A taxpayer was permitted to elect out of the 50-percent additional first-year depreciation deduction for any class of property for any taxable year.

[58] Pub. L. No. 111-5, sec. 1201 (2009).

[59] Pub. L. No. 111-240, sec. 2022 (2010). Further, for qualifying property (property otherwise eligible for bonus depreciation that had a MACRS recovery period of 7 years or less) placed in service in 2010, the taxpayer was not required to allocate the additional first-year depreciation deduction to related section 460 contracts.

[60] Pub. L. No. 111-312, sec. 401 (2010).

[61] For a definition of "acquire" for this purpose, see section 3.02(1)(a) of Rev. Proc. 2011-26, 2011-16 I.R.B. 664.

the property in service after September 8, 2010 and before January 1, 2012 (before January 1, 2013 in the case of certain longer-lived and transportation property). Third, the original use of the property must commence with the taxpayer after September 8, 2010. An additional 50-percent first-year depreciation deduction[62] is allowed for qualified property placed in service after December 31, 2011, and before January 1, 2013, (after December 31, 2012, and before January 1, 2014, for certain longer-lived and transportation property). The additional first-year depreciation deduction is allowed for both regular tax and alternative minimum tax purposes, but is not allowed for purposes of computing earnings and profits.[63]

2. Present law

An additional first-year depreciation deduction is allowed equal to 50 percent of the adjusted basis of qualified property placed in service between January 1, 2008 and September 8, 2010 or between January 1, 2012 and January 1, 2013 (January 1, 2014 for certain longer-lived and transportation property).[64] As described above, an additional first-year depreciation deduction is allowed equal to 100 percent of the adjusted basis of qualified property placed in service after September 8, 2010 and before January 1, 2012 (before January 1, 2013, in the case of certain longer lived and transportation property).

Property qualifying for the additional first-year depreciation deduction must meet all of the following requirements. First, the property must be (1) property to which MACRS applies with an applicable recovery period of 20 years or less; (2) water utility property (as defined in section 168(e)(5)); (3) computer software other than computer software covered by section 197; or (4) qualified leasehold improvement property (as defined in section 168(k)(3)).[65] Second, the original use[66] of the property must commence with the taxpayer after December 31, 2007.[67]

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[62] An additional first-year depreciation deduction is also allowed equal to 50-percent of the adjusted basis of qualified property placed in service during 2008, 2009, and 2010 (2009, 2010, and 2011 for certain longer-lived and transportation property).

[63] Sec. 168(k). The additional first-year depreciation deduction is subject to the general rules regarding whether an item must be capitalized under section 263 or section 263A.

[64] Sec. 168(k). The additional first-year depreciation deduction is subject to the general rules regarding whether an item must be capitalized under section 263 or section 263A.

[65] The additional first-year depreciation deduction is not available for any property that is required to be depreciated under the alternative depreciation system of MACRS. The additional first-year depreciation deduction is also not available for qualified New York Liberty Zone leasehold improvement property as defined in section 1400L(c)(2).

[66] The term "original use" means the first use to which the property is put, whether or not such use corresponds to the use of such property by the taxpayer. If in the normal course of its business a taxpayer sells fractional interests in property to unrelated third parties, then the original use of such property begins with the first user of each fractional interest (i.e., each fractional owner is considered the original user of its proportionate share of the property).

[67] A special rule applies in the case of certain leased property. In the case of any property that is originally placed in service by a person and that is sold to the taxpayer and leased back to such person by the taxpayer within three months after the date that the property was placed in service, the property would be treated as originally placed

Third, the taxpayer must acquire the property within the applicable time period (as described below). Finally, the property must be placed in service before January 1, 2013. An extension of the placed-in-service date of one year (*i.e.*, January 1, 2014) is provided for certain property with a recovery period of 10 years or longer and certain transportation property.[68] Transportation property generally is defined as tangible personal property used in the trade or business of transporting persons or property.[69]

To qualify for the additional first-year depreciation deduction, property generally must be acquired (1) after December 31, 2007, and before January 1, 2013 (before January 1, 2014 in the case of certain longer-lived and transportation property), but only if no binding written contract for the acquisition is in effect before January 1, 2008, or (2) pursuant to a binding written contract which was entered into after December 31, 2007, and before January 1, 2013.[70] With respect to property that is manufactured, constructed, or produced by the taxpayer for use by the taxpayer, the taxpayer must begin the manufacture, construction, or production of the property after December 31, 2007, and before January 1, 2013. Property that is manufactured, constructed, or produced for the taxpayer by another person under a contract that is entered into prior to the manufacture, construction, or production of the property is considered to be manufactured, constructed, or produced by the taxpayer. For property eligible for the extended placed-in-service date, a special rule limits the amount of costs eligible for the additional first-year depreciation. With respect to such property, only the portion of the basis that is properly attributable to the costs incurred before January 1, 2013 ("progress expenditures") is eligible for the additional first-year depreciation deduction.[71]

Property does not qualify for the additional first-year depreciation deduction when the user of such property (or a related party) would not have been eligible for the additional first-year depreciation deduction if the user (or a related party) were treated as the owner. For example, if a taxpayer sells to a related party property that was under construction prior to January 1, 2008, the property does not qualify for the additional first-year depreciation deduction. Similarly, if a taxpayer sells to a related party property that was subject to a binding

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in service by the taxpayer not earlier than the date that the property is used under the leaseback. If property is originally placed in service by a lessor, such property is sold within three months after the date that the property was placed in service, and the user of such property does not change, then the property is treated as originally placed in service by the taxpayer not earlier than the date of such sale.

[68] Property qualifying for the extended placed-in-service date must have an estimated production period exceeding one year and a cost exceeding $1 million.

[69] Certain aircraft which is not transportation property, other than for agricultural or firefighting uses, also qualifies for the extended placed in service date, if at the time of the contract for purchase, the purchaser made a nonrefundable deposit of the lesser of 10 percent of the cost or $100,000, and which has an estimated production period exceeding four months and a cost exceeding $200,000.

[70] Property does not fail to qualify for the additional first-year depreciation merely because a binding written contract to acquire a component of the property is in effect prior to January 1, 2008.

[71] For purposes of determining the amount of eligible progress expenditures, it is intended that rules similar to section 46(d)(3) as in effect prior to the Tax Reform Act of 1986 apply.

written contract prior to January 1, 2008, the property does not qualify for the additional first-year depreciation deduction. As a further example, if a taxpayer (the lessee) sells property in a sale-leaseback arrangement, and the property otherwise would not have qualified for the additional first-year depreciation deduction if it were owned by the taxpayer-lessee, then the lessor is not entitled to the additional first-year depreciation deduction.

In the case of the additional first-year depreciation deduction, the basis of the property is appropriately adjusted to reflect the additional first-year depreciation deduction. Nevertheless, there are no adjustments to the allowable amount of depreciation for purposes of computing a taxpayer's alternative minimum taxable income with respect to property to which the provision applies. The amount of the additional first-year depreciation deduction is not affected by a short taxable year. The taxpayer may elect out of additional first-year depreciation for any class of property for any taxable year.

The limitation under section 280F on the amount of depreciation deductions allowed with respect to certain passenger automobiles is increased in the first year by $8,000 for automobiles that qualify (and for which the taxpayer does not elect out of the additional first-year deduction). The $8,000 increase is not indexed for inflation.

3. Additional bonus depreciation provisions

New York Liberty Zone property

To promote revitalization and redevelopment in certain areas of New York City affected by the terrorist attacks on September 11, 2001, the Job Creation and Worker Assistance Act of 2002[72] provided an additional first-year depreciation deduction equal to 30 percent of the adjusted basis of qualified property.[73] "Qualified New York Liberty Zone property" is property placed in service before January 1, 2007 (January 1, 2010 for property discussed below) in the New York Liberty Zone area that was not otherwise eligible for the general bonus depreciation provisions of section 168(k). Unlike the bonus depreciation provisions discussed above, the definition of New York Liberty Zone property also included residential rental or nonresidential real property that replaced certain destroyed or condemned real property and that was placed in service before January 1, 2010.

Gulf Opportunity Zone property

Similar to the bonus depreciation available for qualified New York Liberty Zone property, the Gulf Opportunity Zone Act of 2005[74] provided an additional first-year depreciation

[72] Pub. L. No. 107-147, sec. 301 (2002).

[73] See section 1400L(b). A taxpayer was permitted to elect out of the 30-percent additional first-year depreciation deduction for any class of property for any taxable year.

[74] Pub. L. No. 109-135, sec. 101 (2005).

deduction equal to 50 percent of the adjusted basis of qualified property.[75] Qualified Gulf Opportunity Zone property is property placed in service after August 28, 2005 (the date Hurricane Katrina hit New Orleans, Louisiana) and before January 1, 2008 in the Gulf Opportunity ("GO") Zone area that was not otherwise eligible for the general bonus depreciation provisions of section 168(k). The placed-in-service deadline was extended for specified "Gulf Opportunity Zone extension property" which is real property located in a county or parish within the GO Zone where more than 60-percent of the housing units were destroyed by hurricanes in 2005.[76] The placed-in-service deadline for Gulf Opportunity Zone extension property was extended several times, most recently to December 31, 2011, for nonresidential real property and residential rental property.[77]

[75] See section 1400N(d). A taxpayer was permitted to elect out of the 50-percent additional first-year depreciation deduction for any class of property for any taxable year.

[76] Sec. 1400N(d)(6). Pub. L. 109-432, sec. 120(a) (2006).

[77] The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, Pub. L. No. 111-312, sec. 765(a)(1)-(2) (2010).

Election to accelerate alternative minimum tax and research credits in lieu of bonus depreciation

The bonus depreciation provisions available in 2008 did not always provide the intended benefit to companies in net operating loss positions.[78] Under the Housing and Economic Recovery Act of 2008,[79] Congress allowed corporations to claim additional research and minimum tax credits in lieu of claiming bonus depreciation for "eligible qualified property" placed in service after March 31, 2008.[80] A corporation making the election would increase the limitation under section 38(c) on the use of research credits or section 53(c) on the use of minimum tax credits in lieu of taking bonus depreciation deductions. The increases in the allowable credits under this provision are treated as refundable. The depreciation for eligible qualified property was calculated for both regular tax and alternative minimum tax purposes using the straight-line method.

The research or minimum tax credit limitation was increased by the bonus depreciation amount, which was equal to 20 percent of bonus depreciation[81] for certain eligible qualified property that could be claimed as a deduction absent an election under this provision. Generally, eligible qualified property included in the calculation was bonus depreciation property that met the following requirements: (1) the original use of the property must commence with the taxpayer after March 31, 2008; (2) the taxpayer must acquire the property either (a) after March 31, 2008, and before January 1, 2010, but only if no binding written contract for the acquisition was in effect before April 1, 2008,[82] or (b) pursuant to a binding written contract that was entered into after March 31, 2008, and before January 1, 2010;[83] and (3) the property must be placed in service after March 31, 2008, and before January 1, 2010 (January 1, 2011, for certain longer-lived and transportation property).

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[78] For example, companies in significant net operating loss ("NOL") positions did not receive any current cash tax savings under the provision if they did not have a tax liability in the current year or an ability to carryback the additional loss generated through bonus depreciation. These companies often chose to forego bonus depreciation to avoid increasing NOL carryforwards. NOLs are only allowed to be carried forward 20 years, so by deferring the depreciation deductions otherwise eligible under the bonus regime, taxpayers effectively extended the 20 year window.

[79] Pub. L. No. 110-289, sec. 3081 (2008).

[80] The date restriction included in the definition of eligible qualified property was extended as part of the American Recovery and Reinvestment Act of 2009. Pub. L. No. 111-5, sec. 1201 (2009).

[81] For this purpose, bonus depreciation is the difference between (i) the aggregate amount of depreciation for all eligible qualified property determined if section 168(k)(1) applied using the most accelerated depreciation method (determined without regard to this provision), and the shortest life allowable for each property, and (ii) the amount of depreciation that would be determined if section 168(k)(1) did not apply using the same method and life for each property.

[82] In the case of passenger aircraft, the written binding contract limitation does not apply.

[83] Special rules apply to property manufactured, constructed, or produced by the taxpayer for use by the taxpayer.

The bonus depreciation amount was limited to the lesser of (1) $30 million or (2) six-percent of the research credit allocable to business credit carryovers from, and minimum tax credits allocable to the adjusted minimum tax imposed for, taxable years beginning before January 1, 2006. All corporations treated as a single employer under section 52(a) are treated as one taxpayer for purposes of the limitation, as well as for electing the application of this provision.

The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010[84] extended and expanded the definition of eligible qualified property and generally permitted a corporation to increase the minimum tax credit limitation by the bonus depreciation amount with respect to eligible property placed in service after December 31, 2010 (December 31, 2011, in the case of certain longer-lived and transportation property), and before January 1, 2013 (January 1, 2014, in the case of certain longer-lived and transportation property). The provision applies with respect to "round 2 extension property," which is defined as property that is eligible qualified property solely because it meets the requirements under the extension of the additional first-year depreciation deduction for certain property placed in service after December 31, 2010.[85] Generally, round 2 extension property included in the calculation is bonus depreciation property that met the following requirements: (1) the original use of the property must commence with the taxpayer after December 31, 2010; (2) the taxpayer must purchase the property either (a) after December 31, 2010, and before January 1, 2013, but only if no binding written contract for the acquisition was in effect before January 1, 2011, or (b) pursuant to a binding written contract that was entered into after December 31, 2010 (December 31, 2011, in the case of certain longer-lived and transportation property), and before January 1, 2013; and (3) the property must be placed in service after December 31, 2010, and before January 1, 2013 (January 1, 2014, for certain longer-lived and transportation property). A corporation making the election forgoes the depreciation deductions allowable under section 168(k) and instead increases the limitation under section 53(c) on the use of minimum tax credits.[86]

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[84] Pub. L. No. 111-312, sec. 401 (2010).

[85] An election under new section 168(k)(4)(I) with respect to round 2 extension property is binding for any property that is eligible qualified property solely by reason of the amendments made by section 401(a) of the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, even if such property is placed in service in 2012.

[86] A taxpayer that made an election to increase the research credit or minimum tax credit limitation for eligible qualified property for its first taxable years ending after March 31, 2008, or for extension property, may choose not to make the election to increase the minimum tax credit for round 2 extension property. Further, the provision allows a taxpayer that did not made an election for eligible qualified property for its first taxable year ending after March 31, 2008, or for extension property, to make the election for round 2 extension property for its first table year ending after December 31, 2010, and for each subsequent year. In the case of a taxpayer electing to increase the research or minimum tax credit for eligible qualified property and/or extension property and the minimum tax credit for round 2 extension property, a separate bonus depreciation amount, maximum amount, and maximum increase amount is computed and applied to each group. In computing the maximum amount, the maximum increase amount for extension property or for round 2 extension property is reduced by bonus depreciation amounts for preceding taxable years only with respect to extension property or round 2 extension property, respectively.

C. Expensing Provisions

1. Legislative background

A taxpayer with a sufficiently small amount of annual investment costs may elect to deduct at least a portion of those costs currently. Such rules were originally enacted in 1958 as section 179.[87] The 1958 legislation provided that a taxpayer could elect to deduct, as additional first-year depreciation, 20 percent of the cost of certain depreciable property. The cost of property eligible for this treatment was limited to $10,000, and consequently, the deduction was limited to $2,000 for the taxable year. Section 179 property was defined as depreciable property with a useful life of six years or more that was acquired by purchase after 1957 for use in a trade or business or for holding for the production of income.

In 1981, when the ACRS depreciation rules were adopted (generally providing accelerated methods and shorter recovery periods for depreciation), the section 179 rules were also revised to provide expensing of a greater amount.[88] The 1981 legislation provided that, for taxable years beginning in 1982 and 1983, a taxpayer could elect to deduct up to $5,000 of the cost of qualifying property placed in service in the taxable year. The dollar limitation was increased to $7,500 for taxable years beginning in 1984 and 1985, and increased to $10,000 for taxable years beginning in 1986 and thereafter.[89] Qualifying property was defined as property acquired by purchase for use in a trade or business (not including property held merely for the production of income). The provision was subsequently modified to provide that the dollar limitation on the deductible amount is reduced (but not below zero) by the amount by which the cost of section 179 property placed in service during the taxable year exceeds a dollar threshold.[90]

The dollar limitation was again increased in 1993 to $17,500 for taxable years beginning after 1992.[91] In 1996, the expensing provisions were again amended to provide for the dollar limitation to increase over a period of several years, ultimately reaching $25,000 for taxable years beginning in 2003 or thereafter.[92] For the years 2003 through 2006, the relevant dollar

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[87] Small Business Tax Revision Act of 1958 [title II of H.R. 8381, the Technical Amendments Act of 1958], Pub. L. No. 85-866. sec. 204 (1958).

[88] The Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, sec. 202 (1981).

[89] Subsequent legislation altered the years for which these amounts took effect. The $10,000 amount was to become effective for taxable years beginning in 1990 and thereafter, under section 13 of the Tax Reform Act of 1984, Pub. L. No. 98-369 (1984), but was made effective for taxable years beginning after 1986, under section 202 of the Tax Reform Act of 1986, Pub. L. No. 99-514 (1986).

[90] See section 202 of the Tax Reform Act of 1986, Pub. L. No. 99-514 (1986).

[91] The Omnibus Budget and Reconciliation Act of 1993, Pub. L. No. 103-66, sec. 13116(a) (1993).

[92] The Small Business Job Protection Act of 1996, Pub. L. No. 104-188, sec. 1111(a) (1996).

amount was increased to $100,000.[93] In 2007, the dollar limitation was again increased to $125,000.[94] For the 2008 and 2009 years, the relevant dollar amount was increased to $250,000.[95] For 2010 and 2011, the relevant dollar limitation is $500,000.[96] In 2012, the section 179 limitation is $125,000 and, for 2013 and all subsequent years, the relevant dollar limitation returns to $25,000.[97] While the annual dollar limitation is often deemed the most significant rule under section 179, certain additional rules govern section 179 computations and eligibility and the coordination of section 179 with other rules.[98]

2. Present law

Subject to certain limitations, a taxpayer that invests in certain qualifying property may elect under section 179 to deduct on a current basis (or "expense") the cost of qualifying property, rather than to recover such costs through depreciation deductions.[99] For taxable years beginning in 2012, the maximum amount a taxpayer may expense is $125,000 of the cost of

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[93] In 2003, the Jobs and Growth Tax Relief Reconciliation Act of 2003, Pub. L. No. 108-127, sec. 202(a) (2003), increased the relevant dollar amount to $100,000, indexed annually for inflation, but only for tax years beginning after 2002 and before 2006; the American Jobs Creation Act of 2004, Pub. L. No. 108-357, sec 201 (2004), extended these increased amounts through taxable years beginning before 2008; the Tax Increase Prevention and Reconciliation Act of 2005, Pub. L. No. 109-222, sec. 101 (2005), further extended these amounts through taxable years beginning before 2010.

[94] The Small Business and Work Opportunity Tax Act of 2007, Pub. L. No. 110-28, sec. 8212 (2007), increased the relevant amount to $125,000 for taxable years beginning in 2007.

[95] The Economic Stimulus Act of 2008, Pub. L. No. 110-185, sec. 102(a) (2008), increased the relevant amount to $250,000 for 2008 with the limitation returning to $125,000 for 2009 and 2010. However, the American Recovery and Reinvestment Tax Act of 2009, Pub. L. No. 111-5, sec. 1202(a)(1) and (2) (2009), and the Hiring Incentives to Restore Employment Act, Pub. L. No. 111-147, sec. 201(a)(1)-(4) (2010), extended the increase to $250,000 for the 2009 and 2010 years, respectively.

[96] The Creating Small Business Jobs Act of 2010, Pub. L. No. 111-240, sec. 2021(a)(1) and (2) (2010), increased the relevant limitation to $500,000 for the 2010 and 2011, with the amount returning to $25,000 starting in 2012.

[97] The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, Pub. L. No. 111-312, sec. 402 (2010).

[98] The amount eligible to be expensed for a taxable year may not exceed the taxable income derived in that year from the active conduct of a trade or business (determined without regard to section 179). Any amount that is not allowed as a deduction because of the taxable income limitation may be carried forward to succeeding taxable years (subject to similar limitations). No general business credit under section 38 is allowed with respect to any amount for which a deduction is allowed under section 179. An expensing election is made under certain rules prescribed by the Secretary. Further, additional section 179 incentives are provided for qualified property used by a business in the New York Liberty Zone (sec. 1400L(f)), an empowerment zone (sec. 1397A), a renewal community (sec. 1400J), or the Gulf Opportunity Zone (sec. 1400N(e)).

[99] Additional section 179 incentives have been provided with respect to qualified property meeting applicable requirements that is used by a business in an empowerment zone (sec. 1397A), a renewal community (sec. 1400J), or the Gulf Opportunity Zone (sec. 1400N(e)). In addition, section 179(e) provides for an enhanced section 179 deduction for qualified disaster assistance property.

qualifying property placed in service for the taxable year. The $125,000 amount is reduced (but not below zero) by the amount by which the cost of qualifying property placed in service during the taxable year exceeds $500,000.[100] The $125,000 and $500,000 amounts are indexed for inflation.[101] Off-the-shelf computer software placed in service in taxable years beginning before 2013 is treated as qualifying property.

For taxable years beginning in 2013 and thereafter, a taxpayer with a sufficiently small amount of annual investment may elect to deduct up to $25,000 of the cost of qualifying property placed in service for the taxable year. The $25,000 amount is reduced (but not below zero) by the amount by which the cost of qualifying property placed in service during the taxable year exceeds $200,000. The $25,000 and $200,000 amounts are not indexed for inflation. In general, qualifying property is defined as depreciable tangible personal property that is purchased for use in the active conduct of a trade or business (not including off-the-shelf computer software).

The amount eligible to be expensed for a taxable year may not exceed the taxable income for a taxable year that is derived from the active conduct of a trade or business (determined without regard to this provision). Any amount that is not allowed as a deduction because of the taxable income limitation may be carried forward to succeeding taxable years (subject to similar limitations).[102] No general business credit under section 38 is allowed with respect to any amount for which a deduction is allowed under section 179. An expensing election is made under rules prescribed by the Secretary.[103]

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[100] Sec. 179(b)(2).

[101] Sec. 179(b)(6).

[102] Special rules apply with respect to qualified leasehold improvement property, qualified restaurant property, and qualified retail improvement property. See section 179(f)(4).

[103] Sec. 179(c)(1). Under Treas. Reg. sec. 1.179-5, which have not been amended to reflect changes made by Pub. L. Nos. 111-312, 111-240, 110-28, 109-222, and 108-357, a taxpayer is permitted to make or revoke an election under section 179 without the consent of the Commissioner on an amended Federal tax return for the taxable year applicable to property placed in service in taxable years beginning after 2002 and before 2008. This amended return must be filed within the time prescribed by law for filing an amended return for the taxable year. T.D. 9209, July 12, 2005.

D. Amortization of Intangibles

1. 15-year amortization of certain acquired intangibles

Legislative background

Similar to the codification of recovery periods for certain tangible assets and in order to minimize controversy and simplify the Code, in 1993, the Congress changed the rules regarding amortization of goodwill and certain other acquired intangibles to require 15 year straight-line amortization for all such intangibles.[104] Treasury regulations under prior law had permitted depreciation or amortization for the cost or other basis of acquired intangibles only if the property had "a limited useful life that may be determined with reasonable accuracy."[105] The Treasury regulations also stated that no depreciation was allowed with respect to goodwill.[106] However, taxpayers litigated whether intangibles such as a "customer base" could be amortized if shown to have a determinable value and useful life. The U.S. Supreme Court held that a taxpayer able to prove that a particular asset could be valued, and that the asset had a limited useful life that could be estimated with reasonable accuracy, was able to depreciate the asset over the useful life regardless of how much the asset appeared to reflect the expectancy of continued patronage. However, the Supreme Court also characterized the taxpayer's burden as "substantial" and stated that it "often will prove too great to bear."[107] The enactment of section 197 mitigated much controversy that surrounded valuing and determining the useful life of certain intangible assets, such as goodwill.

Present law

Under section 197 of the Code, when a taxpayer acquires intangible assets held in connection with a trade or business, any value properly attributable to a "section 197 intangible" is amortizable on a straight-line basis over 15 years.[108] Such intangibles include goodwill; going concern value; workforce in place including its composition and terms and conditions (contractual or otherwise) of its employment; business books and records, operating systems, or other information base; any patent, copyright, formula, process, design, pattern, knowhow, format, or similar item; customer based intangibles; supplier based intangibles; and any other

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[104] Pub.L. No.103-66, Omnibus Budget Reconciliation Act of 1993, sec. 13261 (Aug. 10, 1993), adding section 197 to the Code. For a description of the reasons for change, see H.R. Rep. 103-111, Report of the Committee on the Budget, House of Representatives, to accompany H.R. 2264 (May 25, 1993) at p. 760 and H.R. Rep. 103-213, Conference Report of the Committee on the Budget, House of Representatives, to accompany H.R. 2264, at p. 672-696.

[105] Treas. Reg. sec. 1.167(a)-(3).

[106] *Ibid.*

[107] *Newark Morning Ledger Co v. United States,* 507 U.S. 541 (April 20, 1993).

[108] Secs. 197(d)(1)(F) and 197(f)(4). A franchise is included in the definition of a section 197 intangible. A franchise is defined as "an agreement which gives one of the parties to the agreement the right to distribute, sell, or provide goods, services, or facilities, within a specified area." Sec. 1253(b)(1).

similar item. They also include any license, permit, or other rights granted by governmental units [109] (even if the right is granted for an indefinite period or is reasonably expected to be renewed indefinitely); any covenant not to compete; and any franchise, trademark or trade name. In 2004, sports franchises were added to the assets subject to the 15-year amortization period.[110]

However, interests in land, including leases, easements, grazing rights, and mineral rights granted by a government, may not be amortized over the 15-year period provided in section 197, but instead must be amortized over the period of the grant of the right.[111] Also, certain financial interests, certain computer software readily available for purchase by the general public, and certain rights acquired separately from the acquisition of assets constituting a trade or business (or substantial portion thereof) are not subject to the 15-year amortization. Also, self-created assets, such as goodwill created through advertising and other expenses, are not subject to the provision.[112]

If there is a disposition of one or more section 197 intangible assets acquired in a transaction or series of related transactions (or any such intangible becomes worthless), and one or more other section 197 intangibles acquired in such transaction or series of related transactions are retained, no loss is allowable until all such section 197 assets are disposed of, and the basis of those assets are adjusted for any loss not recognized.[113]

Section 197 contains anti-churning rules that apply to prevent pre-section 197 goodwill, going concern value, or intangibles that would not have been amortizable but for section 197 from being transferred among related parties and becoming eligible for the 15-year amortization.[114]

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[109] Sec. 197(d)(1)(D). Examples include a liquor license, a taxi-cab medallion, an airport landing or take-off right, a regulated airline route, or a television or radio broadcasting license. Renewals of such governmental rights are treated as the acquisition of a new 15-year asset. Treas. Reg. sec. 1.197-2(b)(8). A license, permit, or other right granted by a governmental unit is a franchise if it otherwise meets the definition of a franchise. Treas. Reg. sec. 1.197-2(b)(10). Section 197 intangibles do not include certain rights granted by a government not considered part of the acquisition of a trade or business. Sec. 197(e)(4)(B) and Treas. Reg. sec. 1.197-2(c)(13).

[110] Sec. 886 of Pub. L. No. 108-357 (October 22, 2004), the American Jobs Creation Act of 2004.

[111] Sec. 197(e)(2). Treas. Reg. sec. 1.197-2(c)(3). An interest in land does not include an airport landing or takeoff right, a regulated airline route, or a franchise to provide cable television service. The cost of acquiring a license, permit, or other land improvement right, such as a building construction or use permit, is taken into account in the same manner as the underlying improvement. Treas. Reg. Sec. 1.197-2(c)(3).

[112] Thus, section 197 does not require costs attributable to such assets to be capitalized under section 197 and amortized over 15 years.

[113] Sec. 197(f)(1).

[114] Sec. 197(f)(9).

2. Other cost recovery provisions

In general

Section 167 allows as a depreciation deduction a reasonable allowance for the exhaustion, wear and tear, and obsolescence of property used in the trade or business or held for the production of income. Though tangible assets generally are subject to the depreciation rules of section 168 (which sets out the MACRS and ADS rules), section 167 provides special rules for some tangible and intangible assets. The cost recovery of many intangible assets is governed by the rules of section 197 (discussed in section II.D.1).

Specific rules under section 167 are provided with respect to computer software,[115] certain rights acquired separately from the acquisition of assets constituting a trade or business (or substantial portion thereof) that are not governed under section 197, mortgage servicing rights,[116] and geological and geophysical expenditures.[117] The cost of motion picture films, sound recordings, copyrights, books, and patents also are depreciated under this section.

Certain interests or rights acquired separately

The recovery period for certain interests or rights (*e.g.*, patent or copyright), not acquired in a transaction (or series of related transactions) involving the acquisition of assets constituting a trade or business or substantial portion thereof,[118] is determined by the usefulness of the asset to the taxpayer. To the extent a certain interest or right is known to be of use for only a limited period of time, the length of which can be estimated with reasonable accuracy, such an intangible asset may be recovered over the useful life of the asset.[119] For certain interests or rights with an undeterminable useful life, a 15-year safe harbor amortization period may be available.[120]

Income forecast method

The cost of motion picture films or video tapes, sound recordings, copyrights, books, and patents are eligible to be recovered using the income forecast method of depreciation.[121] Under

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[115] Section 167(f)(1) provides that costs of computer software shall be recovered ratably over 36 months.

[116] Section 167(f)(3) provides that costs incurred to obtain mortgage servicing rights shall be recovered ratably over 108 months.

[117] Section 167(h) provides that geological and geophysical ("G&G") expenditures shall be recovered ratably over 24 months. However, major integrated oil companies are required to amortize all G&G costs over seven years for costs paid or incurred after December 19, 2007.

[118] Secs. 167(f)(2) and 197(e)(4)(B), (C), and (D).

[119] Treas. Reg. section 1.167(a)-3(a).

[120] Treas. Reg. section 1.167(a)-3(b).

[121] Sec. 167(g)(6). An election under section 167(g)(8) was available for taxable years beginning after December 31, 2005 and before January 1, 2011 which provided a 5-year amortization period (beginning with the

the income forecast method, a property's depreciation deduction for a taxable year is determined by multiplying the adjusted basis of the property by a fraction, the numerator of which is the gross income generated by the property during the year, and the denominator of which is the total forecasted or estimated gross income expected to be generated prior to the close of the tenth taxable year after the year the property was placed in service. Any costs that are not recovered by the end of the tenth taxable year after the property was placed in service may be taken into account as depreciation in that year.

In general, the adjusted basis of property that may be taken into account under the income forecast method only includes amounts that satisfy the economic performance standard of section 461(h). An exception to this rule applies to participations and residuals.[122] Solely for purposes of computing the allowable deduction for property under the income forecast method of depreciation, participations and residuals may be included in the adjusted basis of the property beginning in the year such property is placed in service (even if economic performance has not yet occurred) if such participations and residuals relate to income to be derived from the property before the close of the tenth taxable year following the year the property is placed in service. For this purpose, participations and residuals are defined as costs the amount of which, by contract, varies with the amount of income earned in connection with such property.

The inclusion of participations and residuals in adjusted basis beginning in the year the property is placed in service applies only for purposes of calculating the allowable depreciation deduction under the income forecast method. For all other purposes, the general basis rules of sections 1011 and 1016 apply. Thus, in calculating the adjusted basis for determining gain or loss on the sale of income forecast property, participations and residuals are treated as increasing the taxpayer's basis only when such items are properly taken into account under the taxpayer's method of accounting.[123]

Alternatively, rather than accounting for participations and residuals as a cost of the property under the income forecast method of depreciation, the taxpayer may deduct those payments as they are paid, consistent with the *Associated Patentees*[124] decision. This may be done on a property-by-property basis and must be applied consistently with respect to a given property thereafter.

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month in which the property was placed in service) for certain musical works and copyrights with respect to musical compositions.

[122] Sec. 167(g)(7). For property placed in service after October 22, 2004, taxpayers may choose to include participations and residuals in the adjusted basis of the property for the taxable year the property is placed in service.

[123] For example, in the case of participations or residuals to which sections 404(a)(5) or 404(b)(1) applies, such participations or residuals would not increase the taxpayer's basis until the amount is included in the gross income of the participant.

[124] *Associated Patentees, Inc. v. Commissioner*, 4 T.C. 979 (1945).

In addition, taxpayers that claim depreciation deductions under the income forecast method are required to pay (or receive) interest based on a recalculation of depreciation under a "look-back" method.[125]

The "look-back" method is applied in any "recomputation year" by (1) comparing depreciation deductions that had been claimed in prior periods to depreciation deductions that would have been claimed had the taxpayer used actual, rather than estimated, total income from the property; (2) determining the hypothetical overpayment or underpayment of tax based on this recalculated depreciation; and (3) applying the overpayment rate of section 6621 of the Code. Except as provided in Treasury regulations, a "recomputation year" is the third and tenth taxable year after the taxable year the property was placed in service, unless the actual income from the property for each taxable year ending with or before the close of such years was within 10 percent of the estimated income from the property for such years.

3. Start-up expenditures[126]

A taxpayer can elect to deduct up to $5,000 of start-up expenditures in the taxable year in which the active trade or business begins.[127] The $5,000 amount is reduced (but not below zero) by the amount by which the cumulative cost of start-up expenditures exceeds $50,000.[128] However, for taxable years beginning in 2010, the provision increases the amount of start-up expenditures a taxpayer can elect to deduct from $5,000 to $10,000 and increases the deduction phase-out threshold such that the $10,000 is reduced (but not below zero) by the amount by which the cumulative cost of start-up expenditures exceeds $60,000.[129] Start-up expenditures that are not deductible in the year in which the active trade or business begins are, at the taxpayer's election, amortized over a 15-year period beginning with the month the active trade or business begins.[130] Start-up expenditures are amounts that would have been deductible as trade or business expenses, had they not been paid or incurred before business began, including amounts paid or incurred in connection with (1) investigating the creation or acquisition of an active trade or business, (2) creating an active trade or business, or (3) any activity engaged in

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[125] Sec. 167(g)(2). An exception is allowed under section 167(g)(3) for any property with a cost basis of $100,000 or less.

[126] Similar rules apply to organizational expenditures under section 248. Organizational expenditures are defined as any expenditure which (1) is incident to the creation of the corporation, (2) is chargeable to capital account, and (3) is of a character which, if expended incident to the creation of a corporation having a limited life, would be amortizable over such life. Sec. 248(b).

[127] Sec. 195(b)(1)(A).

[128] *Ibid*.

[129] The temporary $10,000 limit and $60,000 threshold were enacted in the Small Business Jobs Act of 2010, Pub. L. No. 111-240, and apply to start-up expenditures paid or incurred in the first taxable year beginning after December 31, 2009.

[130] Sec. 195(b)(1)(B).

for profit and for the production of income before the day on which the active trade or business begins, in anticipation of such activity becoming an active trade or business.[131]

Treasury regulations[132] provide that a taxpayer is deemed to have made an election under section 195(b) to amortize its start-up expenditures for the taxable year in which the active trade or business to which the expenditures relate begins. A taxpayer that chooses to forgo the deemed election must clearly elect to capitalize its start-up expenditures on its timely filed Federal income tax return for the taxable year the active trade or business commences.[133] The election either to amortize or capitalize start-up expenditures is irrevocable and applies to all start-up expenditures related to the active trade or business.

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[131] Sec. 195(c).

[132] Treas. Reg. sec. 1.195-1(b). See also, Treas. Reg. sec. 1.248-1(b) and Treas. Reg. sec. 1.709-1(b).

[133] When a taxpayer elects not to amortize its start-up expenditures, such amounts are not deductible. That is, the amounts are added to the basis of the business and taken into account upon termination or disposition of such business. Sec. 195(a).

E. Tax Credits for Capital Investment

1. Energy-related credits

Since the repeal of the prior-law investment tax credit in 1986,[134] a number of tax credits for investment in energy-related property have been modified, expanded, or newly enacted.[135]

2. General business credits that may impact capital investment

In addition, businesses are allowed a variety of other tax credits as part of the general business credit. While these include several employment-related credits for employers, others relate to specific types of investment in real estate, such as the low-income housing credit and the rehabilitation credit.

Low-income housing credit

The low-income housing credit[136] may be claimed over a 10-year period for the cost of building rental housing occupied by tenants having incomes below specified levels. The amount of the credit for any taxable year in the credit period is the applicable percentage of the qualified basis of each qualified low-income building. The qualified basis of any qualified low-income building for any taxable year equals the applicable fraction of the eligible basis of the building.

The credit percentage for newly constructed or substantially rehabilitated housing that is not Federally subsidized is adjusted monthly by the Internal Revenue Service so that the 10 annual installments of the credit have a present value of 70 percent of the total qualified basis. The credit percentage for newly constructed or substantially rehabilitated housing that is Federally subsidized and for existing housing that is substantially rehabilitated is calculated to have a present value of 30 percent of qualified basis. These are referred to as the 70-percent credit and 30-percent credit, respectively.

Rehabilitation credit

Present law provides a two-tier tax credit for rehabilitation expenditures.[137]

A 20-percent credit is provided for qualified rehabilitation expenditures with respect to a certified historic structure. For this purpose, a certified historic structure means any building that

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[134] Sec. 211 of Pub. L. No. 99-514, the Tax Reform Act of 1986.

[135] For a summary and analysis of present-law energy-related investment credits, see Joint Committee on Taxation, *Present Law and Analysis of Energy-Related Tax Expenditures and Description of the Revenue Provisions Contained in H.R. 1380, the New Alternative Transportation to Give Americans Solutions Act of 2011* (JCX-47-11), September 20, 2011.

[136] Sec. 42.

[137] Sec. 47.

is listed in the National Register, or that is located in a registered historic district and is certified by the Secretary of the Interior to the Secretary of the Treasury as being of historic significance to the district.

A 10-percent credit is provided for qualified rehabilitation expenditures with respect to a qualified rehabilitated building, which generally means a building that was first placed in service before 1936. The pre-1936 building must meet requirements with respect to retention of existing external walls and internal structural framework of the building in order for expenditures with respect to it to qualify for the 10-percent credit. A building is treated as having met the substantial rehabilitation requirement under the 10-percent credit only if the rehabilitation expenditures during the 24-month period selected by the taxpayer and ending within the taxable year exceed the greater of (1) the adjusted basis of the building (and its structural components), or (2) $5,000.

The provision requires the use of straight-line depreciation or the alternative depreciation system in order for rehabilitation expenditures to be treated as qualified under the provision.

F. Recapture Rules

Upon disposition of most property used in a business on which depreciation or amortization deductions were taken, the treatment of the resulting gain or loss as ordinary or capital depends on whether there is a net gain or a net loss under section 1231. If the netting of gains and losses results in a net gain, then, subject to the depreciation recapture rules, long-term capital gain treatment results.[138] If the netting of gains and losses results in a loss, the loss is fully deductible against ordinary income.[139]

The depreciation recapture rules require taxpayers to recognize ordinary income in an amount equal to all or a portion of the gain realized as a result of the disposition of property. The purpose of the rules is to limit a taxpayer's ability to reduce ordinary income via depreciation deductions and then receive capital gain treatment for the portion of any gain on the disposition of the depreciated property that resulted from the taking of depreciation deductions. There are two regimes that dictate depreciation recapture, sections 1245 and 1250.[140]

Depreciable personal property, whether tangible or intangible, and certain depreciable real property (typically real property that performs specific functions in a business, but not buildings or structural components of buildings) disposed at a gain are known as section 1245 property.[141] When a taxpayer disposes of section 1245 property, the taxpayer must recapture the gain on disposition of the property as ordinary income to the extent of earlier depreciation or amortization deductions taken with respect to the asset.[142] Any remaining gain recognized upon the sale of section 1245 property is treated as section 1231 gain.

Depreciable real property, other than that included within the definition of section 1245 property, disposed at a gain is known as section 1250 property.[143] Gain on the disposition of section 1250 property is treated as ordinary income, rather than capital gain, only to the extent of the excess of post-1969 depreciation allowances over the depreciation that would have been available under the straight-line method.[144] However, if section 1250 property is held for one year or less, all depreciation is recaptured, regardless of whether it exceeds the depreciation that

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[138] Sec. 1231(a)(1).

[139] Sec. 1231(a)(2).

[140] Cost recovery deductions taken under ACRS (for property placed in service after 1980 and before 1987 (before August 31, 1986, if the taxpayer so elected)) are generally subject to recapture; however, properties are not necessarily classified as section 1245 or 1250 property in the same manner as similar properties placed in service before or after ACRS.

[141] Sec. 1245(a)(3).

[142] Sec. 1245(a)(1).

[143] Sec. 1250(c).

[144] Sec. 1250(a)(1).

would have been available under the straight-line method. Special rules phase out the recapture for certain types of property held over a specified period of time.[145]

For corporations, the amount treated as ordinary income on the disposition of section 1250 property is increased by 20 percent of the additional amount that would be treated as ordinary income if the property were subject to recapture under the rules for section 1245 property.[146] For individuals, any capital gain that would be treated as ordinary income if the property were subject to recapture under the rules for section 1245 property is taxed at a maximum rate of 25 percent.

Recapture and anti-churning rules apply under other cost recovery provisions, including sections 179 and 197. For recapture purposes, an amortizable section 197 intangible is considered to constitute section 1245 property and is subject to its recapture rules.[147] Section 197 also provides anti-churning rules that apply to prevent pre-section 197 goodwill, going concern value, or intangibles that would not have been amortizable but for section 197 from being transferred among related parties and becoming eligible for the 15-year amortization.

Recapture rules also apply to certain business credits. For example, if property eligible for investment tax credits are disposed of, or otherwise ceases to be investment credit property (*e.g.*, casualty loss), before the close of the recapture period (five years), the tax for the year is increased by a recapture percentage.[148] Advance rehabilitation and certain energy credits and credits related to certain energy property are also subject to recapture provisions. In addition, in determining the amount of gain that is recaptured as ordinary income under section 1245 or section 1250, the amount of an investment credit downward basis adjustment is also treated as a deduction allowed for depreciation.[149]

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[145] Sec. 1250(a)(1)(B). The special phaseout rule applies to residential rental property, certain types of subsidized housing, and property for which rapid depreciation of rehabilitation expenditures was claimed under section 167(k).

[146] Sec. 291(a)(1).

[147] See. H.R. Rep. 103-213, August 4, 1993, p. 688. The conference report relating to the 1993 legislation enacting section 197 stated: "For purposes of chapter 1 of the Internal Revenue Code, an amortizable section 197 asset is to be treated as property of a character which is subject to the allowance for depreciation provided in section 167."

[148] Sec. 50(a).

[149] Sec. 50(c)(4).

G. Statutory Recovery Periods

While most recovery periods follow historic Treasury guidance, as noted above, the Congress has established statutory recovery periods in certain cases. Table 10 summarizes the recovery periods determined by statute ("statutory MACRS recovery") as well as the recovery period that would otherwise apply ("standard MACRS recovery"). Parenthetical references following the standard recovery periods included in the table refer to the asset class for the property, if applicable, as set forth in Rev. Proc. 87-56.[150]

Table 10.–Statutory Recovery Periods for Specified Assets[151]

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Computer software (purchased)[152] (sec. 167(f)(1))	3 years	5 years[153]	Permanent
Mortgage servicing rights (sec. 167(f)(3))	9 years	Varies based on contract length[154]	Permanent
Geological and geophysical expenditures (sec. 167(h))	2 years (7 years for major integrated oil companies)	Allocated to the cost of the property that was acquired or retained.[155]	Permanent

[150] 1987-2 C.B. 674.

[151] Table 10 includes statutory recovery periods for specified assets that are permanent, or those that expire on or after December 31, 2011.

[152] Software development costs can be deducted currently. Rev. Proc. 69-21, 1969-2 C.B. 303, Rev. Proc. 2000-50, 2000-2 C.B. 601.

[153] For computer software purchased before August 11, 1993. Rev. Proc. 69-21, 1969-2 C.B. 303.

[154] In general, mortgage servicing rights would be amortized over the life of the underlying contract (*e.g.*, 30 years for 30-year mortgage).

[155] For taxable years beginning before August 10, 2005. Rev. Rul. 77-188, 1977-1 C.B. 76. Other special provisions currently in effect may apply absent Sec. 167(h).

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Race horses (sec. 168(e)(3)(A)(i))	3 years	3 years (over 2 years old) (01.223)[156] 7 years (No class life)[157]	December 31, 2013 (any race horse) Permanent (any race horse over the age of two and that is placed in service after December 31, 2013)
Horses over 12 years old, other than race horses (sec. 168(e)(3)(A)(ii))	3 years	7 years (No class life)[158]	Permanent
Qualified rent-to-own property (sec. 168(e)(3)(A)(iii))	3 years	5 years (57.0)[159]	Permanent
Automobiles or light general purpose trucks (sec. 168(e)(3)(B)(i))	5 years	3 years (00.241)	Permanent
Semi-conductor manufacturing equipment (sec. 168(e)(3)(B)(ii))	5 years	5 years (36.0)	Permanent

[156] Rev. Proc. 88-22, 1988-1 C.B. 785.

[157] *Ibid.*

[158] *Ibid.*

[159] Rev. Proc. 95-38, 1995-2 C.B. 397. Rev. Rul. 95-52, 1995-2 C.B. 27.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Computer-based telephone central office switching equipment (sec. 168(e)(3)(B)(iii))	5 years	10 years (48.12)[160]	Permanent
Qualified technological equipment (*i.e.*, computers and related peripheral equipment) (sec. 168(e)(3)(B)(iv))	5 years	5 years (00.12) if used in the normal course of business operations. Remaining items are industry specific. [161]	Permanent
Qualified technological equipment (*i.e.*, high technology telephone station equipment) (sec. 168(e)(3)(B)(iv))	5 years	7 years (48.13)	Permanent
Qualified technological equipment (*i.e.*, high technology medical equipment) (sec. 168(e)(3)(B)(iv))	5 years	5 years (57.0)	Permanent
Research and experimentation property (secs. 168(e)(3)(B)(v) and 1245)	5 years	Industry specific[162]	Permanent

[160] Rev. Proc. 87-57 refers to the code section in defining the class life.

[161] Assets that do not fall into Rev. Proc. 87-56 classes 00.11 through 00.4 for depreciable assets used in all business activities must be classified according to classes 01.1 through 80.0 for depreciable assets used in specific business activities. The property would be classified according to the specific business activity in which the property was primarily used. For example, research and development property used in the manufacture of locomotives (class life 37.41) would be recovered over a 7-year period, while research and development property used in the manufacture of sugar and sugar products (class life 20.2) would be recovered over a 10-year period.

[162] See footnote 161 above for further explanation.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Solar or wind energy property (secs. 168(e)(3)(B)(vi) and 48(a)(3)(A)(i))	5 years	Industry specific[163]	Permanent
Fiber-optic solar energy property (secs. 168(e)(3)(B)(vi) and 48(a)(3)(A)(ii))	5 years	Industry specific[164]	December 31, 2016
Geothermal energy property (secs. 168(e)(3)(B)(vi) and 48(a)(3)(A)(iii))	5 years	Industry specific[165]	Permanent
Fuel cell or qualified microturbine property (secs. 168(e)(3)(B)(vi) and 48(a)(3)(A)(iv))	5 years	Industry specific[166]	Permanent
Combined heat and power system property (secs. 168(e)(3)(B)(vi) and 48(a)(3)(A)(v))	5 years	Industry specific[167]	Permanent

[163] See footnote 161 above for further explanation.

[164] See footnote 161 above for further explanation.

[165] See footnote 161 above for further explanation.

[166] See footnote 161 above for further explanation.

[167] See footnote 161 above for further explanation.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Qualified small wind energy property (secs. 168(e)(3)(B)(vi) and 48(a)(3)(A)(vi))	5 years	Industry specific[168]	Permanent
Thermal energy equipment using ground or ground water (secs. 168(e)(3)(B)(vi) and 48(a)(3)(A)(vii))	5 years	Industry specific[169]	December 31, 2016
Railroad tracks (sec. 168(e)(3)(C)(i))	7 years	Unknown[170]	Permanent
Motorsports racetrack property (secs. 168(e)(3)(C)(ii) and (i)(15))	7 years	15 years (with 150 percent declining balance method) (00.3)[171] or 39 years (straight-line)	December 31, 2011
Alaska natural gas pipeline (secs. 168(e)(3)(C)(iii) and (i)(16))	7 years[172]	15 years (with 150 percent declining balance method) (46.0)	Permanent

[168] See footnote 161 above for further explanation.

[169] See footnote 161 above for further explanation.

[170] The useful life of this property is unclear.

[171] See TAM 200526019.

[172] To depreciate Alaska natural gas pipeline property over seven years, the general rule requires that the assets be placed in service after December 31, 2013. However, Alaska natural gas pipeline property will be treated as placed in service on January 1, 2014 if the taxpayer who places such system in service prior to that date elects such treatment.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Natural gas gathering line (sec. 168(e)(3)(C)(iv))	7 years	15 years (with 150 percent declining balance method) (46.0)[173]	Permanent
Single purpose agricultural or horticultural structures (*e.g.*, greenhouse specifically designed, constructed and used for the commercial production of plants) (secs. 168(e)(3)(D)(i) and (i)(13))	10 years	20 years (01.3)	Permanent
Tree or vine bearing fruits or nuts (secs. 168(b)(3)(E) and (e)(3)(D)(ii))	10 years (straight-line)	15 years (with 150 percent declining balance method)[174]	Permanent

[173] For natural gas gathering lines where the original use of the property commences with the taxpayer before April 12, 2005.

[174] At the time the present law was enacted, it was unclear whether trees and vines were classified as land improvements, recovered over 15 years, or whether they have no class life. H.R. Rep. No. 100-1104, Conference Report to Accompany H.R. 4333, the Technical Corrections and Miscellaneous Revenue Act of 1988, October 21, 1988, pp. 149-150.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Smart electric distribution property (*i.e.*, qualified smart electric grid system and qualified smart electric meter) (sec. 168(b)(2)(C), secs. 168(e)(3)(D)(iii) and (iv), and secs. 168(i)(18) and (19))	10 years (with 150 percent declining balance method)	20 years (with 150 percent declining balance method) (49.14)[175]	Permanent
Municipal wastewater treatment plant (sec. 168(e)(3)(E)(i))	15 years	20 years (with 150 percent declining balance method) (49.3)	Permanent
Telephone distribution plant and comparable equipment used for two-way exchange of voice and data communications (sec. 168(e)(3)(E)(ii))	15 years	15 years (with 150 percent declining balance method) (48.14)[176]	Permanent
Retail motor fuel outlets (sec. 168(e)(3)(E)(iii))	15 years	15 years (with 150 percent declining balance) (57.1)[177] or 39 years (straight-line)	Permanent

[175] For property placed in service before October 4, 2008.

[176] A 15 years recovery period is provided for telephone distribution plant and comparable equipment used for two-way voice and data communications. However, a 7 year recovery period (48.42) is provided for cable distribution plant and comparable equipment used for two-way voice and data communications.

[177] IRS Industry Specialization Program Coordinated Issue Paper, Petroleum and Retail Industries Coordinated Issue: Convenience Stores (before revisions); see S. Rep. No. 281, 104th Cong., 2d Sess. 15 (1996).

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Qualified leasehold improvements (sec. 168(b)(3)(G) and sec. 168(e)(3)(E)(iv))	15 years (straight-line)	39 years (straight-line)	December 31, 2011
Qualified restaurant property (sec. 168(b)(3)(H) and sec. 168(e)(3)(E)(v))	15 years (straight-line)	39 years (straight-line)[178]	December 31, 2011
Gas utility land improvements (*i.e.*, initial clearing and grading) (sec. 168(e)(3)(E)(vi)	15 years	7 years[179] or non-depreciable	Permanent
Certain electric transmission property (property used in the transmission of electricity for sale at 69 kilovolts) (sec. 168(e)(3)(E)(vii))	15 years	20 years (with 150 percent declining balance method) (49.14)[180]	Permanent
Qualified retail improvements (sec. 168(b)(3)(I) and sec. 168(e)(3)(E)(ix))	15 years (straight-line)	39 years (straight-line)	December 31, 2011

[178] For property placed in service before January 1, 2009.

[179] Initial clearing and grade improvements were specifically excluded from Asset Class 49.24 under Rev. Proc. 87-56, and no separate asset class was provided for those improvements. Accordingly, the cost of those improvements was depreciated under MACRS over a seven-year recovery period as assets for which no class life is provided. Certain amounts may be considered nondepreciable land.

[180] For electric transmission property where the original use of the property commences with the taxpayer before April 12, 2005.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Tax exempt use property subject to a lease (sec. 168(g)(3)(A))	Straight-line over a recovery period equal to the longer of the property's class life or 125 percent of the lease term	Varies based on property class life	Permanent
Indian reservation property (sec. 168(j))	Shorter recovery periods than MACRS[181]	MACRS recovery periods	December 31, 2011
Cellulosic biofuel plant property (sec. 168(l))	50-percent bonus in the first year[182]	Unknown[183]	December 31, 2012
Reuse and recycling property (sec. 168(m)(1)(A))	50-percent bonus in the first year[184]	7 years (49.5)	Permanent
Pollution control facilities (secs. 169 and 291)	5 years (7 years for certain atmospheric pollution control facilities)	Industry specific[185] or 39 years (straight-line)	Permanent

[181] See section 168(j)(2).

[182] The property's original use must commence with the taxpayer after December 20, 2006 and it must purchased by the taxpayer after December 20, 2006 (or for self-constructed property if the taxpayer began manufacturing, constructing, or producing the property after December 20, 2006) and no written binding contract for its acquisition was in effect before December 21, 2006.

[183] The useful life of this property is currently unclear.

[184] The property's original use must commence with the taxpayer after August 31, 2008 and be purchased by the taxpayer after August 31, 2008 (or for self-constructed property if the taxpayer began manufacturing, constructing, or producing the property after August 31, 2008), but only if no written binding contract for the acquisition was in effect before September 1, 2008.

[185] See footnote 161 above for further explanation.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Magazine circulation expenditures (sec. 173)	Deduct currently	Unknown[186]	Permanent
Research and development expenditures[187] (sec. 174)	Deduct currently	Industry specific[188]	Permanent
Soil and water conservation expenditures; endangered species recovery expenditures[189] (sec. 175)	Deduct currently (not to exceed 25% of annual gross farming income)[190]	Non-depreciable[191]	Permanent
Liquid fuel refinery property[192] (sec. 179C)	50-percent bonus in the first year[193]	10 years (13.3 or 49.223)	December 31, 2013

[186] A three-year election to amortize expenditures is currently allowed under sec. 59(e). Alternatively, the amortization period may be determined under secs. 167 or 197.

[187] For a more detailed discussion of the tax treatment of research and development expenditures, refer to Joint Committee on Taxation, *Tax Incentives for Research, Experimentation, and Innovation* (JCX-45-11), September 16, 2011. Research and development expenditures do not include property of a character which is subject to the allowance for depreciation or depletion. Sec. 174(b)(1)(C).

[188] See footnote 161 above for further explanation. It should be noted that research and development expenditures are deferred until a depreciable asset is created. Once an asset is created and placed in service, the research and development amounts are recovered through depreciation (or deducted at the time such asset is abandoned).

[189] For endangered species recovery expenditures incurred after December 31, 2009.

[190] Any excess may be carried over and deducted in succeeding taxable years.

[191] Costs are added to the basis of the land. Treas. Reg. sec. 1.175-1.

[192] A qualified refinery is any refinery located in the United States that, for property placed in service after August 8, 2005 and on or before October 3, 2008, is designed to serve the primary purpose of processing liquid fuel from crude oil or qualified fuels; or, for property placed in service after October 3, 2008 and before January 1, 2014,

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Energy efficient commercial buildings deduction (sec. 179D)	Additional deduction of $1.80 per square foot	39 years (straight-line) (with no additional deduction)	December 31, 2013
Advanced mine safety equipment (sec. 179E)	50-percent bonus in the first year	7 years (10.0)	December 31, 2011
Fertilizer and soil enrichment costs incurred by farmers (sec. 180)	Deduct currently	Facts and circumstances[194]	Permanent
Certain qualified film and television productions (sec. 181)	Deduct currently (subject to certain dollar limitations)	Income forecast method	December 31, 2011
Expenditures to remove architectural and transportation barriers to the handicapped and elderly (sec. 190)	Deduct currently (not to exceed $15,000)	39 years (straight-line) or non-depreciable	Permanent

is designed to serve the primary purpose of processing liquid fuel from crude oil, qualified fuels, or directly from shale or tar sands.

[193] For property placed in service after August 8, 2005 that was not subject to a written binding contract to purchase the property in effect before June 15, 2005. If the property is not placed in service before January 1, 2010, there must have been a written binding contract to purchase the property in place before January 1, 2010, or for self-constructed property, construction of the property began after June 15, 2005 and before January 1, 2010.

[194] Expenditures which affect production for more than one year must be capitalized and recovered over the period for which they impact production.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Tertiary injectants (sec. 193)	Deduct currently	Facts and circumstances[195]	Permanent
Reforestation expenditures (sec. 194)	Deduct currently[196] or 7 year amortization	Depletion[197]	Permanent
Environmental remediation costs (sec. 198)	Deduct currently	Unknown[198]	December 31, 2011
Intangible drilling costs ("IDC") (Secs. 263(c) and 291)	Deduct currently (30 percent of IDCs amortized over 5 years for major integrated oil companies)	Depletion or depreciation (based on the specific applicable recovery period for the depreciable item)[199]	Permanent

[195] Expenditures which affect production for more than one year must be capitalized and recovered over the period for which they impact production.

[196] Annual expenditures of up to $10,000 may be currently deducted in the year paid or incurred.

[197] Depletion is the exhaustion of natural resources as a result of production. The deduction is similar to depreciation in that it allows the taxpayer to recover the cost of an asset over the resources' productive life. See sec. 611 and 612.

[198] The capitalization of environmental remediation expenditures under prior law was a question of fact and subject to dispute. See H.R. Conf. Rep. No. 220, 105th Cong., 1st Sess. 330, 488 (1997).

[199] IDCs do not include expenses for items that have a salvage value (such as pipes or casings), items that are part of the acquisition price of an interest in the property, or amounts property allocable to the cost of depreciable property. A taxpayer may elect to deduct IDC ratably over a 60-month period under sec. 59(e). If the taxpayer makes this election, no alternative minimum tax preference amount results.

Provision	Statutory Recovery Period	Standard Recovery Period	Expiration
Luxury vehicles (sec. 280F)	Limits the annual deduction	3 years (00.22)	Permanent
Exploration and development costs (secs. 616, 617 and 291)	Deduct currently (30 percent of exploration and development costs amortized over 5 years for corporations)	Depletion[200]	Permanent

[200] Costs are allocated to a specific property unit and depleted under sec. 611 or 612. Losses incurred on abandoning areas of interest can be deducted under sec. 165. A taxpayer may elect to deduct exploration and development costs over a 10-year period under sec. 59(e). If the taxpayer makes this election, no alternative minimum tax preference amount will result.

H. Domestic Production Activities Deduction

1. Legislative background

Congress both repealed the Extraterritorial Income ("ETI") regime and enacted section 199 as part of the American Jobs Creation Act of 2004.[201] The ETI regime had been deemed inconsistent with obligations of the United States under various international trade agreements and was repealed to bring the law into compliance with those agreements. The section 199 legislation was crafted to replace the ETI benefit with tax relief designed to be comparable to a three-percentage-point reduction in the tax rate applied to U.S.-based manufacturing. The deduction was phased in over time to match the phase-out of the ETI regime.[202] As described in 2005:

> "The Congress believed that it was appropriate and necessary to replace the ETI regime with provisions that reduce the tax burden on domestic manufacturers, including small businesses engaged in manufacturing. The Congress was of the view that a reduced tax burden on domestic manufacturers [would] improve the cash flow of domestic manufacturers and make investments in domestic manufacturing facilities more attractive."[203]

Prior to the enactment of section 199 there was no provision in the Code that permitted taxpayers to claim a deduction equal to a percentage of taxable income attributable to their domestic production activities. Congress subsequently modified the statute several times to make additions and corrections to the way the deduction is computed.[204] A provision was added which allows U.S. businesses to claim the section 199 deduction for qualifying activities taking place in Puerto Rico for taxable years beginning after December 31, 2005 and before January 1, 2012.[205] The section 199 deduction for taxpayers with oil related qualified production related activities income was reduced by three percentage points for taxable years beginning after 2009.[206] Special rules were put in place for domestic film production for taxable years beginning after December 31, 2007.[207]

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[201] Pub. L. No. 108-357, sec. 102 (2004).

[202] For taxable years beginning in 2005 and 2006, the deduction was three percent of such income. For taxable years beginning in 2007, 2008, and 2009, the deduction was six percent of such income.

[203] Joint Committee on Taxation, *General Explanation of Tax Legislation Enacted in the 108th Congress* (JCS-5-05), May 2005, p. 170.

[204] See Pub. L. No. 109-135, sec. 403(a) (2005), Pub. L. No. 109-22, sec. 514(a) (2006).

[205] Pub. L. No. 109-432, sec. 401 (2006). The provision was effective for the first two years beginning after December 2005 and before January 2008. The provision has been extended and currently expires for taxable years beginning after December 31, 2011.

[206] Pub. L. No. 110-343, sec. 401(a) (2008).

[207] Pub. L. No. 110-343, sec. 502 (2008).

2. Present law

In general

Section 199 of the Code provides a deduction from taxable income (or, in the case of an individual, adjusted gross income) that is equal to a portion of the lesser of a taxpayer's taxable income or its qualified production activities income.[208] For taxable years beginning after 2009, the deduction is nine percent of such income. With respect to a taxpayer that has oil related qualified production activities income for taxable years beginning after 2009, the deduction is limited to six percent of the least of its oil related production activities income, its qualified production activities income, or its taxable income.[209]

However, a taxpayer's deduction under section 199 for a taxable year may not exceed 50 percent of the wages properly allocable to domestic production gross receipts paid by the taxpayer during the calendar year that ends in such taxable year.[210] In the case of corporate taxpayers that are members of certain affiliated groups,[211] the deduction is determined by treating all members of such groups as a single taxpayer and the deduction is allocated among such members in proportion to each member's respective amount (if any) of qualified production activities income.

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[208] In the case of an individual, the deduction is equal to a portion of the lesser of the taxpayer's adjusted gross income or its qualified production activities income. For this purposes, adjusted gross income is determined after application of sections 86, 135, 137, 219, 221, 222, and 469, and without regard to the section 199 deduction.

[209] Sec. 199(d)(9). "Oil related qualified production activities income" means the qualified production activities income attributable to the production, refining, processing, transportation, or distribution of oil, gas or any primary product thereof (as defined in section 927(a)(2)(C) prior to its repeal). Treas. Reg. sec. 1.927(a)-1T(g)(2)(i) defines the term "primary product from oil" to mean crude oil and all products derived from the destructive distillation of crude oil, including volatile products, light oils such as motor fuel and kerosene, distillates such as naphtha, lubricating oils, greases and waxes, and residues such as fuel oil. Additionally, a product or commodity derived from shale oil which would be a primary product from oil if derived from crude oil is considered a primary product from oil. Treas. Reg. sec. 1.927(a)-1T(g)(2)(ii) defines the term "primary product from gas" as all gas and associated hydrocarbon components from gas wells or oil wells, whether recovered at the lease or upon further processing, including natural gas, condensates, liquefied petroleum gases such as ethane, propane, and butane, and liquid products such as natural gasoline. Treas. Reg. sec. 1.927(a)-1T(g)(2)(iii) provides that these primary products and processes are not intended to represent either the only primary products from oil or gas or the only processes from which primary products may be derived under existing and future technologies. Treas. Reg. sec. 1.927(a)-1T(g)(2)(iv) provides as examples of nonprimary oil and gas products petrochemicals, medicinal products, insecticides, and alcohols.

[210] For purposes of the provision, wages include the sum of the amounts of wages as defined in section 3401(a) and elective deferrals that the taxpayer properly reports to the Social Security Administration with respect to the employment of employees of the taxpayer during the calendar year ending during the taxpayer's taxable year. Elective deferrals include elective deferrals as defined in section 402(g)(3), amounts deferred under section 457, and, for taxable years beginning after December 31, 2005, designated Roth contributions (as defined in section 402A).

[211] Members of an expanded affiliated group for purposes of the provision generally include those corporations which would be members of an affiliated group if such membership were determined based on an ownership threshold of "more than 50 percent" rather than "at least 80 percent."

Qualified production activities income

In general, qualified production activities income is equal to domestic production gross receipts, reduced by the sum of: (1) the costs of goods sold that are allocable to such receipts;[212] (2) other deductions, expenses, or losses that are directly allocable to such receipts; and (3) a proper share of other deductions, expenses, and losses that are not directly allocable to such receipts or another class of income.[213]

Domestic production gross receipts

Domestic production gross receipts generally are gross receipts of a taxpayer that are derived from: (1) any sale, exchange, or other disposition, or any lease, rental, or license, of qualifying production property that was manufactured, produced, grown, or extracted by the taxpayer in whole or in significant part within the United States;[214] (2) any sale, exchange or other disposition, or any lease, rental, or license, of qualified film produced by the taxpayer; (3) any sale, exchange, or other disposition of electricity, natural gas, or potable water produced by the taxpayer in the United States; (4) in the case of a taxpayer engaged in the active conduct of a construction trade or business, construction activities performed in the United States;[215] or (5) in the case of a taxpayer engaged in the active conduct of an engineering or architectural services

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[212] For purposes of determining such costs, any item or service that is imported into the United States without an arm's length transfer price is treated as acquired by purchase, and its cost shall be treated as not less than its value when it entered the United States. A similar rule applies in determining the adjusted basis of leased or rented property where the lease or rental gives rise to domestic production gross receipts. With regard to property previously exported by the taxpayer for further manufacture, the increase in cost or adjusted basis may not exceed the difference between the value of the property when exported and the value of the property when re-imported into the United States after further manufacture. Except as provided by the Secretary, the value of property for this purpose is its customs value (as defined in section 1059A(b)(1)).

[213] See. Treas. Reg. section 1.199-1 through 1.199-9 where the Secretary has prescribed rules for the proper allocation of items of income, deduction, expense, and loss for purposes of determining qualified production activities income. Where appropriate, such rules are similar to and consistent with relevant present-law rules (*e.g.*, sec. 263A, in determining the cost of goods sold, and sec. 861, in determining the source of such items). Other deductions, expenses or losses that are directly allocable to such receipts include, for example, selling and marketing expenses. A proper share of other deductions, expenses, and losses that are not directly allocable to such receipts or another class of income include, for example, general and administrative expenses allocable to selling and marketing expenses. In computing qualified production activities income, the domestic production activities deduction itself is not an allocable deduction.

[214] Domestic production gross receipts include gross receipts of a taxpayer derived from any sale, exchange or other disposition of agricultural products with respect to which the taxpayer performs storage, handling or other processing activities (other than transportation activities) within the United States, provided such products are consumed in connection with, or incorporated into, the manufacturing, production, growth, or extraction of qualifying production property (whether or not by the taxpayer).

[215] For this purpose, construction activities include activities that are directly related to the erection or substantial renovation of residential and commercial buildings and infrastructure. Substantial renovation would include structural improvements, but not mere cosmetic changes, such as painting that is not performed in connection with activities that otherwise constitute substantial renovation.

trade or business, engineering or architectural services performed in the United States for construction projects located in the United States.[216]

However, domestic production gross receipts do not include any gross receipts of the taxpayer derived from property that is leased, licensed, or rented by the taxpayer for use by any related person.[217] Further, domestic production gross receipts do not include any gross receipts of the taxpayer that are derived from the sale of food or beverages prepared by the taxpayer at a retail establishment, that are derived from the transmission or distribution of electricity, gas, and potable water, or that are derived from the lease, rental, license, sale, exchange, or other disposition of land.[218]

A special rule for government contracts provides that property that is manufactured or produced by the taxpayer pursuant to a contract with the Federal Government is considered to be domestic production gross receipts even if title or risk of loss is transferred to the Federal Government before the manufacture or production of such property is complete to the extent required by the Federal Acquisition Regulation.[219]

Qualifying production property

Qualifying production property generally includes any tangible personal property, computer software, or sound recordings. Qualified film includes any motion picture film or videotape[220] (including live or delayed television programming, but not including certain sexually explicit productions) if 50 percent or more of the total compensation relating to the production of such film (including compensation in the form of residuals and participations)[221]

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[216] With regard to the definition of "domestic production gross receipts" as it relates to construction performed in the United States and engineering or architectural services performed in the United States for construction projects in the United States, the term refers only to gross receipts derived from the construction of real property by a taxpayer engaged in the active conduct of a construction trade or business, or from engineering or architectural services performed with respect to real property by a taxpayer engaged in the active conduct of an engineering or architectural services trade or business.

[217] Sec. 199(c)(7). In general, principles similar to those under the present-law extraterritorial income regime apply for this purpose. See Temp. Treas. Reg. sec. 1.927(a)-1T(f)(2)(i). For example, this exclusion generally does not apply to property leased by the taxpayer to a related person if the property is held for sublease, or is subleased, by the related person to an unrelated person for the ultimate use of such unrelated person. Similarly, the license of computer software to a related person for reproduction and sale, exchange, lease, rental or sublicense to an unrelated person for the ultimate use of such unrelated person is not treated as excluded property by reason of the license to the related person.

[218] Sec. 199(c)(4)(B).

[219] Sec. 199(c)(4)(C).

[220] See Treas. Reg. sec. 1.199-3(k).

[221] To the extent that a taxpayer has included an estimate of participations and/or residuals in its income forecast calculation under section 167(g), the taxpayer must use the same estimate of participations and/or residuals for purposes of determining total compensation.

constitutes compensation for services performed in the United States by actors, production personnel, directors, and producers.[222] A qualified film also includes any copyrights, trademarks, or other intangibles with respect to such film. The wage limitation for qualified films includes any compensation for services performed in the United States by actors, production personnel, directors, and producers and is not restricted to W-2 wages.[223]

Other rules

Partnerships and S corporations

With respect to the domestic production activities of a partnership or S corporation, the deduction under section 199 is determined at the partner or shareholder level.[224] In performing the calculation, each partner or shareholder generally will take into account such person's allocable share of the components of the calculation (including domestic production gross receipts; the cost of goods sold allocable to such receipts; and other expenses, losses, or deductions allocable to such receipts) from the partnership or S corporation as well as any items relating to the partner's or shareholder's own qualified production activities, if any.[225] Each partner or shareholder is treated as having W-2 wages for the taxable year in an amount equal to such person's allocable share of the W-2 wages of the partnership or S corporation for the taxable year.[226]

Qualifying in-kind partnerships

In general, an owner of a passthrough entity is not treated as conducting the qualified production activities of the passthrough entity, and vice versa. However, the Treasury regulations provide a special rule for qualifying in-kind partnerships, which are defined as partnerships engaged solely in the extraction, refining, or processing of oil, natural gas, petrochemicals, or products derived from oil, natural gas, or petrochemicals in whole or in significant part within the United States, or the production or generation of electricity in the United States.[227] In the case of a qualifying in-kind partnership, each partner is treated as having manufactured, produced, grown, or extracted property to the extent such property is distributed by the partnership to that partner.[228] If a partner of a qualifying in-kind partnership derives gross receipts from the lease, rental, license, sale, exchange, or other disposition of the property that

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[222] Treas. Reg. sec. 1.199-2.

[223] Sec. 199(b)(2)(D). Effective for tax years beginning after December 31, 2007.

[224] Sec. 199(d)(1)(A)(i).

[225] Sec. 199(d)(1)(A)(ii).

[226] Sec. 199(d)(1)(A)(iii).

[227] Treas. Reg. sec. 1.199-9(i)(2).

[228] Treas. Reg. sec. 1.199-9(i)(1).

was manufactured, produced, grown, or extracted by the qualifying in-kind partnership, then, provided such partner is a partner of the qualifying in-kind partnership at the time the partner disposes of the property, the partner is treated as conducting the manufacture, production, growth, or extraction activities previously conducted by the qualifying in-kind partnership with respect to that property.[229]

Trusts and estates

In the case of a trust or estate, the components of the calculation are apportioned between (and among) the beneficiaries and the fiduciary under regulations prescribed by the Secretary.[230]

Agricultural and horticultural cooperatives

With regard to member-owned agricultural and horticultural cooperatives formed under Subchapter T of the Code, section 199 provides the same treatment of qualified production activities income derived from agricultural or horticultural products that are manufactured, produced, grown, or extracted by cooperatives,[231] or that are marketed through cooperatives, as it provides for qualified production activities income of other taxpayers, that is, the cooperative may claim a deduction from qualified production activities income.

Alternatively, section 199 provides that the amount of any patronage dividends or per-unit retain allocations paid to a member of an agricultural or horticultural cooperative (to which Part I of Subchapter T applies), which is allocable to the portion of qualified production activities income of the cooperative that is deductible under the provision, is deductible from the gross income of the member. To qualify, such amount must be designated by the organization as allocable to the deductible portion of qualified production activities income in a written notice mailed to its patrons not later than the payment period described in section 1382(d). The cooperative cannot reduce its income under section 1382 (*e.g.*, cannot claim a dividends-paid deduction) for such amounts.

Alternative minimum tax

The deduction for domestic production activities is allowed for purposes of computing alternative minimum taxable income (including adjusted current earnings). The deduction in computing alternative minimum taxable income is determined by reference to the lesser of the qualified production activities income (as determined for the regular tax) or the alternative minimum taxable income (in the case of an individual, adjusted gross income as determined for the regular tax) without regard to this deduction.

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[229] *Ibid*.

[230] See Treas. Reg. secs. 1.199-5(d) and (e).

[231] For this purpose, agricultural or horticultural products also include fertilizer, diesel fuel and other supplies used in agricultural or horticultural production that are manufactured, produced, grown, or extracted by the cooperative.

III. ECONOMIC ANALYSIS AND DATA RELATED TO COST RECOVERYAND INVESTMENT

A. User Cost of Capital and Effective Marginal Tax Rates

In general

A tax system is considered efficient if it does not distort the choices that would be made in the absence of the tax system. No tax system can be fully efficient, however, as long as individuals and business entities can alter their behavior in response to taxation. Any tax system puts a "wedge" between the full economic return from an activity and the return that is available to the individual or entity after tax is imposed. Such a tax wedge generally leads to a reduction in the amount of the taxed activity. In general, the goal of a tax system should be to minimize these inefficiencies, subject to satisfying other goals for a tax system, such as raising a desired level of revenue, achieving an equitable distribution of taxes, and creating a tax system that is reasonably administrable.

Economists focus on the effective marginal tax rate to determine the impact of taxes at the margin of behavior. By "marginal," economists mean an incremental unit of a given activity. In the capital income context, that margin of behavior is the decision whether to invest in an incremental unit of capital of the business, and the effective marginal tax rate on that investment is the lifetime tax owed on that investment expressed as a share of the economic (before-tax) returns to that investment. While the statutory corporate tax rates are an important element in determining effective marginal tax rates on capital deployed in the corporate sector, many other factors come in to play as well, including discrepancies between true economic depreciation of the asset and depreciation deductions that are allowed by statute for that class of asset, tax credits or other special rules that may apply to the investment, and whether the asset is financed by debt or equity.

The corporate income tax is a separate entity-level tax on income earned from capital deployed in the corporate sector. As such, it is but one component of taxes on capital income, as capital may be deployed in other organizational forms, such as partnerships, S corporations, or sole proprietorships, which do not face a separate entity level tax. The existence of a separate tax on asset income earned in corporate form is itself a distortion in the efficient allocation of capital, as it creates a disincentive to organize as a corporation.

The marginal tax rate on capital income at the corporate level is important, but the individual income tax also affects the returns to capital income. In addition to the tax rates at the corporate level, the effective marginal tax rate on an incremental unit of investment must reflect the taxation of returns at the individual level. In the case of an individual supplying savings, the marginal unit of supply is an additional dollar of capital above what he is currently saving. While such individual may face an average tax rate on income that is low, due to standard deductions, special rates on dividend or capital gain income, low initial rates on taxable income, and other factors, his marginal rate of tax—the tax on the marginal unit of savings supplied—could be substantially higher due to the progressive structure of the statutory individual tax rate schedule. Furthermore, though subject to a higher statutory marginal rate than his average tax rate, the individual's effective marginal tax rate on an additional unit of capital supplied could be

different from the statutory marginal rate due to opportunities to shelter some of the income from tax through, for example, retirement plan arrangements.

Economists emphasize the effective marginal tax rates because it is these rates that determine the incentives, or disincentives, for taxpayers to work, to save and invest, or to take advantage of various tax preferences. These incentives often distort taxpayer choices, and these distorted choices generally promote an inefficient allocation of society's labor and capital resources. This less efficient allocation of labor and capital resources would leave society with lower output of goods and services than it would otherwise have. For this reason, economists believe that increasing efficiency in an economy results in increased growth in the economy.

The distorted choices that may result from increased effective marginal tax rates are not limited to decisions to work. For example, taxation of income from capital may distort incentives to save by reducing the after-tax return to saving. Substantial disagreement exists among economists as to the effect on saving of changes in the after-tax return to saving. Empirical investigation of the responsiveness of personal saving to after-tax returns provides no conclusive results. If saving is reduced, capital available for investment is reduced. Investment in technology, equipment, and structures drives future productivity increases and growth in an economy. Increases in productivity increase wage rates, which provide incentives for increased labor supply. For this reason, tax policy affecting marginal tax rates on asset income can also have a significant effect on the economy's capacity for future growth.

User cost of capital

A fundamental concept for analyzing the effects of capital taxation and for calculating effective marginal tax rates is the user cost of capital.[232] The user cost of capital is the opportunity cost that the firm (user) incurs as a consequence of owning a capital asset.[233] A firm will purchase an asset only if the value of the goods produced by the asset during the year meets or exceeds the user cost. If the marginal return exceeds the user cost of capital, a firm can increase its profits by undertaking the investment. If the marginal return is less than the user cost, the firm decreases profits by undertaking the investment. Firms invest up to the point where the marginal return to capital assets just equals the user cost of capital. Thus, the user cost of capital is the return that equates the discounted present value of the investment's expected cash flow with the investment's cost, *i.e.*, it is the real before-tax internal rate of return on a marginally profitable investment.[234] If a firm may choose between production technologies, say between one that is labor-intensive and another that is capital-intensive, then a key variable for the firm to consider in its choice of production technology is the user cost of capital. If the user cost of capital is relatively high, the firm may choose a less capital-intensive technology and vice versa.

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[232] The classic exposition of this concept is found in Robert Hall and Dale W. Jorgenson, "Tax Policy and Investment Behavior," *American Economic Review*, 57, June 1967, pp. 391-414.

[233] Harvey Rosen, *Public Finance*. Homewood, Illinois: Richard D. Irwin, Inc., 1985, p. 436.

[234] James B. Mackie, III, "Unfinished Business of the 1986 Tax Reform Act: An Effective Tax Rate Analysis of Current Issues in the Taxation of Capital Income." *National Tax Journal*, 55, June 2002, pp. 293-337.

The user cost of capital may be represented by the following equation.

$$user\ cost = \frac{(1-\theta-\tau*(x))}{(1-\tau)} \times [(i-\pi)+\delta-(\alpha-\pi)],$$

where θ is any investment tax credit,

τ is the statutory corporate tax rate,

x is the present value of the tax depreciation deductions,

i is the nominal corporate discount rate, reflecting the mix of debt and equity financing,

π is the inflation rate,

δ is the present value of the economic depreciation, and

α is the appreciation or revaluation in the asset.

The equation illustrates how various components can affect the user cost of capital. Higher financing costs, represented by the nominal corporate discount rate, increase the cost of capital. The faster an asset wears out with age, that is, the higher the rate of economic depreciation, the higher is the user cost of capital. Higher inflation-adjusted appreciation or revaluation in the asset reduces the user cost of capital. Higher investment tax credits and more generous tax depreciation deductions also reduce the cost of capital. A higher tax rate increases the user cost of capital as the firm must give a greater portion of its return to the government. This demonstrates that there are tradeoffs in tax policy that affect the user cost of capital. For example, if to achieve a revenue neutral tax change, the corporate tax rate were reduced at the same time that tax depreciation were made less generous, these two changes would have offsetting effects on the user cost of capital. The net impact could increase, decrease, or have no net effect on the user cost of capital.

Financing costs

The user cost of capital is the financial cost of capital, or the opportunity cost of funds, adjusted for expected inflation. The user cost of capital depends on how the investment is financed: with debt, equity, retained earnings, or some combination thereof. That is, the financing cost, denoted by *i* in the equation, is the real before-tax rate of interest the firm must pay to acquire the asset if debt-financed, the real before-tax rate of return required by shareholders if the asset is equity-financed, the real before-tax cost of internal equity if the asset is financed with retained earnings, or some weighted average of the three.[235] Investment tax credits lower the user cost of capital by reducing the effective acquisition cost of a capital asset.

[235] Robert S. Chirinko, "Corporate Taxation, Capital Formation, and the Substitution Elasticity between Labor and Capital," *National Tax Journal*, 55, June 2002, pp. 339-355. A more complete treatment would also include the tax treatment of the financiers. See Mackie, 2002.

Economic depreciation and tax depreciation

The user cost of capital also incorporates the rate of economic depreciation of the asset, denoted by δ in the equation. Economic depreciation reflects the rate at which a capital asset falls in value as it ages.[236] Firms must earn enough from capital investments to recover this economic depreciation; otherwise they would be better off investing in some other asset.

Greater tax depreciation allowances tend to lower the user cost of capital. Tax depreciation, denoted by x in the equation, often differs from economic depreciation, and since 1981 has generally been more accelerated than economic depreciation.[237] To the extent that tax depreciation has a larger (smaller) present value than does economic depreciation—accelerated depreciation or in the extreme case, expensing—the user cost of capital may be lower (higher) than in the absence of the tax allowances. The tax law can promote an inefficient distribution of investment if it specifies tax depreciation rates that deviate from economic depreciation rates. Some have argued, for instance, that depreciation provisions are more favorable to investment in equipment than investment in structures, which could result in above-optimal investment in equipment.[238] In addition, tax rules can encourage above-optimal aggregate investment if tax depreciation rates, as a whole, are faster than economic depreciation rates.

Measuring economic depreciation

Although tax depreciation rates are defined by tax rules and relatively straightforward to calculate, measuring economic depreciation rates, the change in market value of income-producing property, is more difficult. Economists have attempted to estimate economic depreciation rates for particular investments, but no consensus has emerged regarding a general representation of depreciation method applicable across broad classes of assets.[239] One method based on early estimates of economic depreciation is the ADS. ADS assigns each investment a recovery period reflecting its useful life, and assumes that the investment depreciates in a straight-line pattern. The dollar amount of economic depreciation is assumed to be the same each year. For example, agricultural machinery is assumed to have a useful life, and recovery period, of 10 years under ADS. A $100 piece of agricultural machinery would have a constant depreciation deduction in the amount of $10 each year over its 10 year life. In the first year this would be a rate of depreciation of 10 percent ($10/$100). However, in the second year, the remaining value is $90 while the tax depreciation deduction amount is still $10 for the year. This represents a rate of depreciation of 11.1 percent ($10/$90). Therefore, the rate of economic depreciation for agricultural machinery varies under ADS from 10 percent the first year to 100 percent in the tenth year.

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[236] The definition of depreciation relevant to measurement of true economic income is economic depreciation, the true loss of economic value. Paul A. Samuelson, "Tax Deductibility of Economic Depreciation to Insure Invariant Valuations," *Journal of Political Economy*, vol. 72, December 1964, pp. 604-606.

[237] The legislative background of the tax depreciation rules is described in section II.A. of this document.

[238] Jane G. Gravelle, "Depreciation and the Taxation of Real Estate," Congressional Research Service Report RL3063, 2000.

[239] Jane G. Gravelle, "Whither Tax Depreciation," *National Tax Journal*, September 2001, pp. 513-526.

However, some economists have argued that assets do not depreciate by a constant dollar amount each year, and that instead they depreciate at a constant rate, that is, a geometric pattern. That is, they depreciate the most in the first year of their useful life and by declining amounts in subsequent years. In particular, some economists have found that economic depreciation follows a geometric pattern, as opposed to a straight-line pattern, because data suggest that a geometric pattern more closely matches the actual pattern of price declines for most asset types.

For example, one of the earliest and most prominent studies estimated that agricultural machinery depreciates at a 9.71-percent rate with a useful life of 17 years, which is longer than the ADS life.[240] BEA currently estimates an 11.79-percent rate of economic depreciation for agricultural machinery with a useful life of 14 years. In the case of agricultural machinery, the useful life under ADS may understate the economic useful life and therefore, provide tax depreciation that is more generous than economic depreciation. A full comparison would need to adjust for the method of depreciation as well as the useful life.

The BEA follows a methodology of a constant rate of decay over estimated useful lives to compute rates of economic depreciation for use in the National Income and Product Accounts. The purpose of these estimates is to measure the consumption of fixed capital for purposes of accurately measuring components of GDP. Instead of a small number of recovery periods for asset classes as under the present income tax depreciation rules, several hundred types of assets are identified. Each of these is assigned a depreciation rate equal to the appropriate declining balance rates divided by the service life. BEA bases its economic depreciation patterns on empirical evidence of used asset prices in resale markets for each asset type wherever possible. The BEA describes its methodology for estimating economic depreciation as follows.

> BEA assumes most assets have depreciation patterns that decline geometrically over time. For any given year, the constant-dollar depreciation charge on an existing asset is obtained by multiplying the depreciation charge in the preceding year by one minus the annual depreciation rate.[241] BEA's geometric depreciation rates are derived by dividing declining balance rates by service lives.... Declining-balance rates are multiples of the comparable rate of depreciation that would be obtained for the first period of an asset's life using the straight-line method. Thus, when the declining balance rate is equal to 2 (referred to as a "double-declining balance"), the rate of depreciation in the first period of an asset's life is equal to twice the rate that would have been obtained using the straight-line method.[242]

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[240] Frank C. Wykoff and Charles R. Hulten, "The Measurement of Economic Depreciation," *Depreciation, Inflation, and the Taxation of Capital* (ed. Charles R. Hulten), 1981, pp. 81-125.

[241] New assets are assumed, on average, to be placed in service at midyear, so that depreciation on them in the first year is equal to one-half the new investment times the depreciation rate.

[242] U.S. Department of Commerce, Bureau of Economic Analysis, *Fixed Assets and Consumer Durable Goods in the United States, 1925-97*, Washington, DC: U.S. Government Printing Office, September, 2003, p. M-6, M-7.

On average the declining balance rate is 1.65 for equipment and 0.91 for private nonresidential structures. These serve as the default declining balance rates for assets for which no data are available. Table 11 provides the rate of economic depreciation, service life, and declining balance rate for selected types of assets, as estimated by the BEA. It also lists the recovery periods for these types of assets under the current ADS and MACRS tax rules.

Table 11.−BEA Economic Depreciation Rates and Service Lives Compared to ADS and MACRS Recovery Periods for Selected Asset Types

Type of Asset	BEA Rate of Depreciation	BEA Service Life	BEA Declining Balance Rate	ADS Class Life	MACRS Recovery Period
Software - Pre-packaged	0.5500	3	1.6500	5	3
Software - Custom	0.3300	5	1.6500	5	3
Machinery (except tractors) - Construction	0.1550	10	1.5500	6	5
Equipment - Railroad	0.0589	28	1.6500	14	7
Farm tractors	0.1452	9	1.3064	4	3
Ships and boats	0.0611	27	1.6500	18	10
Machinery (except tractors) - Agricultural	0.1179	14	1.6500	10	7
Equipment (1978 and later years) - Office and accounting	0.3119	7	2.1832	6	5
Manufacturing structures	0.0314	31	0.9747	40	39
Office buildings, including medical buildings	0.0247	36	0.8892	40	39
Educational buildings	0.0188	48	0.9024	40	39
1-to-4-unit residential structures (new)	0.0114	80	0.9100	40	27.5
Trucks - Government, noncombat	0.2875	6	1.7252	6	5
Trucks - Used for trucking and other services (1992 and after)	0.1725	10	1.7252	6	5

Source: Bureau of Economic Analysis, Rev. Proc. 87-56.

Statutory corporate rate

The corporate tax system also influences the user cost of capital through the statutory corporate income tax rate. The corporate income tax raises the user cost of capital by increasing the required before-tax return to generate the same after-tax revenue. This requires more productive assets than would be needed without this additional cost. If asset prices reflect their productivity, these new assets may be more expensive, taking account of corporate income tax. A greater total cost for assets may raise the value of economic depreciation. To the extent that financing costs are not deductible, they also raise the opportunity cost of funds.

User cost of capital and investment

While the tax system directly affects the user cost of capital, the impact of the tax system on investment depends on how sensitive investment is to changes in the user cost of capital. If investment is relatively responsive to the user cost of capital, then policymakers can influence the level of investment by enacting changes in the corporate tax rate, depreciation allowances, investment tax credits, and/or taxation of returns to investment at the individual level.

Effective marginal tax rates

One way to measure the potential inefficiency in the allocation of capital is to calculate the effective marginal tax rate on investment. The effective marginal tax rate is the rate that would offer the same incentives implied by various features of the tax code, if that rate were applied directly to economic income.[243] The effective marginal tax rate may be calculated from the user cost of capital.[244] The effective marginal tax rate is the rate that would leave an after-tax real rate of return sufficient to cover the real financing costs of the investment and economic depreciation. Effective marginal tax rates are often used as a measure of investment incentives in lieu of the user cost of capital upon which it is based. Tax changes that increase the user cost of capital also increase the effective marginal tax rate. Similarly, tax changes that reduce the user cost of capital also reduce the effective marginal tax rate. Increases (decreases) in the effective marginal tax rate tend to decrease (increase) investment in the long run, and thus decrease (increase) the size of the aggregate capital stock.

Economic output, however, depends not only on the size of the capital stock but also on its composition. In the absence of taxes, the operation of a competitive economy causes capital to flow to sectors where it is expected to earn the highest rate of return. This results in an allocation of investment that produces the largest amount of national income. However, if effective marginal tax rates differ across sectors of the economy, more capital may accumulate in lightly taxed sectors, and less capital may be invested in highly taxed sectors. This may result in an inefficient allocation of capital to sectors in which it earns a lower rate of return, reducing productivity and potential output. Thus, the effect of a reduction in the economy-wide effective marginal tax rate on investment could be partially offset if the disparity in effective marginal tax rates across sectors increases.

Table 12 reports a recent estimate of effective marginal tax rates on capital income.[245] The overall effective marginal tax rate on capital income is 13.8 percent. However, the rate varies significantly depending on the type of investment, the form of business organization, and the source of financing. The effective marginal tax rate on all business investment is 24.2 percent, with a higher rate in the corporate sector (26.3 percent) than in the noncorporate sector (20.6 percent). This difference is due in part to the presence of a separate corporate income tax and in part to most noncorporate income being taxed at relatively low marginal rates. However,

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[243] While useful for measuring marginal incentive effects, effective marginal tax rates are not relevant for purposes of comparing tax burdens on investors in particular activities or industries. The calculation of effective marginal tax rates depends on a concept of long-run equilibrium in which all investors earn the same risk-adjusted after-tax rate of return; therefore, differences in effective marginal tax rates do not reflect differences in investor returns. Mackie, 2002.

[244] For a detailed description of the methodology and calculations involved, see Congressional Budget Office, *Computing Effective Tax Rates on Capital Income*, December 2006, available at http://www.cbo.gov/ftpdocs/76xx/doc7698/12-18-TaxRates.pdf.

[245] For a detailed description of the assumptions and calculations involved, see Congressional Budget Office, *Taxing Capital Income: Effective Rates and Approaches to Reform*, October 2005, available at http://www.cbo.gov/ftpdocs/67xx/doc6792/10-18-Tax.pdf.

this is partially offset by the relatively greater share of corporate relative to noncorporate income that is received by tax-favored retirement accounts.

Investment for both tenant-occupied and owner-occupied housing is tax-favored relative to business investment as a whole with effective marginal tax rates of 18.2 percent and -5.1 percent, respectively. Rental housing is taxed at a lower rate than other business investment because of relatively generous depreciation schedules (27.5-year recovery period)[246] and the large portion of rental housing investment that occurs outside of the corporate sector. The negative rate on owner-occupied housing reflects the deductibility of mortgage interest and real property taxes and the exclusion of implicit net rental income and certain capital gains from gross income.[247]

Table 12.−Effective Marginal Tax Rates on Capital Income, 2005

Overall	13.8
Business	24.2
Corporate	26.3
Debt financed	-6.4
Equity financed	36.1
Noncorporate	20.6
Housing	
Tenant occupied	18.2
Owner occupied	-5.1

Source: Congressional Budget Office.

The effective marginal tax rates were computed based on the mix of debt and equity financing observed in the corporate sector. To show the sensitivity of rates to the source of financing, effective marginal tax rates were recomputed assuming either all debt or all equity financing. The marginal tax rate on income from an all-debt-financed corporate investment is -6.4 percent versus 36.1 percent for an all-equity-financed corporate investment. The negative rate on income from an all-debt-financed corporate investment is attributable in part to deductions for both accelerated depreciation and interest expense which, in combination, exceed taxable income. This is partially offset by individual taxes on the interest income received; however, much of that interest income is generally taxed at individual marginal tax rates lower than the corporate marginal tax rate at which the interest paid is deductible, or it may be received by tax-favored accounts (individual retirement accounts or tax-exempt holdings of pension funds and endowments) and escape taxation entirely. The rate on all-equity-financed investment is higher than the statutory corporate tax rate due to individual income taxation of dividends and

[246] Table 11 above shows the estimated BEA service life for new 1-to-4 unit residential structures of 80 years. BEA estimates new 5-or-more-unit structures have a service life of 65 years.

[247] See discussion of tax incentives for owner-occupied housing in Joint Committee on Taxation, *Present Law, Data, and Analysis Relating to Tax Incentives for Homeownership* (JCX-50-11), September 30, 2011.

capital gains, mitigated by the share of such income received by tax-favored accounts. Without considering these individual-level taxes, the rate on equity-financed corporate investment is lower than the statutory rate (30.6 percent) due to accelerated depreciation.

Effect of depreciation on effective marginal tax rates

The effective marginal tax rate varies by type of asset generally because of variation in the deviation of tax depreciation from economic depreciation. In its analysis, the Congressional Budget Office used Bureau of Economic Analysis published economic depreciation rates.[248] Table 13 provides a list of effective marginal tax rates on capital income of C corporations by asset type. It also presents the cumulative percentage of each asset type in 2002. The final column presents tax recovery periods for selected asset types.

Table 13 shows that computers and peripheral equipment have an effective marginal tax rate in excess of the top statutory corporate tax rate.[249] Other relatively heavily taxed assets include inventories, manufacturing buildings, and land. The lowest rates apply to petroleum and natural gas structures, mining structures, railroad equipment, aircraft, and specialized industrial machinery.

[248] Department of Commerce, Bureau of Economic Analysis, *Fixed Assets and Consumer Durable Goods in the United States, 1925–97,* September 2003, Table B, p. M-30; Table C, pp. M-31–M-32; available at www.bea.gov/bea/dn/Fixed_Assets_1925_97.pdf. This methodology for measuring depreciation rates is different from depreciation represented by ADS.

[249] Research suggests that current tax depreciation schedule for computers measures their actual loss in value in a zero-inflation environment. However, because the tax code is not indexed for inflation, the depreciation allowances may be too small in present value for positive inflation rates. Mark E. Doms, *et al.,* "How Fast Do Personal Computers Depreciate? Concepts and New Estimates," in James M. Poterba (ed.), *Tax Policy and the Economy 18*, Cambridge, Mass.: The MIT Press, 2004, pp. 37-80.

Table 13.−Effective Marginal Tax Rates on Capital Income of C Corporations by Asset Type and Selected MACRS Recovery Periods

Asset Type	Effective Marginal Tax Rate	Cumulative Percentage of Assets in 2002	Selected MACRS Recovery Periods
Computers and Peripheral Equipment	36.9	1.2	5
Inventories	34.4	11.8	nondepreciable
Manufacturing Buildings	32.2	19.1	39
Land	31.0	33.5	nondepreciable
Other Buildings	30.6	36.1	39
Commercial Buildings	30.4	44.5	39
Office Buildings (Including Medical)	30.2	51.2	39
Automobiles	29.7	52.2	5
Other Structures	29.5	53.4	
Software	29.1	55.9	3
Hospitals and Special Care	28.4	56.6	
Educational Buildings	28.4	56.9	39
Office and Accounting Equipment	28.4	57.0	5 or 7
Internal Combustion Engines	27.3	57.0	5
Electric Transmission and Distribution	24.9	59.4	20
Other Electrical Equipment	24.8	59.5	
Residential Buildings	23.8	60.0	27.5
Steam Engines	22.9	60.5	
Farm Tractors	22.7	60.6	3
Service Industry Machinery	22.2	61.2	
Mining and Oil-Field Machinery	21.9	61.4	
Other Equipment	21.5	62.5	
Farm Structures	20.8	62.7	20
Medical Equipment and Instruments	20.4	63.4	
Agricultural Machinery	20.2	63.6	

Asset Type	Effective Marginal Tax Rate	Cumulative Percentage of Assets in 2002	Selected MACRS Recovery Periods
Railroads	20.1	65.9	
Nonmedical Instruments	20.0	66.7	
Metal-Working Machinery	19.0	68.4	
Other Power Structures	19.0	70.5	
Photocopy and Related Equipment	18.8	70.8	5
Electric Structures	18.6	76.2	
Other Furniture	18.5	77.7	7
Other Trucks, Buses, and Truck Trailers	18.2	78.6	5
Light Trucks (Including Utility Vehicles)	18.2	79.9	5
Communications Equipment	17.8	83.7	7
Household Appliances	17.5	83.8	5
Construction Tractors	17.4	83.8	3
General Industrial Equipment	17.3	86.8	7
Communication Structures	17.0	89.7	7
Construction Machinery	16.7	90.3	5
Ships and Boats	16.5	90.8	10
Residential Equipment	16.2	90.8	
Fabricated Metal Products	15.5	91.6	
Household Furniture	15.1	91.6	5
Specialized Industrial Machinery	14.9	93.8	
Aircraft	14.5	95.8	7*
Railroad Equipment	11.4	96.5	7
Mining Structures	9.5	96.8	7
Petroleum and Natural-Gas Structures	9.2	100.0	

* The recovery period is seven years for commercial aircraft and five years for non-commercial aircraft (*e.g.*, corporate jets) including helicopters.
Source: Congressional Budget Office.

Tax expenditures related to selected cost recovery rules

One measure of the effect of a tax system on the user cost of capital (and therefore on effective marginal tax rates) is the tax expenditure for accelerated depreciation and expensing. Table 14 reports the tax expenditure estimates for fiscal years 2011-2015 for selected provisions related to the cost recovery rules.[250] The Joint Committee staff generally classifies as tax expenditures cost recovery allowances that are more favorable than those provided under the alternative depreciation system (sec. 168(g)), which provides for straight-line recovery over tax lives that are longer than those permitted under the accelerated system.[251] In addition, a tax expenditure has been measured for depreciation in those specific cases in which the tax treatment of a certain type of asset deviates from the overall treatment of other similar types of assets. For example, the tax treatment of leasehold improvements of commercial buildings is depreciated using a recovery period of 15 years for property placed in service in 2011, while the general treatment of improvements to commercial buildings if the owner makes the improvements is a 39 year recovery period. In this case, the difference between depreciation (in this case straight-line) using 15 years and 39 years for the recovery period represents a tax expenditure.

Table 14.−Tax Expenditures for Selected Cost Recovery Rules, FY2011-2015 (billions of dollars)

Provision	Total FY2011-2015 ($ billions)
Depreciation of equipment in excess of the alternative depreciation system	109.0
Expensing of research and experimental expenditures	26.5
Depreciation of rental housing in excess of alternative depreciation system	24.8
Expensing under section 179 of depreciable business property	9.5
Amortization of business startup costs	5.3
Expensing of exploration and development costs, fuels	4.4

[250] For the most recent tax expenditure estimates prepared by the Joint Committee staff, see Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2011-2015* (JCS-1-12), January 17, 2012.

[251] Some economists assert that this may not represent the difference between tax depreciation and economic depreciation. The Bureau of Economic Analysis of the Department of Commerce ("BEA") introduced a new methodology for calculating economic depreciation for purposes of the National Income and Product Accounts ("NIPA") in 1997 that relies on a different methodology. If economic depreciation were calculated using the BEA methodology for NIPA instead of ADS, the tax expenditure would be a different amount. The BEA methodology for NIPA is discussed above under "Measuring economic depreciation." For a detailed discussion of the BEA methodology, see Barbara M. Fraumeni, "The Measurement of Depreciation in the U.S. National Income and Product Accounts," *Survey of Current Business*, 77, July 1997, pp. 7–23.

Provision	Total FY2011-2015 ($ billions)
Election to expense 50 percent of qualified property used to refine liquid fuels	3.0
Depreciation of buildings other than rental housing in excess of alternative depreciation system	2.1
Expensing of timber growing costs	1.2
Five-year MACRS for certain energy property	1.1
Amortization and expensing of reforestation expenditures	1.1
Deduction for expenditures on energy-efficient commercial building property	0.9
15-year MACRS for certain electric transmission property	0.8
Amortization of air pollution control facilities	0.8
10-year MACRS for smart electric distribution property	0.7
Expensing of costs to remove architectural and transportation barriers to the handicapped and elderly	0.6
Amortization of geological and geophysical expenditures associated with oil and gas exploration	0.6
15-year MACRS for natural gas distribution line	0.6
Expensing of the costs of raising dairy and breeding cattle	0.5
Expensing of exploration and development costs, nonfuel minerals	0.3
Expensing by farmers for fertilizer and soil conditioner costs	0.3
Expensing of soil and water conservation expenditures	0.3
Special depreciation allowance for certain reuse and recycling property	0.1
Expensing of magazine circulation expenditures	0.1

Source: Joint Committee on Taxation.

Capital cost recovery and national investment

Changes in tax depreciation schedules may affect the overall level of investment in the economy. However, the magnitude of the effect is an empirical question. For example, the bonus depreciation provisions enacted in 2002, 2003, 2008, 2009, and 2010, substantially raised the first-year depreciation deduction a taxpayer could take and thereby increased an investment's rate of tax depreciation substantially. Although these provisions lowered the user cost of capital, their overall impact depended on the degree to which they encouraged taxpayers to make investments they otherwise would not have made. If the drop in the user cost of capital mainly benefits taxpayers who make a level of investment similar to the level that they would have made without bonus depreciation, then the effect of the change in tax law is muted.

The findings in the literature on the effects of more generous cost recovery methods, and more generally on the sensitivity of capital investment to its user cost, are mixed. One of the first major studies found that investment responded strongly to changes in tax policy.[252] The authors examined a range of tax policies that lowered the user cost of capital, such as accelerated depreciation, investment tax credits, and expensing. Their results are in line with conventional economic theory, which suggests that lowering the user cost of capital (such as through accelerated depreciation) increases national investment.

The findings of subsequent studies, however, have been mixed. Some authors have found negligible effects. One study of the bonus depreciation provisions enacted in 2002 and 2003 concluded that the provisions had little impact on investment spending.[253] Another study, analyzing the investment behavior of a large collection of firms from 1981 to 1991, estimated a relatively small response of capital investment to changes in its user cost.[254] Various explanations for these results have been proposed in the economics literature. For example, if firms face high, fixed costs of adjusting their capital stocks, they may be less sensitive to tax incentives to invest in more capital.[255] Also, lack of taxpayer awareness, tax law interactions, and the complexity costs of claiming a deduction under a new provision could reduce the sensitivity of investment to tax incentives. A study of the bonus depreciation provisions of 2002 and 2003, as well as legislation enacted in 2003 that increased the maximum section 179 deduction from $25,000 to $100,000, found that the fraction of small businesses claiming 179 expensing changed little between 2001 or 2002, and 2003, when the limitation on deductions was raised.[256] Among small businesses, 39 percent of individuals and 54 percent of corporations claimed bonus depreciation in 2002, compared to 33 percent of individuals and 49 percent of corporations in 2003, when bonus depreciation was made more generous.[257] Other research has found that utilization rates for the bonus depreciation measures were higher for industries, such as telecommunications, where the long-lived investments by a small number of firms accounts for the bulk of investment.[258]

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[252] Robert Hall and Dale W. Jorgenson, "Tax Policy and Investment Behavior," *American Economic Review*, vol. 57, no. 3, June 1967, pp. 391-414.

[253] Darrel Cohen and Jason Cummins, "A Retrospective Evaluation of the Effects of Temporary Partial Expensing," *Board of Governors of the Federal Reserve System Finance and Economics Discussion Series*: 2006-19.

[254] Robert S. Chirinko, Steven M. Fazzari, and Andrew P. Meyer, "How Responsive Is Business Capital Formation to Its User Cost? An Exploration with Micro Data," *Journal of Public Economics* 74(1), 1999, pp. 53-80.

[255] Ricardo J. Caballero and Eduardo M.R.A. Engel, "Explaining Investment Dynamics in U.S. Manufacturing: A Generalized (*S*, *s*) Approach," *Econometrica* 67(4), 1999, pp. 783-826.

[256] 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.

[257] *Ibid*., p. 284.

[258] Matthew Knittel, "Corporate Response to Accelerated Tax Depreciation: Bonus Depreciation for Tax Years 2002-2004," Office of Tax Analysis Working Paper 98, May 2007.

On balance, however, the economic literature on tax policy and investment does lean toward the conclusion that changes in taxes do have a noticeable impact on investment. A well-known survey of the literature, for example, concluded that investment was highly responsive to changes in the cost of capital.[259] One study looking at the period from 1953 to 1988, during which time accelerated depreciation and investment tax credit provisions were both enacted and repealed, found that tax policy had a strong effect on the level of investment, especially for machinery and equipment.[260] The authors also provided evidence that suggests firms with lower net cash flows, which may be more liquidity-constrained, are more responsive to changes in the cost of capital.[261] If this is true, then firms with less access to capital markets are particularly sensitive to changes in tax incentives for investment. Moreover, insofar as tax changes affect both net cash flows and the user cost of capital, some economists have found that the cash-flow effect is stronger.[262] Recent research on the bonus depreciation provisions enacted in 2002 and 2003 found a clear and substantial impact of tax incentives on investment in capital goods.[263] The authors argue that the demand for long-lived investment goods is extremely responsive to temporary changes in tax treatment because the value of these investments is not particularly sensitive to the date of purchase, while the cost could be if temporary tax incentives are in place.

International comparisons

The taxation of capital income varies across countries. Table 15 reports statutory corporate income tax rates, including subnational taxes where relevant, the present discounted value of depreciation allowances, and effective marginal tax rates for investments in equipment for member countries of the Organization for Economic Cooperation and Development ("OECD") in 2005.[264] While the United States has a top statutory corporate tax rate exceeding the OECD average by eight percentage points, this difference is partially offset by more generous accelerated depreciation than the average OECD country. This results in an effective marginal tax rate on equity-financed investment four percentage points higher in the United States than the average in the OECD and on par with the subset of nations which are members of

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[259] Kevin A. Hassett and R. Glenn Hubbard, "Tax Policy and Business Investment," *Handbook of Public Economics*, Volume 3, (eds. Alan J. Auerbach and Martin Feldstein), 2002, pp. 1293-1343.

[260] Alan J. Auerbach and Kevin Hassett, "Tax Policy and Business Fixed Investment in the United States," *Journal of Public Economics* 47(1), 1992, pp. 141-170.

[261] *Ibid*.

[262] Steven M. Fazzari, R. Glenn Hubbard, and Bruce C. Petersen, "Financing Constraints and Corporate Investment," *Brookings Papers on Economic Activity* (1), 1988, pp. 141-195.

[263] Christopher House and Matthew Shapiro, "Temporary Investment Tax Incentives: Theory with Evidence from Bonus Depreciation," *American Economic Review* 98(3), 2008, pp. 737-768.

[264] Data are from U.S. Department of the Treasury, "Treasury Conference on Business Taxation and Global Competitiveness Background Paper," July 23, 2007, available at http://www.treasury.gov/press-center/press-releases/Documents/07230%20r.pdf. Since 2005, Germany, Japan, the United Kingdom and others have lowered the statutory corporate tax rates and made other changes that may affect the effective marginal tax rate calculations shown here.

the Group of Seven ("G7").[265] Debt-financed investment faces a lighter burden of taxation in the United States relative to the effective marginal tax rate on average among OECD or G7 members, largely as a result of the higher statutory marginal tax rate in the United States increasing the value of interest deductions.

Table 15.−Statutory and Effective Marginal Tax Rates among OECD Countries for Investments in Equipment, 2005

	Statutory Corporate Tax Rate	PDV of Depreciation Allowance - Equipment (Equity)	EMTR Equipment Equity	EMTR Equipment Debt
		OECD Corporate Tax Rates, 2005		
Australia	30%	66%	24%	-23%
Austria	25%	66%	20%	-18%
Belgium	34%	75%	22%	-35%
Canada	36%	73%	25%	-37%
Finland	26%	73%	17%	-23%
France	34%	77%	20%	-36%
Great Britain	30%	73%	20%	-28%
Germany	38%	71%	29%	-37%
Greece	32%	87%	12%	-40%
Ireland	13%	66%	10%	-8%
Italy	37%	82%	19%	-48%
Japan	40%	73%	28%	-40%
Netherland	32%	73%	21%	-29%
Norway	28%	67%	22%	-21%
Portugal	28%	79%	15%	-29%
Spain	35%	78%	21%	-38%
Sweden	28%	78%	16%	-29%
Switzerland	34%	78%	20%	-36%
United States	39%	79%	24%	-46%
OECD Average	31%	75%	20%	-32%
G7 Average	36%	76%	24%	-39%

Source: Institute for Fiscal Studies, www.ifs.org.uk.

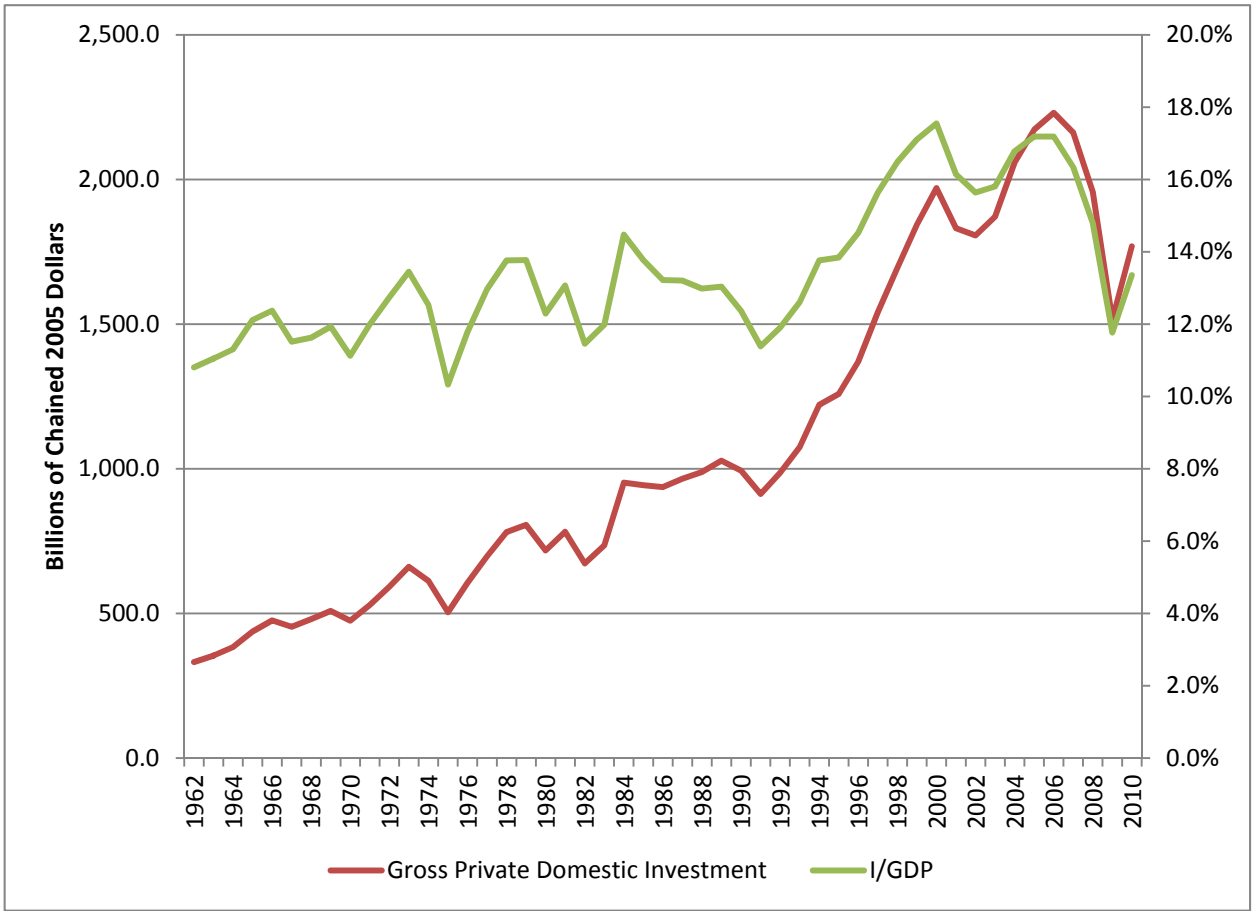
[265] The group of seven industrialized nations includes Canada, France, Germany, Italy, Japan, United Kingdom, and United States.

B. Data on Cost Recovery and Investment

Investment and GDP

Investment, along with consumption, government expenditures, and net exports, is one of the primary components of gross domestic product ("GDP"). On the left axis, Figure 1 shows the amount of real gross private domestic investment in billions of chained 2005 dollars since 1962. On the right axis, Figure 1 shows the share of real GDP attributable to investment. In general, the level of investment rose steadily from the 1960s through the late 1980s. From the trough after the 1990-1991 recession, real investment more than doubled over the next decade, rising from $912.7 billion in 1991 to $1,970.3 billion in 2000. The level of investment peaked at $2,230.4 billion in 2006, though it has fallen by more than 20 percent since then to $1,769.3 billion. Over 80 percent of that decline is attributable to a drop in residential fixed investment (housing). As a share of GDP, investment fluctuates within a range of 12 to 14 percent, except for the decade from about 1997 to 2007 during which investment exceeded its historical average by several points.

Figure 1.−Gross Private Domestic Investment, Levels and Share of GDP, 1962-2010

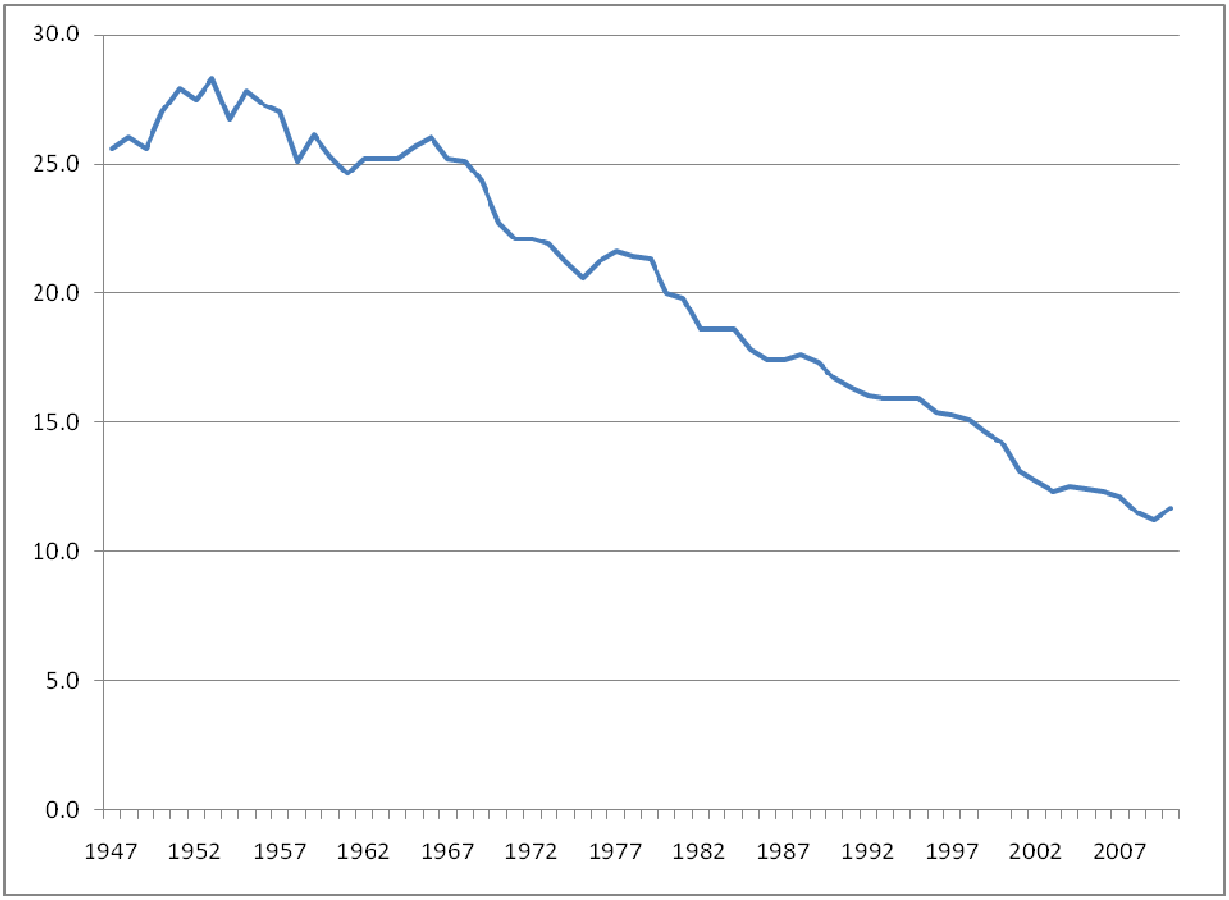


Source: Bureau of Economic Analysis, JCT staff calculations.

Manufacturing and GDP

Investment is often associated with the manufacturing sector of the economy. Figure 2 shows the share of GDP attributable to the value added by the manufacturing sector since 1947. Manufacturing has steadily declined as a share of GDP throughout the period. However, as shown in Figure 1, the share of GDP attributable to investment has remained more stable. This suggests that investment in other sectors has offset any decline in investment in manufacturing as a share of GDP.

Figure 2.-Manufacturing as a Share of GDP, 1947-2010



Source: Bureau of Economic Analysis, JCT staff calculations.

Corporate data on cost recovery and the domestic production activities deduction

Corporations report information about their assets and various cost recovery deductions on their tax returns. These include the deduction for domestic production activities, depreciation (including expensing under section 179 and bonus depreciation), depletion, and amortization. In addition corporations may claim a variety of investment credits. For tax year 2008,[266]

[266] Data in this paragraph come from Internal Revenue Service, *2008 Estimated Data Line Counts Corporation Tax Returns*, Rev. 05-2011; Internal Revenue Service, *Corporation Income Tax Returns 2008*, Publication 16, Rev. 05-2011; and JCT staff calculations.

approximately 51,000 active corporations claimed over $18.4 billion in deductions for domestic production activities. Nearly 3.4 million active corporations filed returns claiming $758.6 billion in deductions for depreciation and $183.7 billion of amortization. Of the depreciation deductions, $30.7 billion represents section 179 expensing deductions by 1.1 million returns and $155 billion in bonus depreciation claimed by nearly 637,000 returns. Approximately 15,000 returns claimed $21.5 billion in depletion. Current year regular investment credits totaled $505.4 million for 2008.

Deductions for cost recovery vary by industry. Data by industrial sector are not available for all items. Table 14 reports selected tax attributes of active corporations[267] for tax year 2008 by sector. Table 15 reports the percentage of the totals for each item by sector. While the greatest percentage of corporations are concentrated in the professional, scientific, and technical services and construction sectors, each of these only accounts for about one percent of total assets. The finance and insurance sector has the largest share of total assets at 44.1 percent, though the assets in this sector are not generally depreciable, depletable, or amortizable assets subject to cost recovery. Manufacturing accounts for the largest share (28.6 percent) of depreciable assets with over $2.7 trillion in depreciable assets. This sector also has nearly one-quarter of all depletable assets of active corporations and almost one-third of all intangible assets. Depletable assets are most highly concentrated in the mining sector (63.6 percent).

Consistent with its share of assets eligible for the various cost recovery deductions, the manufacturing sector has the largest share of depreciation and amortization deductions at $210.1 billion and $52.7 billion, respectively. It also accounts for almost two-thirds of the domestic production activities deduction at $12.2 billion claimed. The information and mining sectors are the only other sectors in which the domestic production activities deduction exceeds $1 billion. The depletion deductions are also highly concentrated by sector, with nearly two-thirds of deductions claimed by active corporations in the mining sector.

Private goods producing industries[268] collectively account for three-quarters of domestic production activities deductions and over 90 percent of depletion deductions. They represent about one-third of deductions for depreciation and amortization. Collectively they represent just over 20 percent of returns. Service industries that are not particularly capital intensive account for a relatively small share of all cost recovery deductions. The administrative and support and waste management and remediation services; educational services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; and other services sectors collectively account for less than one percent of all domestic production activities and depletion deductions and seven percent of depreciation and amortization deductions, respectively.

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[267] Active corporations include all corporations organized for profit that are required to file one of the 1120 forms that are part of the Statistics of Income study: Forms 1120, 1120S, 1120-L, 1120-PC, 1120-RIC, 1120-REIT, and 1120-F.

[268] BEA classifies the following sectors as private goods producing industries: agriculture, forestry, fishing and hunting; mining; construction; and manufacturing. The remaining sectors are private service producing industries.

Table 15.−Selected Tax Attributes of Active Corporations by Sector, 2008

Sector	Number of returns	Total assets	Depreciable assets	Depletable assets	Intangible assets (amortizable)	Domestic production activities deduction	Depreciation deduction	Depletion deduction	Amortization deduction
Agriculture, Forestry, Fishing, and Hunting	137,294	141,893	110,414	4,823	3,667	117	8,851	74	346
Mining	38,506	890,547	271,966	373,719	54,271	1,285	33,014	14,174	6,222
Utilities	7,238	1,577,296	1,183,731	18,429	62,005	606	53,130	430	8,298
Construction	766,689	762,606	282,033	1,804	23,550	482	24,339	149	1,233
Manufacturing	270,727	10,356,935	2,705,053	131,665	1,346,129	12,159	210,075	5,097	52,731
Wholesale Trade	380,773	2,020,856	486,885	48,713	222,218	811	53,132	989	10,534
Retail Trade	605,102	1,583,204	652,896	205	186,739	185	57,077	15	4,882
Wholesale and Retail Trade not Allocable	492	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Transportation and Warehousing	195,228	709,134	583,838	95	68,461	(1)	42,863	22	2,646
Information	118,279	2,468,468	938,004	200	833,447	2,229	82,472	(1)	38,614
Finance and Insurance	254,092	33,890,647	306,120	3,172	345,324	59	40,022	201	27,875
Real Estate and Rental and Leasing	648,578	1,470,106	855,859	1,276	63,106	21	48,287	71	2,773
Professional, Scientific, and Technical Services	845,356	794,631	170,245	195	216,595	280	16,922	66	7,872
Holding Companies	45,725	18,775,837	206,520	727	437,146	75	35,136	93	7,130
Administrative and Support and Waste Management and Remediation Services	276,344	290,312	122,862	2,111	91,681	15	10,495	125	4,158
Educational Services	52,484	39,406	12,890	(1)	11,511	(1)	1,262	(1)	416
Health Care and Social Assistance	416,101	324,959	165,054	(1)	80,403	(1)	13,050	(1)	2,897
Arts, Entertainment, and Recreation	122,425	108,056	73,948	(1)	15,090	(1)	5,233	(1)	905
Accommodation and Food Services	292,901	474,149	270,427	109	74,248	61	17,785	(1)	2,908
Other Services	371,146	119,946	67,754	(1)	20,777	17	5,404	(1)	1,309
Not Allocable	1,742	158	26	(1)	(1)	(1)	(1)	(1)	(1)
All	5,847,221	76,799,144	9,466,524	587,260	4,156,369	18,424	758,554	21,515	183,749

Dollar amounts in millions.

(1) Data not reported due to small sample size.

Source: Internal Revenue Service, Statistics of Income, JCT staff calculations

Table 16.−Percentage Distribution of Selected Tax Attributes of Active Corporations by Sector, 2008

Sector	Number of returns	Total assets	Depreciable assets	Depletable assets	Intangible assets (amortizable)	Domestic production activities deduction	Depreciation deduction	Depletion deduction	Amortization deduction
Agriculture, Forestry, Fishing, and Hunting	2.3%	0.2%	1.2%	0.8%	0.1%	0.6%	1.2%	0.3%	0.2%
Mining	0.7%	1.2%	2.9%	63.6%	1.3%	7.0%	4.4%	65.9%	3.4%
Utilities	0.1%	2.1%	12.5%	3.1%	1.5%	3.3%	7.0%	2.0%	4.5%
Construction	13.1%	1.0%	3.0%	0.3%	0.6%	2.6%	3.2%	0.7%	0.7%
Manufacturing	4.6%	13.5%	28.6%	22.4%	32.4%	66.0%	27.7%	23.7%	28.7%
Wholesale Trade	6.5%	2.6%	5.1%	8.3%	5.3%	4.4%	7.0%	4.6%	5.7%
Retail Trade	10.3%	2.1%	6.9%	0.0%	4.5%	1.0%	7.5%	0.1%	2.7%
Wholesale and Retail Trade not Allocable	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Transportation and Warehousing	3.3%	0.9%	6.2%	(1)	1.6%	(1)	5.7%	0.1%	1.4%
Information	2.0%	3.2%	9.9%	(1)	20.1%	12.1%	10.9%	(1)	21.0%
Finance and Insurance	4.3%	44.1%	3.2%	0.5%	8.3%	0.3%	5.3%	0.9%	15.2%
Real Estate and Rental and Leasing	11.1%	1.9%	9.0%	0.2%	1.5%	0.1%	6.4%	0.3%	1.5%
Professional, Scientific, and Technical Services	14.5%	1.0%	1.8%	(1)	5.2%	1.5%	2.2%	0.3%	4.3%
Holding Companies	0.8%	24.4%	2.2%	0.1%	10.5%	0.4%	4.6%	0.4%	3.9%
Administrative and Support and Waste Management and Remediation Services	4.7%	0.4%	1.3%	0.4%	2.2%	0.1%	1.4%	0.6%	2.3%
Educational Services	0.9%	0.1%	0.1%	(1)	0.3%	(1)	0.2%	(1)	0.2%
Health Care and Social Assistance	7.1%	0.4%	1.7%	(1)	1.9%	(1)	1.7%	(1)	1.6%
Arts, Entertainment, and Recreation	2.1%	0.1%	0.8%	(1)	0.4%	(1)	0.7%	(1)	0.5%
Accommodation and Food Services	5.0%	0.6%	2.9%	(1)	1.8%	0.3%	2.3%	(1)	1.6%
Other Services	6.3%	0.2%	0.7%	(1)	0.5%	0.1%	0.7%	(1)	0.7%
Not Allocable	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
All	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

(1) Less than 0.05 percent.

Source: Internal Revenue Service, Statistics of Income, JCT staff calculations