Order Code RL33854

CRS Report for Congress

Selected International Depreciation Rates by Asset and Country

January 30, 2007

Brent W. Mast
Information Research Specialist
Knowledge Services Group

Prepared for Members and Committees of Congress

Congressional Research Service

Selected International Depreciation Rates by Asset and Country

Summary

The depreciation provisions in the U.S. tax system are of recurring interest to Congress. More than 100 bills were introduced in the 109^{th} Congress that addressed some aspect of depreciation. Concerns about the U.S. depreciation system tend to begin with the criticism that updates to the system have not kept pace with technological advancements of the assets for which it is utilized to account. Proponents of updating the depreciation system point to a number of problems, including inefficient investment incentives, high administrative costs, increased disputes based on difficulties in compliance, and, in the macroeconomy, impaired competitiveness and economic growth. New perspectives on the policy options for the U.S. depreciation system may be gained through examining the systems used by other countries. This report provides information on the depreciation systems of selected European Union countries (France, Germany, Ireland, Spain, and the United Kingdom) by presenting depreciation rates for buildings; computers; expensable assets; motor vehicles; patents; plant, equipment, machinery, and tools; and software.

Contents

List of Tables

Selected International Depreciation Rates by Asset and Country

Introduction

The depreciation provisions in the U.S. tax system are of recurring interest to Congress. More than 100 bills were introduced in the 109th Congress that addressed some aspect of depreciation. Depreciation, or capital cost recovery, provisions are, "Income tax features intended to allow businesses to recover the costs associated with the depreciation in value of tangible assets that are used to produce income."[1]

Concerns about the U.S. depreciation system tend to begin with the criticism that the depreciation system has not kept pace with technological advancements in the assets for which it is utilized to account. Proponents of updating the depreciation system point to a number of problems, including inefficient investment incentives, high administrative costs, increased disputes based on difficulties in compliance, and, in the macroeconomy, impaired competitiveness and economic growth. One policy option is to alter the depreciable lives for classes of assets. Proposals that alter depreciable lives include immediate depreciation of assets upon purchase (also known as expensing an asset) and equalization of tax depreciation and economic depreciation.[2]

New perspectives on the policy options for the U.S. depreciation system may be gained through examining the systems used by other countries. The tables below provide information on the depreciation systems of selected European Union countries (France, Germany, Ireland, Spain, and the United Kingdom) by presenting depreciation rates for buildings; computers; expensable assets; motor vehicles; patents; plant, equipment, machinery, and tools; and software. All of the countries represented use either straight line depreciation or a variation of accelerated depreciation for the assets captured in the tables.[3] The depreciation information for each country was compiled from multiple commercially and publicly available sources; the sources are named in each table. Within the sources, in certain instances

---

[1] Joseph J. Cordes, Robert D. Ebel, and Jane G. Gravelle, eds., *The Encyclopedia of Taxation and Tax Policy*, 2nd ed., Urban Institute Press (Washington: 2005), p. 43.

[2] See the Senate Finance Subcommittee on Long-Term Growth and Debt Reduction hearing, *Updating Depreciable Lives: Is there Salvage Value in the Current System?*, July 21, 2005. Witness statements are available at [http://finance.senate.gov/sitepages/hearing072105.htm].

[3] The *Barron's Dictionary of Accounting Terms*, Third Edition (2000), defines straight-line depreciation as a "method providing equal depreciation charges for each period because it assumes *constant* benefit from the asset," and accelerated depreciation as a "method recognizing higher amounts of depreciation in the earlier years and lower amounts in the later years of a fixed asset's life."

the information sought was not available, and in these instances the depreciation rates are listed as "na." In addition, please note that while the attempt was made to gather the most current information available, no attempt was made to compare the information offered in these sources to the laws of each country.

Because of the complex variations in the depreciation systems used by each country, every nuance relevant to the depreciation allowances offered for each asset type in every country was not captured. For example, a unique set of depreciation rules may apply to those businesses operating within special geographic zones, engaged in research and development, or purchasing "environmentally friendly" equipment. Also, depreciation rules may vary depending on the size of the company.

Several notable variations in the depreciation systems studied were found in Spain and the United Kingdom. In Spain, small and medium-sized companies, defined as those with annual sales of less than €8 million, are entitled to increase by a coefficient of 1.5 the maximum depreciation rates in the official tables for tangible fixed assets and intangible assets (such as goodwill, trademarks and leasehold assignment rights).[4] In the United Kingdom,

> If the company is medium-sized, a first-year allowance (FYA) of 40% of the cost of an acquisition is given in the first year, and only in the following year will the expenditure minus the FYA go into the pool and qualify for the writing-down allowances (WDA). The same procedures apply for small businesses, except that they enjoy an FYA of 50% for 2006/07. A medium-sized business must satisfy at least two of the following conditions: turnover of not more than £22.8m per year, assets of not more than £11.4m and no more than 250 employees. A small business must meet two of the following conditions: turnover of not more than £5.6m, assets of not more than £2.8m and no more than 50 employees.[5]

Also notable in the United Kingdom is that the depreciation system has been replaced by what is termed a capital allowances system:

> The system of capital allowances replaces the charge for depreciation in business accounts by providing tax relief for certain types of capital expenditure which can be written off against income profits in computing the taxable profits of a business...The rates at which the various capital allowances are available bear little or no relationship to the basis on which fixed assets are depreciated for accounting purposes and usually a deferred tax provision will be created in the accounts of a company to reflect the timing difference between depreciation for tax purposes under the capital allowances system and depreciation for accounting purposes...[6]

---

[4] Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Spain*, p. 16, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=729177658].

[5] Ibid.

[6] Barbara Ford, Ed., *Doing Business in the United Kingdom*, Part IV, Ch. 28. Matthew Bender & Company, Inc. (2006).

An example of how the United Kingdom capital allowance system operates for plant and machinery assets follows:

> For example, capital allowances are given on the acquisition of plant and machinery. Generally, all such expenditure in a tax year is taken to a single pool (main pool), and at the end of the year a writing-down allowance (WDA) of an amount equal to 25% of the pool is taken out of the pool and allowed as a tax-deductible expense. The net amount in the pool is then carried forward to the following year and the process repeated each year. Disposals of assets that had previously gone into the pool are taken out at sale proceeds (but limited to original cost). If there is a deficit in the pool at the end of a tax year, a balancing charge arises that is included in taxable income.[7]

[7] Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: United Kingdom*, p. 10, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1350665920].

Table 1. Asset Type: Buildings

Countries	Elements of the Depreciation System		
	Basis	**Method**	**Rate and Recovery Period**
France	Initial cost or cost of manufacture[a]	SL[b]	Commercial buildings at 2-5% per year; Industrial buildings at 5% per year; Recovery period for commercial buildings (based on useful life) is 20-50 years.[c]
Germany	Historical, acquisition, or production costs[d]	SL, AD[e]	For SL, buildings at 2-4% per year; For AD, buildings at 10% for each of first four years, 5% for each of next 3 years, and 2.5% for each of next 18 years, plus 1% of the construction costs.[e]
Ireland	Historical, acquisition, or production costs[f]	SL[g]	4% per year for industrial buildings; 10% per year for hotels, tourist facilities and buildings for farming and livestock production.[g]
Spain	Acquisition cost[h]	SL[i]	Industrial buildings at 1.4-3% per year; Gasoline stations at 5% per year; Bank buildings and dwelling houses at 2% (AD is permitted for all assets except buildings and furniture).[j]
United Kingdom	Acquisition cost[k]	SL[l]	Industrial buildings and hotel construction expenditures at 4% per year.[l]

AD = Accelerated Depreciation
SL = Straight-Line Depreciation

Sources:

a. Lovells & Paul, Hastings, Janofsky & Walker (Europe) LLP, *Doing Business in France*, Ch 13, §13.02, Matthew Bender & Company, Inc. (2005).

b. Price Waterhouse Coopers, *Corporate Taxes: Worldwide Summaries*, 2004-2005, John Wiley & Sons, Inc. (Hoboken, NJ: 2004), p. 262.

c. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, France, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

d. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.

e. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, Germany, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

f. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, Unpublished Table. Obtained from the CCCTB WG on Feb. 15, 2006.

g. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, Ireland, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

h. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.

i. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Spain*, p. 16, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=729177658].

j. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, Spain, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

k. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: United Kingdom*, p. 10, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1350665920].

l. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, United Kingdom, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

Table 2. Asset Type: Computers

Countries	Elements of the Depreciation System		
	Basis	Method	Rate and Recovery Period
France	na	na	na
Germany	Historical, acquisition, or production costs[a]	SL[b]	33.3%[b]
Ireland	na	na	na
Spain	Acquisition cost[c]	SL, AD[c]	For SL, 12.5%-25% per year; AD rate is calculated using a coefficient of 1.5-2.5 times the depreciation period, with the minimum declining depreciation 11%.[d]
United Kingdom	na	na	na

AD = Accelerated Depreciation
SL = Straight-Line Depreciation
na = Not Available From Our Sources

Sources:

a. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.

b. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Germany*, p. 19, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1218285521].

c. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Spain*, p. 16, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=729177658].

d. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, Spain, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

Table 3. Asset Type: Expensable Assets

Countries	Elements of the Depreciation System		
	Basis	Method	Rate and Recovery Period
France	Software development expenses (may be written off as incurred or amortized over a maximum of 5 years); Computer software costing less than €375[a]	Expensed[a]	100% immediately[a]
Germany	Assets costing less than €410[b]	Expensed[b]	100% immediately[b]
Ireland	na	na	na
Spain	na	na	na
United Kingdom	na	na	na

na = Not Available From Our Sources

Sources:

a. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: France*, p. 18, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=869325472].

b. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Germany*, p. 19, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1218285521].

Table 4. Asset Type: Motor Vehicles

Countries	Elements of the Depreciation System		
	Basis	Method	Rate and Recovery Period
France	Initial cost or cost of manufacture[a]	SL[b]	20-25% per year for 4-5 years[b]
Germany	Historical, acquisition, or production costs[c]	SL, AD[d]	16.6% per year for SL; AD rate may not exceed twice the SL rate and must be less than 20%[d]
Ireland	Acquisition cost[e]	SL, AD[e]	For SL, 12.5-20% per year; For AD, 40% for cars used as taxis or for short term hire[e]
Spain	Acquisition cost[f]	SL, AD[g]	For SL, vehicles at 7.17-16% per year, and trucks in construction, foundry, mining and forestry activities at 8.33-15%; AD rate is calculated using a coefficient of 1.5-2.5 times the depreciation period, with the minimum declining depreciation 11%[h]
United Kingdom	Pooled costs[i]	AD[j]	25% per year for motor cars with a cost greater than £12,000, with the allowance not to exceed £3,000 per year; The £12,000 limit is ignored for expenditure on the acquisition or leasing of electric cars or cars with low carbon dioxide emissions.[j]

AD = Accelerated Depreciation
SL = Straight-Line Depreciation

Sources:

a. Lovells & Paul, Hastings, Janofsky & Walker (Europe) LLP, *Doing Business in France*, Ch 13, §13.02, Matthew Bender & Company, Inc. (2005).

b. Walter H. Diamond, *Foreign Tax and Trade Briefs*,Part 9 Western Europe, France, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

c. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.

d. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Germany*, p. 19, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1218285521].

e. Patrick Ussher & Brian J. O'Connor, Eds, *Doing Business in Ireland*, Ch. 5, §5.03, Matthew Bender & Company, Inc. (2005).

f. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.

g. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Spain*, p. 16, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=729177658].

h. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, Spain, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

i. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: United Kingdom*, p. 10, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1350665920].

j. Barbara Ford, Ed., *Doing Business in the United Kingdom*, Part IV, Ch. 28, Matthew Bender & Company, Inc. (2006).

Table 5. Asset Type: Patents

Countries	Elements of the Depreciation System		
	Basis	**Method**	**Rate and Recovery Period**
France	Initial cost or cost of manufacture[a]	SL[a]	20% per year[a]
Germany	na	na	na
Ireland	Acquisition cost[b]	SL[b]	Equal installments over the remaining validity of the patent, up to a maximum of 17 years[b]
Spain	na	na	na
United Kingdom	na	na	na

SL = Straight-Line Depreciation
na = Not Available From Our Sources

Sources:
a. Lovells & Paul, Hastings, Janofsky & Walker (Europe) LLP, *Doing Business in France*, Ch 13, §13.02, Matthew Bender & Company, Inc. (2005).
b. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, Ireland, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

Table 6. Asset Type: Plant, Equipment, Machinery, and Tools

Countries	Elements of the Depreciation System		
	Basis	Method	Rate and Recovery Period
France	Initial cost or cost of manufacture[a]	SL, AD[b]	For SL, 10-20% per year;[b] Most new industrial equipment, machinery, trucks, environmental protection systems, and security devices are eligible to use AD (AD rate = straight line rate multiplied by a coefficient fixed by statute);[c] Recovery period, based on useful life, is 10-20 years[d]
Germany	Historical, acquisition, or production costs[e]	SL, AD[f]	6-10% per year for SL; AD rate may not exceed twice the SL rate[f]
Ireland	Acquisition cost[g]	SL[g]	10-20% per year[g]
Spain	Acquisition cost[h]	SL, AD[i]	For SL, 7.14-15% per year; AD rate is calculated using a coefficient of 1.5-2.5 times the depreciation period, with the minimum declining depreciation at 11%[i]
United Kingdom	Pooled costs[j]	AD[k]	25% per year[l]

AD = Accelerated Depreciation
SL = Straight-Line Depreciation

Sources:
a. Lovells & Paul, Hastings, Janofsky & Walker (Europe) LLP, *Doing Business in France*, Ch 13, §13.02, Matthew Bender & Company, Inc. (2005).
b. Walter H. Diamond, *Foreign Tax and Trade Briefs*,Part 9 Western Europe, France, §1 Tax Information, 2006. Matthew Bender & Company, Inc. (2006).
c. Lovells & Paul, Hastings, Janofsky & Walker (Europe) LLP, *Doing Business in France*, Ch 13, §13.02, Matthew Bender & Company, Inc. (2005).
d. Walter H. Diamond, *Foreign Tax and Trade Briefs*,Part 9 Western Europe, France, §1 Tax Information, Matthew Bender & Company, Inc. (2006).
e. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.
f. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Germany*, p. 19, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1218285521].
g. Patrick Ussher & Brian J. O'Connor, Eds, *Doing Business in Ireland*, Ch. 5, §5.03, Matthew Bender & Company, Inc. (2005).
h. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.
i. Walter H. Diamond, *Foreign Tax and Trade Briefs*, Part 9 Western Europe, Spain, §1 Tax Information, Matthew Bender & Company, Inc. (2006).
j. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: United Kingdom*, p. 10, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1350665920].
k. Barbara Ford, Ed., *Doing Business in the United Kingdom*, Part IV, Ch. 28, Matthew Bender & Company, Inc. (2006).
l. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: United Kingdom*, p. 10, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=1350665920].

Table 7. Asset Type: Software

Countries	Elements of the Depreciation System		
	Basis	Method	Rate and Recovery Period
France	Initial cost or cost of manufacture[a]	SL[a]	Software purchases may be amortized over their expected lives or in 12 equal monthly installments starting from the date of purchase.[a]
Germany	na	na	na
Ireland	Historical, acquisition or productions costs[b]	SL[b]	Software over 7 years[b]
Spain	Acquisition cost[c]	SL, AD[c]	For SL, 7.14-15% per year; AD rate is calculated using a coefficient of 1.5-2.5 times the depreciation period, with the minimum declining depreciation at 11%.[d]
United Kingdom	Pooled costs[e]	AD[e]	Software at 25%[f]

AD = Accelerated Depreciation
SL = Straight-Line Depreciation

Sources:

a. Lovells & Paul, Hastings, Janofsky & Walker (Europe) LLP, *Doing Business in France*, Ch 13, §13.02. Matthew Bender & Company, Inc. (2005).

b. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.

c. Deloitte Touche Tohmatsu in cooperation with the Economist Intelligence Unit, *Deloitte Country Guides: Spain*, p. 16, at [http://www.deloittecountryguides.com/report_dl.asp?mode=pdf&issue_id=729177658].

d. Walter H. Diamond, Foreign Tax and Trade Briefs, Part 9 Western Europe, Spain, §1 Tax Information, Matthew Bender & Company, Inc. (2006).

e. European Commission's Common Consolidated Corporate Tax Base Working Group (CCCTB WG), *Annex 1 - Draft Summary Tables of Main Tax Depreciation Rules for Fixed Assets in Member States*, unpublished table. Obtained from the CCCTB WG on Feb. 15, 2006.

f. Barbara Ford, Ed., *Doing Business in the United Kingdom,* Part IV, Ch. 28, Matthew Bender & Company, Inc. (2006).