

**BACKGROUND MATERIALS ON ALTERNATIVE MINIMUM TAX  
AND CAPITAL COST RECOVERY PREPARED FOR THE  
HOUSE COMMITTEE ON WAYS AND MEANS  
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## INTRODUCTION

This document,<sup>1</sup> prepared by the staff of the Joint Committee on Taxation, contains background materials relating to the alternative minimum tax and capital cost recovery. These materials were prepared at the request of the House Committee on Ways and Means in connection with a series of discussions on tax policy issues scheduled by the Committee.

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<sup>1</sup> This document may be cited as follows: Joint Committee on Taxation, *Background Materials on Alternative Minimum Tax and Capital Cost Recovery Prepared for the House Committee on Ways and Means Tax Policy Discussion Series* (JCX-14-02), March 8, 2002.

## **I. ISSUES IN THE CORPORATE ALTERNATIVE MINIMUM TAX**

### **A. Present Law**

#### **In general**

Present law imposes an alternative minimum tax (“AMT”) on a corporation to the extent the corporation’s tentative minimum tax liability exceeds its regular tax liability.<sup>2</sup> Tentative minimum tax equals 20 percent of the corporation’s alternative minimum taxable income in excess of a \$40,000 exemption. The exemption amount is phased out by an amount equal to 25 percent of the amount that the corporation's alternative minimum taxable income exceeds \$150,000, and is fully phased out for corporate alternative minimum taxable income over \$310,000.

Alternative minimum taxable income is the corporation's taxable income increased by certain preference items and adjusted by determining the tax treatment of certain items in a manner that negates the deferral of income resulting from the regular tax treatment of those items.

A corporation with average gross receipts of less than \$7.5 million for the prior three taxable years is exempt from the corporate minimum tax. The \$7.5 million threshold is reduced to \$5 million for a new corporation’s first three-taxable-year period.

#### **Preference items in computing alternative minimum taxable income**

The corporate minimum tax preference items are:

- (1) The excess of the deduction for percentage depletion over the adjusted basis of the property at the end of the taxable year. This preference does not apply to percentage depletion allowed with respect to oil and gas properties.
- (2) The amount by which excess intangible drilling costs arising in the taxable year exceed 65 percent of the net income from oil, gas, and geothermal properties. This preference does not apply to an independent producer to the extent the preference would not reduce the producer's alternative minimum taxable income by more than 40 percent.
- (3) Tax-exempt interest income on private activity bonds (other than qualified 501(c)(3) bonds) issued after August 7, 1986.
- (4) Accelerated depreciation or amortization on certain property placed in service before January 1, 1987.

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<sup>2</sup> For convenience, "AMT" herein refers to the corporate alternative minimum tax. A similar alternative minimum tax applies to individuals.

### **Adjustments in computing alternative minimum taxable income**

The adjustments that corporations must make in computing alternative minimum taxable income are:

- (1) Depreciation on property placed in service after 1986 and before January 1, 1999, must be computed by using the generally longer class lives prescribed by the alternative depreciation system of section 168(g) and either (a) the straight-line method in the case of property subject to the straight-line method under the regular tax or (b) the 150-percent declining balance method in the case of other property. Depreciation on property placed in service after December 31, 1998, is computed by using the regular tax recovery periods and the AMT methods described in the previous sentence.
- (2) Mining exploration and development costs must be capitalized and amortized over a 10-year period.
- (3) Taxable income from a long-term contract (other than a home construction contract) must be computed using the percentage of completion method of accounting.
- (4) The amortization deduction allowed for pollution control facilities placed in service before January 1, 1999 (generally determined using 60-month amortization for a portion of the cost of the facility under the regular tax), must be calculated under the alternative depreciation system (generally, using longer class lives and the straight-line method). The amortization deduction allowed for pollution control facilities placed in service after December 31, 1998, is calculated using the regular tax recovery periods and the straight-line method.
- (5) The special rules applicable to Merchant Marine construction funds are not applicable.
- (6) The special deduction allowable under section 833(b) Blue Cross and Blue Shield organizations is not allowed.
- (7) The adjusted current earnings adjustment, described below.

### **Adjusted current earnings adjustment**

The adjusted current earnings adjustment is the amount equal to 75 percent of the amount by which the adjusted current earnings of a corporation exceeds its alternative minimum taxable income (determined without the adjusted current earnings adjustment and the alternative tax net operating loss deduction). In determining adjusted current earnings the following rules apply:

- (1) For property placed in service before 1994, depreciation generally is determined using the straight-line method and the class life determined under the alternative depreciation system. For property placed in service in 1994 and thereafter, there is no adjustment.

- (2) Any amount that is excluded from gross income under the regular tax but is included for purposes of determining earnings and profits is included in determining adjusted current earnings.
- (3) The inside build-up of a life insurance contract is included in adjusted current earnings (and the related premiums are deductible).
- (4) Intangible drilling costs of integrated oil companies must be capitalized and amortized over a 60-month period.
- (5) The regular tax rules of section 173 (allowing circulation expenses to be amortized) and section 248 (allowing organizational expenses to be amortized) do not apply.
- (6) Inventory must be calculated using the FIFO, rather than LIFO, method.
- (7) The installment sales method generally may not be used.
- (8) No loss may be recognized on the exchange of any pool of debt obligations for another pool of debt obligations having substantially the same effective interest rates and maturities.
- (9) Depletion (other than for oil and gas) must be calculated using the cost, rather than the percentage, method.
- (10) In certain cases, the assets of a corporation that has undergone an ownership change must be stepped-down to their fair market values.

### **Other rules**

The combination of the taxpayer's net operating loss carryover and foreign tax credits cannot reduce the corporation's tentative minimum tax by more than 90 percent of the amount determined without these items.

The various nonrefundable business credits allowed under the regular tax generally are not allowed against the AMT.

If a corporation is subject to AMT in any year, the amount of tax exceeding the taxpayer's regular tax liability is allowed as a credit (the "AMT credit") in any subsequent taxable year to the extent the corporation's regular tax liability exceeds its tentative minimum tax in such subsequent year.<sup>3</sup>

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<sup>3</sup> The AMT credit also includes certain credits disallowed under Internal Revenue Code sections 29 (relating to nonconventional fuels) and 30 (relating to electric vehicles).

## **B. Legislative Background**

The concept of a minimum tax was first enacted in 1969 and was structured as a tax that was added on to a corporation's regular tax liability (known as an "add-on" tax). The Tax Reform Act of 1986 repealed the add-on minimum tax for corporations and replaced it with the present law AMT structure. This change was made to ensure that no corporation with substantial economic income could avoid significant tax liability by using exclusions, deductions and credits.<sup>4</sup> The restructured tax was effective beginning in 1987 and the adjusted current earnings adjustment described under present law was effective beginning in 1990, replacing a book income adjustment that applied for years 1987 through 1989.

Since the enactment of the corporate AMT, several changes to the tax have been made. The principal changes involve the computation of depreciation. The adjusted current earnings depreciation adjustment requiring the use of straight-line depreciation for tangible personal property was repealed by the Omnibus Budget Reconciliation Act of 1993, for property placed in service after 1993. The Taxpayer Relief Act of 1997 ("the 1997 Act") repealed the requirement to use longer depreciation lives in computing AMT depreciation for property placed in service after 1998.

Other changes include the repeal of the oil and gas preferences for percentage depletion and intangible drilling costs for corporations other than integrated oil companies by the Energy Policy Act of 1992. The 1997 Act repealed the corporate AMT for small corporations. Numerous other smaller changes have been made to the corporate AMT since its enactment in 1986.

## **C. Analysis of Issues**

### **1. Background**

As the preceding discussion suggests, the Congress has made substantial revisions to the corporate AMT since its enactment. Under the AMT as enacted in 1986, larger firms were more likely to be subject to the AMT than were smaller firms, and firms in more capital-intensive industries were more likely to be subject to the AMT than were firms in less capital-intensive industries. This outcome would be expected by the design of the AMT. The AMT included as an adjustment the difference between accelerated depreciation claimed under the regular tax system and depreciation calculated under the AMT's less generous allowance schedules. As described above, other AMT preferences and adjustments deferred the recovery of other capital costs that are deductible under the regular tax. Thus, the greater a corporation's capital assets, the greater its total value of accelerated depreciation and other capital-related preferences and adjustments, and the greater the likelihood the corporation would have been either subject to the AMT or subject to limitations on credit usage by the AMT. For the same reason, a capital-intensive business was more likely to be subject to the AMT than would a less capital-intensive business with equal gross revenues. The U.S. General Accounting Office ("GAO") estimated

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<sup>4</sup> See H. Rept. 99-426, pp. 305-306, and S. Rept. 99-313, p. 518.

that in 1992, 25 percent of all corporate assets were owned by corporations subject to the AMT.<sup>5</sup> In 1993, the manufacturing and the transportation and public utility industries had more than half of industry assets in corporations that were subject to the AMT.<sup>6</sup>

Since 1986, relatively few corporations have incurred a tax liability under the AMT. For example, in 1990, approximately 32,000 of 2.1 million corporate income tax returns included an AMT liability. The modifications enacted in 1992 and 1993 further narrowed the applicability of the AMT. In 1999, approximately 15,000 of 2.2 million corporate income tax returns included an AMT liability. The modifications enacted in 1997 are expected to narrow the applicability further. However, even those corporations that did not make AMT tax payments may have had their overall tax liability increase as result of limiting the amount of credits the corporation could claim against its regular income tax. The AMT liability forms a floor (the tentative minimum tax) that may limit the amount of credits a corporation could claim against its regular taxes. Table 1 reports corporate AMT taxpayers as a percentage of all corporate income tax returns between 1987 and 1999.

**Table 1.--Corporate AMT Taxpayers as a Percentage of All Corporate Returns, 1987-1999**

<u>Year</u>	<u>Percentage of AMT taxpayers</u>
1987	0.98
1988	1.10
1989	1.15
1990	1.52
1991	1.46
1992	1.35
1993	1.43
1994	1.28
1995	1.11
1996	1.20
1997	1.11
1998	0.82
1999	0.68

Source: Andrew B. Lyon, *Cracking the Code: Making Sense of the Corporate Alternative Minimum Tax* (Washington, D.C.: The Brookings Institution), 1997, Table 6-3, and JCT staff calculations.

<sup>5</sup> General Accounting Office, *Experience With the Corporate Alternative Minimum Tax*, (GAO/GGD-95-88), April 1995, p. 36.

<sup>6</sup> Andrew B. Lyon, *Cracking the Code: Making Sense of the Corporate Alternative Minimum Tax* (Washington, D.C.: The Brookings Institution), 1997, p. 115.

As noted above, the AMT may alter corporate income tax liabilities under the regular tax by limiting the amount of credits a corporation may otherwise claim against its regular taxes. For example, one analyst has calculated that in 1993 approximately 0.7 percent of corporations were constrained by the AMT's limitation on credits, but did not incur an AMT liability. Adding these taxpayers to those who had a direct AMT liability in 1993 would imply that slightly more than two percent of corporate taxpayers' liabilities were affected by the corporate AMT.<sup>7</sup>

In 1992, total corporate income tax revenue was \$96.8 billion. Of this amount, AMT payments contributed \$4.9 billion, and \$2.3 billion in credits for prior AMT paid were claimed. The net, \$2.6 billion, comprised 2.7 percent of all corporate income tax payments. For 1999 total corporate income tax revenue was \$191.4 billion. Of this amount, AMT payments contributed approximately \$3.1 billion, and approximately \$3.4 billion in credits for prior AMT paid were claimed. The net difference after rounding of negative \$0.4 billion implies that in 1999 Federal receipts were somewhat lower as the result of the corporate AMT.

As noted above, the 1993 Act eliminated the adjusted current earnings depreciation adjustment for property placed in service after 1993. In addition, the 1997 Act allowed the use of regular tax recovery periods in computing depreciation for property placed in service after 1998. Over time, these changes should reduce the number of corporate AMT taxpayers and the AMT liabilities relative to the data reported here for 1992 and earlier. These changes also should make it less likely that, all else equal, capital-intensive businesses are subject to the AMT. In addition, by the end of 1998, corporations had accumulated \$26.2 billion in unused AMT credits from prior AMT liabilities paid. The modifications of the 1993 Act and 1997 Act will enable taxpayers to more rapidly utilize accumulated AMT credits in future years.

Recognizing the importance of the treatment of depreciation and other capital costs under the AMT may also explain the apparent counter-cyclical pattern of Table 1, where the percentage of corporate AMT taxpayers increased as the economy experienced recession and declined as the economy recovered. Fixed capital assets produce a schedule of depreciation deductions that is invariant to economic conditions. As the economy enters a recession, business receipts fall. Consequently, corporate income as measured under the regular tax system declines, but depreciation deductions generally remain the same.<sup>8</sup> Because a corporation becomes subject to the AMT when AMT tax preferences and adjustments become large relative to its regular taxable income,<sup>9</sup> a recession increases the likelihood that a business will become an AMT taxpayer.

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<sup>7</sup> Lyon, *Cracking the Code*, Table 6-3.

<sup>8</sup> A business may reduce its purchases of capital equipment during a recession, thereby reducing deductions for depreciation over time.

<sup>9</sup> A corporation pays the AMT if its AMT tax liability exceeds its regular tax liability. Let Y represent a corporation's regular taxable income. Let P represent AMT preferences. Then alternative minimum taxable income is (Y+P). Ignoring graduated marginal tax rates under the regular tax (and the \$40,000 AMT exemption amount), a corporation is subject to the AMT when:

$$(.20)(Y+P) > (.35)Y.$$

However, the data for the period 1989 through 1992 may overstate the potential for a counter-cyclical relationship between the corporate AMT and macroeconomic performance. During this period the adjusted current earnings adjustment replaced the book income adjustment causing a substantial increase in capital cost adjustments under the adjusted current earnings adjustment. Nevertheless, the recent changes in the corporate AMT would be expected to reduce the counter-cyclical effect of the AMT.

## **2. Discussion of issues**

### **Overview**

In general, the AMT applies a lower marginal rate of tax to a broader tax base. Thus, the AMT may simultaneously lower the corporation's marginal tax rate (the amount of tax liability arising from an additional, or marginal, dollar of income) while increasing the corporation's average tax rate (total tax divided by total income). Strictly speaking, the AMT is not a separate tax but is a calculation that assesses a larger income tax liability today in return for a reduced income tax liability in the future. Each dollar of AMT paid today generates credits that may be applied against future regular income tax liabilities. However, because AMT credits accrue in nominal dollars, the time value of money erodes the future value of such credits. As a consequence, the AMT increases the real tax liability of corporate AMT taxpayers.

As a pre-payment of tax rather than a separate tax, the AMT should be assessed as part of the corporate income tax. Analysts usually evaluate taxes in terms of: (1) equity--the fairness of the tax; (2) efficiency--the extent to which the tax distorts economic decisions; (3) growth--the extent to which the tax system encourages or discourages economic growth; and (4) simplicity--the ease of compliance and administration by affected taxpayers and the IRS.

### **Equity**

In practice, the AMT has the effect of requiring corporations to pay more funds to the Federal Treasury every year, than would be the case if only the regular income tax system applied. To the extent that corporations that outwardly appear to have the ability to pay income taxes indeed do pay taxes, some observers conclude that the AMT increases the perceived fairness of the income tax system. The Senate Finance Committee noted that this was one of the rationales for the enactment of the AMT.

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Simplifying, this is equivalent to:

$$(.20) P > (.15) Y$$

$$\text{or } P/Y > .75.$$

As preferences become large relative to income, the corporation is more likely to be subject to the AMT.

In particular, both the perception and the reality of fairness have been harmed by instances in which major companies have paid no taxes in years in which they reported substantial earnings, and may even have paid substantial dividends to shareholders. Even to the extent that these instances may reflect deferral, rather than permanent avoidance, of corporate tax liability, the committee believes that they demonstrated a need for change.<sup>10</sup>

To assess whether the AMT promotes the overall equity of the tax system, it is necessary to look beyond who remits tax payments to the Federal Treasury to who bears the burden of the corporate income tax. Economists argue that corporations do not bear the burden of the corporate income tax, but rather individuals bear the burden of the corporate income tax and all other taxes. There is disagreement, however, over which individuals bear the burden of corporate income tax, whether it is customers in the form of higher prices, workers in the form of reduced wages, owners of all capital in the form of lower after-tax returns on investment, or some combination of these individuals.<sup>11</sup> The uncertainty regarding the incidence of income taxes on the returns to capital makes it difficult to assess the effect the AMT has on the equity of the burden of the income tax system. As noted above, the AMT raises average tax rates for affected corporations.

Some analysts argue that the AMT promotes horizontal equity by taxing more equally taxpayers who have the same economic capacity but choose to engage in different patterns of tax-favored activities. Other analysts note that in a market economy, investment by individuals and corporations would be expected to equilibrate risk-adjusted, after-tax returns. As a consequence, the prices of tax-favored investments would be bid up (or their quantity increase) and the prices of tax-disfavored investments would fall (or their quantity decrease). In equilibrium, the pre-tax returns of tax-favored and tax-disfavored investments would differ, but their after-tax returns would be the same.<sup>12</sup> For example, tax-exempt bonds trade at interest rates lower than otherwise comparable taxable bonds. This is because the tax-exempt borrower does not have to offer as great an interest rate to the lender to provide the lender with a competitive after-tax return. If after-tax returns equilibrate, analysts may question whether a horizontal inequity existed prior to the enactment of the AMT.

Other analysts note that because, as explained above, the business cycle may move corporations onto and off the AMT, that the AMT may create its own horizontal inequities by

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<sup>10</sup> Senate Committee on Finance, *Report on H.R. 3838, the "Tax Reform Act of 1986."* p. 519.

<sup>11</sup> For a discussion of incidence of the corporate income tax and taxes on the return to capital, see, Joint Committee on Taxation, *Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens* (JCS-7-93), June 14, 1993, pp. 44-51.

<sup>12</sup> Andrew B. Lyon, "The Alternative Minimum Tax: Equity, Efficiency, and Incentive Effects," in *Economic Effects of the Corporate Alternative Minimum Tax* (Washington, D.C.: American Council for Capital Formation Center for Policy Research), 1991, pp. 51-82.

taxing different businesses differently based on the variability of their profits during the course of a business cycle.<sup>13</sup>

### **Efficiency and growth**

A tax system is 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. Whether the AMT contributes to the efficiency of the United States tax system depends on the extent to which it reduces other inefficiencies in the tax system and the extent to which it creates new inefficiencies. By discouraging some individuals and corporations from undertaking what are otherwise tax-favored investments, efficiency may be increased. However, the AMT generally does not eliminate tax-favored treatment of certain activities or investments, but rather limits which taxpayers may take full advantage of the tax-favored treatment provided by the regular income tax. Some analysts have noted that on efficiency grounds, “no one should care if ten companies each invest a little in a tax-preferred activity or one company invests a lot” in such an activity.<sup>14</sup> However, under present law, the ten firms described above could each avoid the AMT while the one firm with the aggregated investment could be subject to the AMT. In addition, limiting which corporations can profitably undertake tax-favored activities could lead to more efficient investors finding the activity unprofitable, while less efficient investors find the activity profitable. Moreover, some tax-favored activities may be permitted as part of the regular income tax as a way to reduce some other inefficiency in the economy. These arguments may suggest that efficiency could be better improved by changes in the regular income taxes.

In the mid-1980s, there was concern that the regular income tax system created different effective tax rates on capital investment depending upon the source of financing and type of equipment being purchased. It has been argued that such differentials in effective tax rates reduce the efficiency of investment in the United States. For example, the regular income tax has been criticized as favoring debt-financed investments at the expense of equity-financed investments. Subsequent to the Tax Reform Act of 1986, analysts debated whether the AMT made taxation of income from investment, more neutral and more efficient, or less neutral and less efficient.<sup>15</sup> The efficiency of investment under the reduced scope of the present-law AMT remains an open question.

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<sup>13</sup> Charles R. Hulten, “Commentary,” in *Economic Effects of the Corporate Alternative Minimum Tax* (Washington, D.C.: American Council for Capital Formation Center for Policy Research), 1991, pp. 84-88.

<sup>14</sup> Michael J. Graetz and Emil M. Sunley, “Minimum Taxes and Comprehensive Tax Reform,” in Henry J. Aaron, Harvey Galper, and Joseph A. Pechman (eds.) *Uneasy Compromise: Problems of a Hybrid Income-Consumption Tax* (Washington, D.C.: The Brookings Institution), 1988, p. 406.

<sup>15</sup> For example, see B. Douglas Bernheim, “Incentive Effects of the Corporate Alternative Minimum Tax,” in Lawrence H. Summers (ed.), *Tax Policy and the Economy*, 3, (Cambridge: The MIT Press), 1989 and Andrew B. Lyon, “Investment Incentives under the Alternative Minimum Tax,” *National Tax Journal*, 43, December 1990, pp. 451-465.

The AMT may affect the level of investment in the United States and thereby affect economic growth. There is some evidence that firms temporarily on the AMT experience a greater variance in effective tax rates than other firms.<sup>16</sup> This variance and uncertainty regarding taxation could have inhibited investment. The reduced scope of present-law AMT may promote more certainty for taxpayers regarding the tax on investments and lead to increased aggregate investment. The AMT also may affect aggregate investment by other means. By increasing average tax rates, the AMT may reduce the cash flow of potential investors. If as some analysts believe, investors' cash flows are important to the investment decision, the AMT may reduce aggregate investment.

### **Simplicity and compliance**

#### Added calculations and record keeping

The AMT requires a calculation of a second income tax base<sup>17</sup> and computation of a tax on that base, so the present tax system, with an AMT, is not as simple to administer or comply with as would the same system without an AMT. As detailed above, relatively few corporations are subject to the AMT. However, that observation understates the extent to which the AMT imposes a compliance burden on corporations. Many corporations must undertake the AMT calculation to determine whether, in fact, they are liable. For example, while only 14,900 corporations actually paid AMT in 1999, 329,000 corporations filed the AMT form. The 329,000 figure understates the number of corporations that did the necessary calculations to determine whether they had an AMT liability.

#### Compliance cost

Survey evidence has suggested that the compliance cost to corporations required by the AMT may be large. One analysis of tax compliance costs of large businesses found that being subject to the AMT adds 16.9 percent to the personnel and nonpersonnel compliance costs of complying with Federal income taxes.<sup>18</sup> The average total income tax compliance cost reported in the survey was approximately \$1 million, implying that complying with the AMT may require additional expenditures of \$169,000 annually by large businesses. While a large number, compliance costs generally are larger for larger businesses which often have more complex business arrangements. The AMT is not the most costly aspect of tax compliance. The same study identifies approximately 40 percent of total compliance costs as arising from foreign-source income and that having an ongoing appeal or tax litigation increases compliance costs by 18 to 28 percent.

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<sup>16</sup> Lyon, "Investment Incentives under the Alternative Minimum Tax."

<sup>17</sup> The adjusted current earnings adjustment causes corporations to have three tax bases.

<sup>18</sup> Joel Slemrod and Marsha Blumenthal, "The Income Tax Compliance Cost of Big Business," *Public Finance Quarterly*, 24 (October 1996), pp. 411-438.

### Joint Committee staff recommendation

In a report<sup>19</sup> issued in April 2001, the Joint Committee staff recommended that the corporate alternative minimum tax be eliminated. The Joint Committee staff concluded that the corporate alternative minimum tax does not necessarily produce a more accurate measurement of income after the depreciation, inventory and accounting provisions of the Tax Reform Act of 1986, and subsequent legislation, have become fully effective. Thus, the Joint Committee staff concluded that the original purpose of the corporate alternative minimum tax is no longer served in any meaningful way, and the elimination of the corporate alternative minimum tax would relieve corporations from computing their tax base using two different methods and complying with burdensome record keeping requirements.

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<sup>19</sup> Joint Committee on Taxation, *Study of the Overall State of the Federal Tax System and Recommendations for Simplification, Pursuant to Section 8022(3)(B) of the Internal Revenue Code of 1986* (JCS-3-01), April 2001, vol. II, p. 16.

## II. ISSUES IN CAPITAL COST RECOVERY

### A. Present Law

#### In general

The U.S. tax system does not generally recover the cost of a capital expenditure based on economic depreciation, but rather uses an accelerated cost recovery system. The U.S. tax system recovers the cost of a capital expenditure over an established period that is typically shorter than the asset's useful life.

Under the U.S. tax system, property is depreciable if it is used for business or held for the production of income and has a useful life exceeding one year. Depreciation for tangible property placed in service after 1986 generally are determined under the Modified Accelerated Cost Recovery System ("MACRS"). Depreciation under MACRS is determined by classifying an asset, assigning a specific recovery period, and applying a depreciation method and a placed-in-service convention. The cost of real property (other than land) is recovered using the straight-line method over specific recovery periods depending on the use of the property.

#### Personal property

##### Classification of assets and recovery periods

Personal property is classified under MACRS based on the property's "class life" unless a different classification is specifically provided in the statute. The class life applicable for personal property is, in a general sense, based on an estimate of the asset's useful life. For example office furniture has a class life of ten years. However, these classifications have not been updated in a significant number of years. Based on the property's class life, MACRS prescribes a recovery period. In general, the recovery period assigned under MACRS is shorter than the estimated useful life. There are six classes of recovery periods ranging from three years to twenty years. For example, personal property that has a class life of four years or less has a recovery period of three years, whereas personal property with a class life greater than four years but less than ten years has a recovery period of five years.

MACRS classifies an asset generally by the economic activity in which the asset is used. For example, all capital assets used in radio and television broadcasting are recovered over five years. The exception to the classification by economic activity applies to assets in which the use generally has no bearing on its useful life. For example, office furniture and fixtures, computers, data handling equipment, and automobiles have the same recovery period irrespective of the economic activity in which they are used.

##### Depreciation methods

In general, there are three depreciation methods, the 200-percent declining balance method, the 150-percent declining balance method, and the straight-line method. The cost of personal property with a recovery period of ten years or less is recovered using the 200-percent declining balance method. The cost of personal property included in the 15-year or 20-year recovered period is recovered using the 150-percent declining balance method. Under both

methods, a taxpayer switches to the straight-line method for the first taxable year in which using the straight line method will yield a larger deduction. In addition, a taxpayer may elect to use the straight-line method.

#### Placed in service conventions

For simplicity, all personal property placed in service or disposed of during a taxable year is treated as placed in service or disposed of at the midpoint of the year except in rare circumstances. As a result, a half-year of depreciation is allowed for the first year the property is placed in service, regardless of when during the year the property is placed in service, and a half-year of depreciation is allowed for the year in which property is disposed of or is otherwise retired from service.

#### **Real property**

The cost of residential rental property is recovered using the straight-line method of depreciation, and a recovery period of 27.5 years. The cost of nonresidential real property is recovered using the straight-line method, and a recovery period of 39 years. In addition, building improvements and structural components, based on their use, are recovered over either a 27.5 or 39 years. Real property also includes leasehold improvements irrespective that the lease term may be less than the assigned recovery period. Special rules may permit a deduction of the cost at the end of the lease term.

#### Placed in service convention

In the case of both residential rental property and nonresidential real property, a mid-month convention applies. Under the mid-month convention, the depreciation allowance for the first year property is placed in service is based on the number of months the property was in service, and property placed in service at any time during a month is treated as having been placed in service in the middle of the month.

#### **Special Situations**

##### Deduction of capital expenditures for small businesses

For certain small businesses a deduction is allowed for the cost of property through a current deduction rather than through depreciation. This allows small businesses to deduct some of their investment in equipment in the year the equipment is placed in service. In 2002, small businesses can immediately deduct, rather than depreciate, the first \$24,000 of investment in certain equipment. This amount is reduced in certain cases.

##### Alternative depreciation system

An alternative depreciation system is provided for property that is predominantly foreign-use property, tax-exempt use property, tax-exempt bond financed property, or property with respect to which a taxpayer elects to apply the alternative depreciation system. In these cases, the alternative depreciation system provides for straight-line recovery and use of the placed in service conventions described above.

### Intangible assets

The costs of intangible assets (e.g., goodwill, patents, copyrights) are treated differently from the costs of tangible assets. Intangibles generally are recovered on a straight-line basis over 15 years. Certain intangibles can be exempted from the 15-year recovery period and recovered over a shorter period if they are acquired separately.

### Nondepreciable assets

Certain assets, including land and inventory, are not depreciable. The cost of land is recovered only upon sale. Certain improvements to land can be depreciated if closely associated with other depreciable property. The cost of investment in inventory is recovered only when the associated goods are sold.

### Depreciation recapture

With the exception of gain on the disposition of residential rental and nonresidential real property, all gain on the disposition of property depreciated under MACRS is recaptured (included in income) as ordinary income up to the amount of previously allowed depreciation deducted for the property. Generally, there is no recapture for residential rental and nonresidential real property. However, the capital gain rate relating to real property depreciation is at a higher rate than the regular capital gain rate.

### General asset accounts

Taxpayers can group properties with similar characteristics into one or more general asset accounts; all assets in each account are depreciated as a single item of property. The depreciation of a general asset account is calculated by using the depreciation method, recovery period, and convention that applies to the property in the account. Specific rules apply when establishing a general asset account.

### Alternative minimum tax

Different depreciation allowances are provided for calculation of regular tax and alternative minimum tax. The rules under the corporate alternative minimum tax reduce the depreciation tax benefits available under the regular tax and have subjected many taxpayers to the alternative minimum tax. However, statutory changes in the 1990s have reduced the impact of depreciation as a factor generating alternative minimum tax liability.

## **B. Overview of Tax Depreciation Systems of Other Countries<sup>20</sup>**

### **Methods of calculating depreciation**

Capital assets are depreciated in many countries following rules and principles that are roughly analogous to the depreciation system employed in the United States. Many countries allow depreciation to be calculated using straight-line or declining balance methods for assets other than natural resources, and a few countries allow use of a unit-of-production or a working-hour method. Some countries allow taxpayers to choose the method of recovery. Many countries require the straight-line method for buildings and intangibles.

The recovery periods<sup>21</sup> differ greatly and in certain countries they are fixed without the possibility of exception<sup>22</sup> while others are fixed within a given range<sup>23</sup> or fixed unless an exception is justified to the authorities.<sup>24</sup> The recovery periods are rough estimates of the useful lives of assets by asset type or by industry. Significant differences exist in the treatment of dispositions of depreciable assets. In some countries, gain is recognized as ordinary income to the extent of depreciation previously claimed while others permit such gain to be deferred through use of a cumulative pooling system.

### **Recovery periods for selected types of assets**

In Europe, most machinery and equipment generally is recovered between seven to 20 years using the straight-line method.<sup>25</sup> In East Asia, most machinery and equipment is depreciated over five to 20 years using the straight-line or declining balance method at the option of the taxpayer. Elsewhere, these assets are depreciated over ten or fewer years.

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<sup>20</sup> The Joint Committee staff reviewed the depreciation systems of selected countries, including Germany, France, Belgium, Ireland, Italy, the Netherlands, Spain, the United Kingdom, Canada, Australia, India, Japan, Taiwan, Korea, China, Mexico and Brazil.

<sup>21</sup> The recovery periods of many countries are expressed in percentage terms. The Joint Committee staff has converted the percentages to their approximate equivalent in years for comparison purposes.

<sup>22</sup> For example, recovery periods are fixed in Ireland, Canada, India, Japan, and Mexico.

<sup>23</sup> For example, France and Korea have fixed ranges of depreciation periods.

<sup>24</sup> For example, Germany, Italy, Spain, Taiwan, and China (exceptions limited to foreign businesses) and Brazil. Recovery periods are determined in agreement with authorities in Belgium, the Netherlands, and Australia.

<sup>25</sup> More rapid depreciation is allowed in Belgium (as fast as three years for machinery and equipment not for office use), and in Italy (as fast as four years for machinery and equipment).

Typically, computers are recovered over four to five years using a declining balance method. Typically, buildings are recovered over a period between 20 and 50 years using the straight-line method.<sup>26</sup> Intangible assets, including intellectual property, purchased goodwill, know-how and start-up costs, generally are depreciable using the straight-line method.<sup>27</sup> In addition, many countries allow intellectual property rights to be depreciated over a period shorter than their legal lives.<sup>28</sup> A few countries do not allow depreciation of some or all types of intangible assets or allow depreciation only in limited circumstances.

Special accelerated depreciation is widely available for assets that promote energy efficiency or environmental protection, and is available in some countries for assets used in specified high technology industries, general research and development, energy development, film production, and for assets located in designated underdeveloped regions.<sup>29</sup>

### **Investment and research tax credits**

Investment tax credits are available in many countries for the purchase of depreciable assets generally or specified types of assets (sometimes limited to those used in certain industries) or on account of an increase in employment by the taxpayer. Research and development tax credits are widely available for scientific research. In some instances, tax credits are available only for small businesses or investments located in designated locations. Some countries, especially developing countries, apply a reduced rate or a zero rate of tax on income from investments in certain industries.<sup>30</sup>

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<sup>26</sup> More rapid depreciation is allowed in Australia, India (for factory buildings), and in Taiwan and Italy (for certain types of buildings).

<sup>27</sup> The declining balance method is available for certain intangibles in Canada, India, and the United Kingdom.

<sup>28</sup> For instance, Japan allows patents to be depreciated over eight years using the straight-line method, France allows patents to be depreciated over five years using the straight-line method, Italy allows patents and trademarks to be depreciated as fast as three years, and India allows all intellectual property to be depreciated over seven years using the declining balance method.

<sup>29</sup> Also, the Netherlands allows a taxpayer to fully deduct in the year of acquisition the cost of intangible assets representing innovative technology obtained from a foreign business that is relocated to the Netherlands.

<sup>30</sup> Taiwan allows the election of either a five-year income tax exemption for qualifying investment enterprises or a tax credit equal to a portion of the purchase price for shares in such an enterprise. Korea allows a seven-year exemption from corporate taxation and an additional three-year 50 percent exemption for foreign companies that invest in certain projects and in new high technology companies. China allows a 50 percent income tax credit for foreign export and high technology enterprises, and a two-year income tax exemption followed by a three-year 50 percent income tax credit for foreign enterprises engaged in production activities. India allows a ten-year tax exemption for certain infrastructure development projects.

## **C. Possible Incremental Changes to the U.S. Tax Depreciation System**

### **1. Revise the asset classification system**

The current depreciation system classifies an asset generally by the economic activity in which the asset is used. This results in like assets being depreciated over different recovery periods based on the taxpayer's use of the asset. Classifying by asset type rather than by how the asset is used may provide a more accurate determination of economic depreciation (similar assets are likely to depreciate at similar rates). In addition, an asset-based approach may be simpler than an activity-based approach if taxpayers have few asset types but engage in many activities or are engaged in multiple lines of business and vertically integrated.

Alternatively, if taxpayers tend to retire assets used in a particular activity together, then an activity based classification system may be more accurate and simpler for many taxpayers because they only need to account for one asset class for each activity in which they participate. Under an asset-type approach, taxpayers generally need to identify several asset types and account for them separately, even if engaged in a single economic activity.

### **2. Create a new process to establish and amend recovery periods**

As a result of the development of new technologies, new products, and services, many recovery periods are out of date. In addition, assets used in many new industries are not specifically assigned recovery periods resulting in uncertainty and disputes between the IRS and taxpayers. Since changes to the assigned recovery periods may only be made through legislation, updating recovery periods is slower than desirable. Granting new authority to Treasury to establish recovery periods may address this concern; however, it may also be necessary to grant Treasury additional authority to require the collection, maintenance, and provision of necessary data by taxpayers in order to allow Treasury to conduct the requisite studies.

### **3. Provide that a separate asset category be established for building improvements**

Building improvements may have useful lives that are shorter than the assigned recovery period for buildings. The long recovery period for improvements and certain structural components, coupled with an inability to recognize a loss upon retirement of a structural component, may result in multiple improvements being depreciated simultaneously (i.e., both the original expenditure and subsequent improvements continue to be depreciated irrespective that one has been retired). Providing a separate recovery period for short-lived components may remove a bias against new investments in such components in favor of continual repair. This also may address disparities that result due to some buildings experiencing more frequent improvements than others (e.g., retail space vs. warehouse).

Alternatively, a building may be viewed as a composite asset, for which the recovery period represents an average depreciation period. Thus, the recovery period implicitly recognizes that some included assets depreciate faster than the average, while other components depreciate over a longer period. Further, a separate recovery period for improvements may create administrative problems. Taxpayers would be required to separately identify

improvements and keep appropriate records. Controversies over the proper classification of construction costs likely would proliferate.

#### **4. Evaluate useful life of nonresidential real property**

Currently, nonresidential real property is assigned a recovery period of 39 years. Some empirical evidence indicates that a 39-year recovery period is too long. Providing a shorter recovery period may more accurately determine the useful lives of buildings. However, buildings enjoy other tax benefits that may not be available to other assets that may offset the lengthy assigned recovery period. For example, buildings receive lower taxes on capital gains and have an ability to support relatively high leverage.

#### **5. Provide shorter recovery periods for used assets**

Whether an asset is new or used is not taken into account under the current depreciation system. Used assets generally have a shorter remaining useful life than new assets. However, a shorter recovery period for used assets may complicate the depreciation system by increasing the number of recovery periods.

#### **6. Greater use of general asset accounts**

The current depreciation system is an asset-specific depreciation system that requires voluminous records, especially for taxpayers with multiple, similar assets. This may be alleviated through greater use of general asset accounts.<sup>31</sup> The current system already uses several simplifying conventions to reduce taxpayer burdens; additional use of general assets accounts would not create significantly greater distortions than under the current system.

Although greater use of general asset accounts may create simplification in record keeping, general asset accounts create the legal fiction that assets that have been disposed of will continue to be depreciated for tax purposes. In addition, the most simplification will mainly be provided to the taxpayers with a greater number of assets. These firms tend to be larger, sophisticated taxpayers for whom simplification may be less necessary because they are better equipped to undertake depreciation accounting. Finally, in order to make general asset accounts operate efficiently, assumptions may have to be made regarding the treatment of proceeds from asset dispositions. To the extent disposition policies of taxpayers differ, such assumptions may create winners and losers.

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<sup>31</sup> For example, Canada, Australia, the United Kingdom and India employ a pooling system of depreciation in which the cumulative unrecovered capital cost of all assets within a category (without regard to the year in which any asset was placed in service) are recovered as one asset.

## **D. Possible Fundamental Reforms to U.S. Tax Depreciation System**

### **1. Economic depreciation**

One approach to fundamental depreciation reform would be to replace the existing tax depreciation structure with a system based on economic depreciation. Although a switch to true economic depreciation is likely not feasible, a simplified version may be possible. For example, one method would be to determine depreciation deductions based on estimates of average economic depreciation by asset type. This approach would ignore taxpayer-specific factors and therefore would not necessarily provide accurate economic depreciation for any particular individual investment. However, the approach may approximate economic depreciation on average

A significant problem with this approach is that it is difficult to ascertain with any degree of certainty what economic depreciation rates should be, even on average, for classes of investments. Although there are many estimates of economic depreciation, these estimates are somewhat inexact and dated. Thus, reform may require substantial new empirical work that ultimately is likely to face many of the problems that plague existing estimates of economic depreciation. It is not clear that new empirical estimates would provide a more accurate system than the current tax depreciation system.

Economic depreciation may provide the potential for simplification elsewhere in the tax code. AMT depreciation adjustments would no longer be needed and the separate depreciation systems for determining corporate earnings and profits and for other purposes could be eliminated.

### **2. Allow depreciation based on facts and circumstances**

Another approach to economic depreciation would be to permit individual taxpayers to establish depreciation deductions based on their particular facts and circumstances. This approach was used prior to 1981. Such a system places a high premium on information about the asset's useful life, including the pattern of depreciation, and the salvage value. This approach may impose a burden on taxpayers to obtain the necessary data to justify to the IRS their depreciation deductions. It also may generate controversy and litigation. These issues were significant factors leading to the repeal of facts-and-circumstances depreciation.

### **3. Indexing depreciation for inflation**

The current system of tax depreciation is based on the historic cost of the asset, and is not adjusted for inflation. Adjusting depreciation allowances by the rate of inflation is said to "index" depreciation for inflation.<sup>32</sup> Indexing depreciation would keep inflation from reducing the incentive to save and invest in capital assets. In the past, the interaction of high inflation with an unindexed tax system was viewed as a serious problem, one that potentially reduced the level

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<sup>32</sup> For example, in Mexico, depreciation allowances are adjusted for inflation through the use of a published inflation multiplier.

of investment and distorted investment choices. With the present low rates of inflation, indexing depreciation may not seem particularly urgent.

Although indexing may provide a more accurate measure of income, indexing also significantly complicates the tax system by requiring annual adjustments in a number of accounts. Indexing depreciation without addressing other taxable income measurement issues would not necessarily improve the measurement and taxation of income (i.e., the removal of one distortion would not necessarily improve the overall efficiency and equity of the tax system).

#### **4. Immediate deduction of capital assets**

An alternative approach to depreciation reform would allow businesses an immediate deduction equal to the present discounted value of depreciation allowances.<sup>33</sup> This approach would have both benefits and disadvantages compared to the current system. A benefit is that it may eliminate the impact of inflation on investment decisions, because all of the investment's cost would be recovered immediately and would have a present value independent of the future rate of inflation. It also would simplify the tax system by eliminating the compliance and other administrative costs associated with determining proper tax allowances for depreciation. A disadvantage is that the value of depreciation depends on the real discount rate, which cannot be known with certainty. In addition, firms without sufficient tax liability would be unable to benefit fully. Thus, this approach would be biased in favor of established firms.

#### **5. Use of a mark-to-market regime**

In theory, a mark-to-market approach to depreciation would be a way to accurately measure income. Under this approach, each asset value is revalued to market value at the end of each taxable year. This value is compared to the prior-year value (possibly indexed for inflation), and the resulting change in value is taken as a gain or loss.

As a practical matter, a mark-to-market approach would be difficult to employ and administer. Limited active markets exist for used productive assets, making valuation of assets difficult and burdensome. Only a few assets, such as automobiles and other transportation assets, are traded with sufficient frequency and in sufficient numbers that reasonably good estimates of market value may be obtained at low cost. A particular taxpayer may use assets more or less intensively than average, so that the depreciation experienced by the taxpayer differs from the average depreciation observed in the market.

Second, a mark-to-market approach measures the total change in the asset's real value, including both depreciation (i.e., age-related declines in value) and revaluation. It would be inconsistent to use a mark-to-market to measure just depreciation, while continuing to tax gains and losses on a realization basis.

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<sup>33</sup> This approach is permitted in Mexico. In addition, Mexico allows taxpayers to make an election to deduct the present value of the total annual depreciation allowances with respect to an asset in the year the asset is acquired or put into service.

## **6. Conform tax and financial (book) depreciation**

Many companies measure income for financial reporting purposes as well as for tax purposes. Thus, they have to keep two sets of accounts. Allowing (or requiring) firms to conform tax depreciation to financial (book) depreciation would help reduce administrative cost. It also could result in improved income measurement to the extent that book depreciation gives a more accurate measurement of income than tax depreciation.

These benefits, however, may be overstated. In addition to depreciation, there are many other differences between financial and tax accounting. Consequently, even if tax and book depreciation were conformed, companies would still have to keep two sets of financial records. It also is not clear that adopting financial accounting for depreciation would necessarily improve income measurement. There are no systematic estimates of book depreciation and the financial accounting rules governing depreciation allow firms broad discretion in choosing their depreciation methods. Thus, there is no well-defined set of financial depreciation rules against which tax depreciation rules may be compared.

## E. Summaries of Capital Cost Recovery in Certain Foreign Countries<sup>34</sup>

### 1. Australia

#### In general

Most capital assets are depreciated under either a straight-line method or a declining balance method at the taxpayer's election. A taxpayer may elect to depreciate some assets under the straight-line method and others under the declining balance method.

#### Classification of assets and recovery periods

For most assets, depreciation rates are fixed in percentage terms for each of seven intervals of estimated useful life. The taxpayer may elect to estimate the useful life of an asset, or may adopt an economic useful life estimate provided by the authorities. Taxpayers may use a declining balance percentage, which differs for each class of assets, in lieu of an asset's assigned straight-line recovery period. This results in larger deductions in the early years and reduced deductions in subsequent years. The depreciation rates are provided below.

<u>Effective life in years</u>	<u>Recovery period (straight-line)</u>
Less than 3	1 year
3 to less than 5	2.5 years
5 to less than 6.67	7 years
6.67 to less than 10	5 years
10 to less than 13	5.8 years
13 to less than 30	7.7 years
30 or more	14.2 years

Certain types of assets are depreciated under special rules. New buildings are depreciated under the straight-line method over a period of 40 years. Small businesses may expense low cost plant assets regardless of their expected life. Other companies may pool low-cost plant assets and depreciate over four years using a declining balance method.

#### Intangible assets

Certain intangibles may be depreciated using the straight-line method. Patents are depreciable over six, eight, or 20 years. Copyrights are depreciable over the shorter of 25 years or until expired. Computer software is depreciable over 2 ½ years.

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<sup>34</sup> The following materials are based on the Joint Committee staff's review of various publicly available secondary sources of foreign laws. The descriptions are intended to serve as general overviews; they may not be fully accurate in all respects, as many details have been omitted and simplifying generalizations made.

## **Investment tax credit / deduction**

Investments in plant and equipment used only for research and development are eligible for a special deduction equal to 125 percent of cost, spread over three years.

## **2. Belgium**

### **In general**

Depreciation is permitted for all trade or business assets subject to deterioration or wear and tear. The straight-line method generally is used, with the declining balance method permitted for certain property. A declining balance method cannot be used for intangible assets.

### **Classification of assets and recovery periods**

Assets generally are classified by asset type. Recovery periods generally are fixed by agreement between the taxpayer and authorities. The recovery periods are determined based on the anticipated useful life of the asset. In principle, rates of recovery should correspond to real depreciation during the taxable period, but in practice, the Belgium Tax Authorities have adopted a system of annual overall percentages to approximate depreciation by category of asset. The traditional periods, listed below, can be modified when a change is justified.<sup>35</sup>

<b><u>Asset category</u></b>	<b><u>Recovery period</u></b>
Office buildings	35 years
Industrial buildings	20 years
Office furniture and equipment	7 to 10 years
Machinery and equipment	3 to 10 years
Small equipment and tools	1 to 5 years
Motor vehicles	3 to 5 years

### **Intangible assets**

In general, intangible assets are depreciated using the straight-line method over at least five years. Research and development investments are recovered over three years. Goodwill acquired from other parties is depreciable over a five-year period.

## **Investment tax credit / deduction**

Belgium has an investment deduction regime that permits a percentage of the cost of certain assets to be deducted in the year purchased. Certain qualifying small and medium-size companies may take a deduction for investments in newly acquired or newly constructed tangible and intangible fixed assets located in Belgium.

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<sup>35</sup> The recovery periods of many countries are expressed in percentage terms. For purposes of these materials, the percentages have been converted to their approximate equivalent in years for ease of exposition.

### **3. Canada**

#### **In general**

Most capital assets may be depreciated only under the declining balance method. Taxpayers may claim any amount up to the maximum depreciation allowed in each year, and may conserve any unclaimed depreciation allowance for future years.

#### **Classification of assets and recovery periods**

Assets are grouped into classes by asset type, and a depreciation allowance is calculated for each class of assets. The effect of the pooling system is that depreciation recapture upon sale of depreciated assets may be indefinitely deferred if assets are acquired to replace assets disposed. The depreciation rate is fixed by regulation for each asset class at the following rates.

<b><u>Asset category</u></b>	<b><u>Depreciation rate</u></b>	
Buildings bought after 1987	4 percent	(roughly 50 years)
Office equipment and tools	20 percent	(roughly 9 years)
Manufacturing and processing equipment	20 to 30 percent	(roughly 5 to 9 years)
Motor vehicles	30 percent	(roughly 5 years)
Computer hardware and systems software	30 percent	(roughly 5 years)
Computer software (except system software)	100 percent	(1 year)

#### **Intangible assets**

Leasehold interests, and some patents and franchises, generally are depreciated using the straight-line method. Goodwill and other intangibles that are not deductible as a business expense may be deducted in an amount measured under the declining balance method at a rate of seven percent per year (i.e., depreciated over a period of approximately 27 years).

#### **Investment tax credit / deduction**

An investment tax credit applies to qualifying scientific research and experimental development expenses at a rate of 20 percent. Small Canadian controlled businesses are eligible for an additional 15 percent investment tax credit and may claim a refund of unused credits. Capital assets used primarily for research and development are eligible for half of the normal credit, a portion (40 percent) of which is refundable for small businesses.

### **4. China**

#### **In general**

Depreciation is allowed following the straight-line method over a minimum period as defined by statute. Foreign businesses may apply for permission to use an accelerated depreciation system with specific justification and special rules exist for foreign businesses conducting oil and gas exploration. In addition, depreciation is limited to 90 percent of the cost of each asset (consistent with a required salvage value of at least ten percent).

## **Classification of assets and recovery periods**

The categories of assets are very broad.

<b><u>Asset category</u></b>	<b><u>Recovery period</u></b>
Buildings and structures	20 years
Machinery and equipment	10 years
Electronic equipment	5 years
Appliances and tools	5 years
Furniture	5 years

## **Intangible assets**

Intangible assets, including patents, trademarks, copyrights, use rights and proprietary technology, are depreciated under the straight-line method over each asset's legal life or the duration of the asset's transfer. Intangible assets created by the taxpayer or without a defined life must be depreciated over a period of at least ten years.

## **5. France**

### **In general**

Depreciation generally is computed using the straight-line method. In general, accelerated methods also are allowed for capital assets other than buildings. Depreciation deductions are based on historic cost and must be deducted even in a loss year.

## **Classification of assets and recovery periods**

In general, recovery periods are based on the useful life of the asset. Taxpayers are allowed to choose their own recovery period, based on useful life, if the difference is within 20 percent of the customary practice or justified by specific circumstances.

There is a range of generally accepted straight-line recovery periods.

<b><u>Asset category</u></b>	<b><u>Recovery period</u></b>
Commercial buildings	20 to 50 years
Industrial buildings	20 years
Office equipment	5 to 10 years
Plant and machinery	10 to 20 years
Industrial tools	5 to 10 years
Motor vehicles	4 to 5 years

## **Intangible assets**

Intangible assets are depreciable in limited circumstances. Intangibles that do not diminish in value generally are not depreciable. The depreciation of certain intangible assets, such as patents and software, is allowed. Patents generally are depreciated over five years.

## **6. Germany**

### **In general**

Depreciation may be computed under the straight-line or declining balance methods, subject to limitations. Accelerated depreciation is allowed only in specific cases.

### **Classification of assets and recovery periods**

The Ministry of Finance establishes useful lives based on audit experience. The useful lives have no legal effect, but generally are followed unless a deviation is justified. With justification, a taxpayer may use a different life.

As part of Germany's tax reform, tax depreciation rates for assets currently are being revised. It is expected that estimates of useful lives of assets will be extended, slowing depreciation. As of June 2001, the Federal Ministry of Finance had issued new tables for general use with respect to the useful lives of some fixed business assets. Other tables should be released in the future. Recently revised periods include the following.

<b><u>Asset category</u></b>	<b><u>Recovery period</u></b>
Commercial buildings	34 years
Office equipment	7 to 17 years
Plant and machinery	10 to 17 years
Motor vehicles	6 years
Computers	3 years

### **Intangible assets**

Depreciation of certain intangibles is permitted. Acquired goodwill may be depreciated on a straight-line basis over a 15-year period. Other intangibles may be depreciated over five to ten years.

### **Investment tax credit / deduction**

Investment allowances and grants exist for investment in particular assets and regions.

## **7. Ireland**

### **In general**

Capital allowances are permitted only with respect to assets specified by law. These assets generally include industrial buildings, office equipment, machinery and plant (broadly defined), patent rights, mining exploration, and some capital expenditures for scientific research. The straight-line and accelerated methods are used.

### **Classification of assets and recovery periods**

Recovery periods and methods for depreciable assets are specified by law. The recovery period and method vary according to type of asset. General recovery periods include the following.

<b><u>Asset category</u></b>	<b><u>Recovery period</u></b>
Industrial buildings	25 years
Commercial buildings	25 to 50 years
Plant and Machinery	5 to 7 years
Motor vehicles	5 years
Computer software	7 years

### **Intangible assets**

Generally, depreciation of intangibles is not allowed. Capital allowances are available on expenditures incurred for certain activities, such as scientific research and patent rights. Purchased or acquired patent rights are written off evenly over the residual life of the patent (limited to 17 years).

### **Investment tax credit / deduction**

Tax incentives, including generous depreciation allowances, exist to encourage manufacturing, overseas investment in Ireland, and investment within certain designated areas in Ireland.

## **8. Italy**

### **In general**

No specific depreciation system is required for tax purposes. Depreciation generally is computed on the straight-line method. Accelerated depreciation may be claimed for tangible assets in certain cases.

### **Classification of assets and recovery periods**

The Ministry of Finance publishes a very detailed list of recovery periods for assets used in business activities. Depreciation must be taken within the limits set forth in the table. At least 50 percent of the maximum allowable depreciation must be taken each year, unless the asset is actually subject to less than normal use. If justified, for example because of intense use, the established recovery periods may be increased. The recovery periods include the following.

<u>Asset category</u>	<u>Recovery period</u>
Buildings	14 to 34 years
Office furniture and equipment	5 to 9 years
Plant and machinery	7 to 34 years
Machinery and equipment	4 to 5 years
Small equipment and tools	5 to 8 years
Computers	5 years

### **Intangible assets**

Intangibles generally are depreciable. Purchased goodwill and trademarks may be depreciated over ten years. Patents, copyrights, and know-how may be depreciated at rates exceeding not more than one-third per year (which means that such assets may be depreciated over a period of approximately three years).

### **Investment tax credit / deduction**

A new tax allowance was recently approved for investment in new goods in a year which exceeds average investment during the previous five years.

## **9. Japan**

### **In general**

Capital assets generally may be depreciated under either a straight-line method or a declining balance method at the option of the taxpayer. Buildings and intangible assets, however, are depreciated under a straight-line method only.

### **Classification of assets and recovery periods**

Standard depreciation rates are fixed by the authorities, based on estimated useful lives by type of equipment. Total accumulated depreciation is limited to 95 percent of acquisition cost for tangible assets. Assorted estimated useful lives include the following.

<u>Asset category</u>	<u>Recovery period</u>
Office buildings	50 years
Machine tools	3 years
Computers	4 to 5 years
Other computers	5 years
Office equipment	5 years
Automobiles	3 to 6 years
Manufacturing plants	10 to 14 years

Accelerated depreciation is allowed for certain eligible assets used in connection with certain industries.

## **Intangible assets**

The cost of intangibles such as patents and trademarks may be recovered using the straight-line method over the asset's remaining useful life, with a special rule that a useful life of eight years may be used for a patent even if its statutory life is longer. The purchase price of computer software and acquired goodwill may be recovered using the straight-line method, usually over five years.

## **Investment tax credit / deduction**

Special deductions are allowed in the year of acquisition of certain assets including: qualifying machinery for energy rationalization, preventing pollution, or waste reprocessing; buildings and machinery located in undeveloped areas; and new machinery or equipment of a small corporation used for manufacturing or construction. Medium and small corporations that acquire or produce certain assets may be eligible for a credit in lieu of an additional deduction.

## **10. Mexico**

### **In general**

Most capital assets may be depreciated under the straight-line method only. Taxpayers may choose to claim a lower depreciation amount for a desired period. Depreciation allowances are adjusted for inflation, by multiplying a depreciation amount based on historical cost by a published inflation multiplier. Taxpayers may elect to claim the present value of the total annual depreciation deductions that would be allowed in the future, calculated under the straight-line method, as a current deduction in the year in which the asset is acquired or put into service.

### **Classification of assets and recovery periods**

Assets generally are classified by asset type and the recovery periods generally are fixed by statute. Special rules limit the depreciation allowed for automobiles and for aircraft and ships not exploited commercially. Environmental machinery and equipment may be deducted in the year of acquisition. The minimum recovery periods for certain assets are listed below.

<b><u>Asset category</u></b>	<b><u>Recovery period</u></b>
Buildings	20 years
Office equipment	10 years
Plant and machinery	10 years
Computers	3 years
Motor vehicles	4 years

### **Intangible assets**

Intangible assets are recovered over approximately seven years except for concessions. Concessions are intangible assets that allow the exploitation of assets in the public domain or that allow the operation of a public service and are depreciated over the life of the concession.

## 11. Netherlands

### In general

Depreciation deductions are permitted so long as the method used is in accordance with sound business practice and is consistently applied. Few official depreciation guidelines exist; in practice, rates are agreed to between the taxpayers and tax officials. The straight-line method generally is used. An accelerated method may be used if the asset provides for greater utility in the first years of its useful life than in subsequent years. Free or random depreciation is also allowed for environmental assets and certain innovative assets, including innovative technology in the form of intangible assets obtained from a foreign business that is relocated to the Netherlands. Depreciation must be taken whether a company makes a profit or loss. Assets with a cost lower than the prescribed limit can be fully depreciated in the year of acquisition.

### Classification of assets and recovery periods

In general, recovery periods are based on the useful life of the asset. As mentioned above, few official guidelines exist. General recovery periods are listed below.

<u>Asset category</u>	<u>Recovery period</u>
Buildings	20 to 50 years
Office equipment	3 to 10 years
Plant and machinery	5 to 10 years
Vehicles and computers	3 to 5 years

### Intangible assets

Intangible assets, including goodwill, copyrights, patents and licenses, may be depreciated if their value decreases because of use or passage of time. Purchased goodwill generally is depreciated over five years.

### Investment tax credit / deduction

An investment deduction is allowed for investments in certain assets. The deduction is a percentage of the cost of the annual investment. The deduction does not reduce the cost for depreciation. An energy-investment deduction is available for investment in energy-friendly assets.

## 12. Spain

### In general

All tangible assets (except land) that lose value from use or age are depreciable. The straight-line method may be used without limitation. A declining-balance method may be used only for certain new tangible assets that have an anticipated life of at least three years. In addition, a taxpayer may choose any recovery period, including immediate deduction, for assets used in specific industries and certain types of investments. To be deductible, depreciation must be recorded in the company's books and must correspond to the actual depreciation of the asset.

### **Classification of assets and recovery periods**

Recovery periods are fixed by law. In general, the recovery periods vary depending on the industry.

<b><u>Asset category</u></b>	<b><u>Recovery period</u></b>
Industrial buildings	35 to 68 years
Commercial Buildings	50 to 100 years
Office equipment	7 to 20 years
Motor vehicles	7 to 14 years
Plant and machinery	8 to 20 years
Computers	4 to 8 years

Taxpayers can use quicker recovery periods if the taxpayer can justify such a recovery period. Regulations outline the requirements for submitting such a plan.

### **Intangible assets**

Intangible assets, such as patents and trademarks, may be depreciated using the straight-line method if they have a limited useful life. If acquired from an unrelated party, goodwill, trademarks and other intangibles with a non-limited useful life may be depreciated over a ten-year period under the straight-line method. Goodwill and other intangibles acquired from a related party may be depreciated only if the asset suffers an irreversible and substantiated decrease in value.

### **Investment tax credit / deduction**

An investment tax credit is available to small businesses for investment in information and communications technology. The credit is equal to ten percent of expenditures and investment in Internet access and use, e-commerce, and incorporation of information and communications technology into business practice. A number of other credits target specific activities. There are limitations on the extent to which the credits may be taken in a taxable year.

## **13. United Kingdom**

### **In general**

Depreciation is provided under a capital allowance regime. Depreciation is allowed for certain specified types of capital expenditures including plant and machinery, industrial buildings, mineral extraction, research and development, patent rights and know-how, dredging, and agricultural buildings. Each category is subject to different rules and to different rates.

### **Classification of assets and recovery periods**

Recovery periods generally are fixed by law and based on the useful life of the asset. Depreciation deductions are calculated with respect to a pool based on the unrecovered cost of the assets in the pool. In some circumstances, the taxpayer can make a short-life election to treat the asset as not part of the pool. Long-life assets are treated as a separate pool and depreciated

using the declining balance method at a rate of six percent per year. General recovery periods include the following.

<b><u>Asset category</u></b>	<b><u>Recovery period</u></b>
Industrial buildings	25 years
Machinery and plant	8 years

Commercial buildings generally are not depreciable. New plant and machinery with a useful life of at least 25 years is depreciated at a rate of six percent per year under the declining balance method (i.e., depreciated over a period of approximately 25 years).

### **Intangible assets**

Depreciation of certain intangibles is allowed. A depreciation deduction on purchased patents and know-how is allowed at a rate of 25 percent per year on a declining-balance basis (i.e., depreciated over a period of approximately eight years). Goodwill is not depreciable.

### **Investment tax credit / deduction**

An enhanced 100 percent capital allowance for energy-savings investments was recently introduced.

## APPENDIX

**Activity-based depreciation system** - a depreciation system in which assets are classified by the economic activity in which the asset is used rather than by asset type.

**Asset-based depreciation system** - a depreciation system in which assets are classified by asset type rather than by the economic activity in which the asset is used.

**Capital expenditure** - an amount paid for permanent improvements or betterments that have a value to the purchaser substantially beyond the taxable year (e.g., a cost to substantially prolong the useful life of property). The cost of a capital expenditure is deducted over a period of years.

**Declining balance method** - the process of recovering the cost of a capital expenditure by applying a uniform rate to the unrecovered cost of a capital expenditure. The uniform rate is usually expressed with reference to the straight-line rate (e.g., 150 percent declining balance refers to a uniform rate that is one and one-half the straight line rate).

**Depreciation** - the process of recovering the cost of a capital expenditure through deductions over the life of such expenditure.

**Depreciation recapture** - the inclusion, as ordinary income, of amounts previously taken as a depreciation deduction on the sale of a capital asset. Depreciation recapture is intended to preclude a taxpayer from sheltering ordinary income through depreciation and subsequently reporting capital gain (taxed at a lower rate than ordinary income) on the disposition of such asset.

**Economic depreciation** - the actual decline in the value of a capital expenditure over a specified period of time taking into account all relevant factors.

**Modified Accelerated Cost Recovery System (“MACRS”)** - the system of depreciation that is used for recovering the cost of capital expenditures for United States tax purposes.

**Recovery period** - the time period (usually expressed in years) under which the cost of a capital expenditure is recouped under MACRS.

**Straight-line depreciation method** - the process of recovering the cost of a capital expenditure by deducting equal annual amounts over its estimated life.