United States General Accounting Office

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Report to the Honorable William J. Coyne, House of Representatives

April 1995

# TAX POLICY

# Experience With the Corporate Alternative Minimum Tax

GAO/GGD-95-88

GAO

United States
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April 3, 1995

The Honorable William J. Coyne
House of Representatives

Dear Mr. Coyne:

This report responds to your request for information on the corporate alternative minimum tax (AMT). In particular, the report discusses the number, size, and industry class of corporations that paid AMT over the period 1987 through 1992; why they were liable for it; whether AMT achieved its purpose; and how AMT might affect corporate investment. AMT was substantially revised by Congress in 1986 to ensure that no corporate taxpayer with substantial economic income avoids significant tax liability by using exclusions, deductions, and credits. In addition, Congress made changes to AMT so that corporations that reported significant income on their financial statements for a particular year would pay some tax in that year. AMT raised almost $2.6 billion in net tax revenue in 1992.

## Background

The legislative history of AMT refers to three distinct measures of income: economic income, financial statement or "book" income, and income as defined for tax purposes. A calculation of economic income would include all types of income, recognize all income when it is earned rather than when it is received, subtract all the costs of earning the income, and make adjustments for inflation. Because such a comprehensive measurement would not be based solely on market transactions, it is not done in practice. Financial statements include a comprehensive measure of income based on historical records that can be verified. In contrast to economic income, financial statement or book income does not adjust values for inflation and does not recognize certain items of income until they are received. The definition of income implicit in the tax code combines a measure of taxpayers' ability to pay taxes with the desire to encourage certain activities through the tax code and to minimize the difficulty of administering and complying with the tax law. Despite many similarities, the three measures are substantially different from each other. The purpose of AMT is to better coordinate the definition of income for tax purposes with that of economic income and financial statement income.

Corporations are required to calculate their tax liability under two sets of rules—computing their regular tax liability and their tentative AMT liability, and paying whichever is greater. If the tentative AMT is more than the

regular tax, the difference between them is AMT. AMT is described in sections 55 through 59 of the Internal Revenue Code.

Corporations have to keep records to calculate AMT as well as the regular tax. For tax year 1994, a corporation had to file Form 4626—used to figure AMT—if its taxable income or loss before the net operating loss deduction, plus its adjustments and preferences, totaled more than the lesser of $40,000 or the corporation's allowable exemption amount. The corporate AMT was cited by all 17 corporations we interviewed in preparing for testimony last year as among the provisions in the Internal Revenue Code with the largest recordkeeping and compliance cost burden.[1]

The AMT rate is 20 percent, lower than the regular corporate tax rate of 35 percent now or 34 percent through 1992. However, AMT is levied on a broader tax base than the regular tax because the AMT tax base includes certain regular tax preferences and adjustments that either delay the time when income is recognized or exclude income items altogether.

Two important AMT adjustments are related to depreciation and financial statement income. Depreciation is the cost incurred by a business reflecting the reduction in value of certain of its assets over time. For both the regular tax and AMT, the amount of depreciation deductions taken in a year is a certain fraction of the original purchase price of the assets. Compared with the regular tax, deductions for depreciation under AMT are smaller in the early years after an asset is placed in service and are spread out over a longer time.

The book income and the adjusted current earnings (ACE) adjustments were established to ensure that firms reporting large earnings on their financial statements in a given year paid some tax in that year. Book income reported on financial statements may not equal taxable income on tax returns because some items of revenue and expenses are never included in one or the other or are reported in different years. As a result, book income may not be equal to the taxable income figure on tax returns, as explained in appendix III. The book income adjustment was part of AMT from 1987 through 1989. It was replaced by the ACE adjustment in 1990. The ACE adjustment relies on income tax principles to define income in a way that Congress intended to be as broad as the definition of book income.

[1]Tax System Burden: Tax Compliance Burden Faced by Business Taxpayers (GAO/T-GGD-95-42, Dec. 9, 1994).

AMT limits the amount of a corporation's net operating losses from prior years that can be deducted in calculating current year's income to 90 percent of tentative taxable income computed under AMT rules. In addition, it disallows the use of many credits available in the regular tax and specifically restricts the amount of foreign tax credit that can be taken for tax payments abroad.

AMT is also linked to the regular tax through the AMT credit. Corporations that have paid AMT can credit these payments against their regular tax liability in future years when they pay the regular tax. However, the credit cannot be used to reduce regular tax liability below tentative AMT liability in future years. With this crediting mechanism, AMT operates partially as a prepayment of tax rather than as a permanent increase in tax liability. (App. I provides a more complete discussion of the history and mechanics of AMT.)

## Results in Brief

AMT more closely resembles a prepayment of tax than a permanent increase in tax liability. As such, it has accelerated tax payments of $27.4 billion over the 1987 through 1992 tax years. But AMT also provides for credits for these prepayments in later years. Over the years 1987 through 1992, corporations used credits totaling $5.8 billion.[2] At the end of 1992, corporations had accumulated $21.6 billion in credits that will result in lower tax revenues in the future as corporations apply their AMT credits against their regular tax liabilities.

Most AMT revenues came from relatively few corporations, but many more corporations bear some burden in complying with the AMT provisions. Of the universe of 2.1 million corporations subject to AMT, just 2,000 large corporations (or 0.1 percent) paid 85 percent of AMT payments in 1992, and only 28,000 (or 1.3 percent) paid any AMT at all. This was the pattern every year from 1987 through 1992. But few corporations that we studied in detail paid AMT every year. Thus, over a longer period of time, a higher percentage of corporations would pay some AMT. Even this percentage will still be much lower than the percentage that have to file an AMT form or keep AMT records. In 1992, 400,000 corporations filed the AMT form. And even more would have had to produce one set of computations and records for regular tax and another for AMT.

Not surprisingly, AMT has most affected corporations and industries that use the exclusions, deductions, and credits that AMT was designed to

[2]The inflation-adjusted numbers for AMT and AMT credits in 1992 dollars are in table II.1.

offset. The two AMT provisions that produced the largest increases in taxable income were the depreciation adjustment and the book and ACE adjustments. In 1992, the depreciation adjustment increased taxable income by about $23 billion and was an AMT item for 87 percent of all AMT payers. The ACE adjustment increased income by about $19 billion and was an AMT item for 67 percent of all AMT payers. AMT payments were also affected by limitations on the amount of net operating losses and foreign tax credits corporations may use.

The three industries that paid the most AMT were manufacturing, transportation, and finance. Generally, their average tax rate increased 1 to 2 percentage points after accounting for AMT credits. The industry whose tax rate was most affected was the mining industry, where the rate increased by 4 to 6 percentage points after taking AMT credits into account.

Congress had two objectives in enacting AMT. AMT has partially achieved the first objective of making corporations with positive economic income pay tax. The AMT tax base comes closer to taxing economic income because it does not allow certain tax preferences and exemptions that cause the regular tax base to deviate from a tax on economic income. AMT depreciation provisions appear to more closely approximate economic depreciation when inflation is low, leading to a more accurate measurement of economic income.[3] However, if inflation is high, AMT depreciation provisions may lead to an overstatement of economic income.

AMT has achieved its second objective by causing corporations that reported positive amounts of book income in a particular year to pay some tax in that year. In every year in the 1987 through 1992 period, at least 6,000 corporations with positive book income that paid no regular tax paid some AMT; another 9,000 corporations with positive book income subject to regular tax paid an additional AMT amount. While in all years in the same period at least 290,000 corporations with positive book income did not pay regular tax or AMT, the vast majority of these were small corporations and had less than $40,000 in net income, which most likely qualified them for the AMT exemption.

The effects of AMT on corporate investment are not clear. First, AMT increases the average tax rate for businesses that pay AMT, decreasing their cash flow. Some studies by economists have indicated that reductions in

[3]The estimates of economic depreciation we used are the most commonly cited and comprehensive estimates that we identified. However, since they are based on a 1981 study, they do not reflect changes in depreciation rates since that time.

cash flow can reduce investment by firms that must pay relatively high costs for funds from external sources. These studies conclude that this effect is more likely for smaller firms, firms that pay relatively small amounts of dividends, firms that do not participate in the corporate bond market, and firms that cannot use working capital to smooth investment spending over time. However, none of the studies directly tested the extent to which AMT actually affected investments.

Second, the literature indicates that the effects of AMT on marginal incentives to invest depend on whether firms consistently pay AMT and on the source of financing for investment.[4] For example, studies show that, if corporations consistently pay AMT or receive AMT credits over long periods, the lower AMT tax rate can more than offset the less generous AMT depreciation allowance, thus enhancing the incentive to invest through retained earnings or stock issuance. Conversely, if investment is financed through debt, AMT can reduce the incentive to invest relative to the regular tax.

For corporations that switch back and forth from regular tax to AMT tax liabilities, research has shown that the effects on investment incentive are more complicated. To illustrate, investment incentives are increased for those firms that deduct investment costs while paying the higher regular tax rate and that report investment income while paying the lower AMT rate; the opposite situations produce effectively higher costs for investments, thereby reducing investment incentives.

Our review of the available studies indicated that determining the effect of AMT on investment is further complicated by the lack of consensus on how significantly actual investments are affected by changes in investment incentives. Some studies have concluded that investment is very responsive to changes in tax incentives, while others have found small effects.

Our ability to pursue the issues raised in the literature by testing the effects of AMT on corporate investment decisions was limited in that we analyzed only tax return data. However, that data showed that most of the total revenue generated by AMT was paid by relatively large corporations rather than small ones. We also note that, while AMT might reduce present cash flows, future cash flows would be enhanced as taxpayers recover AMT credits. Further, our analysis of the return data for the 5-year period from

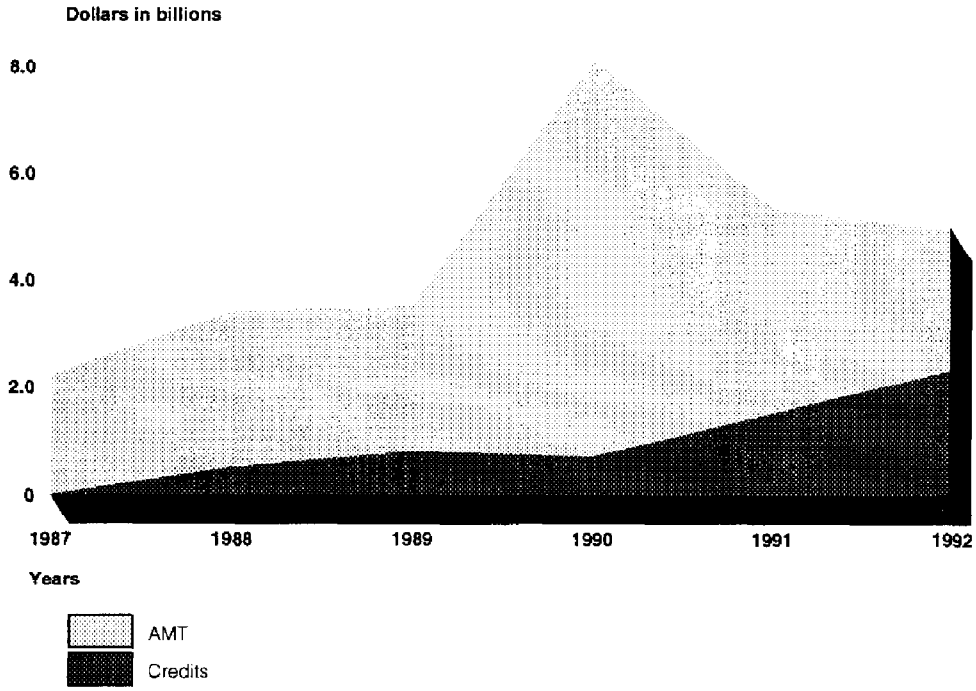
[4]The term marginal incentive refers to the additional tax that a business would pay if it invested an additional dollar.

1987 through 1991 showed that, of 10,000 corporations with assets of $50 million or more, 13 percent either paid AMT or had unrecovered AMT credits in all 5 years; 36 percent switched back and forth between AMT and regular tax liabilities during the period; and the remaining 51 percent did not pay AMT in any of the 5 years.

## How Much AMT Was Paid?

The amount of corporate AMT paid rose from $2.2 billion in 1987 to $8.1 billion in 1990, before declining to $4.9 billion in 1992. These numbers must be combined with the fact that recovery of AMT liability via the AMT credit has been growing, albeit slowly, as shown in figure 1. Most corporations that paid AMT in 1987 had not fully recovered their payment by 1991, the last year we were able to examine, but the total dollar volume of credits used rose from year to year.

**Figure 1: AMT Liabilities and AMT Credits Claimed**




Source: GAO calculations based on Internal Revenue Service (IRS) Statistics of Income data.

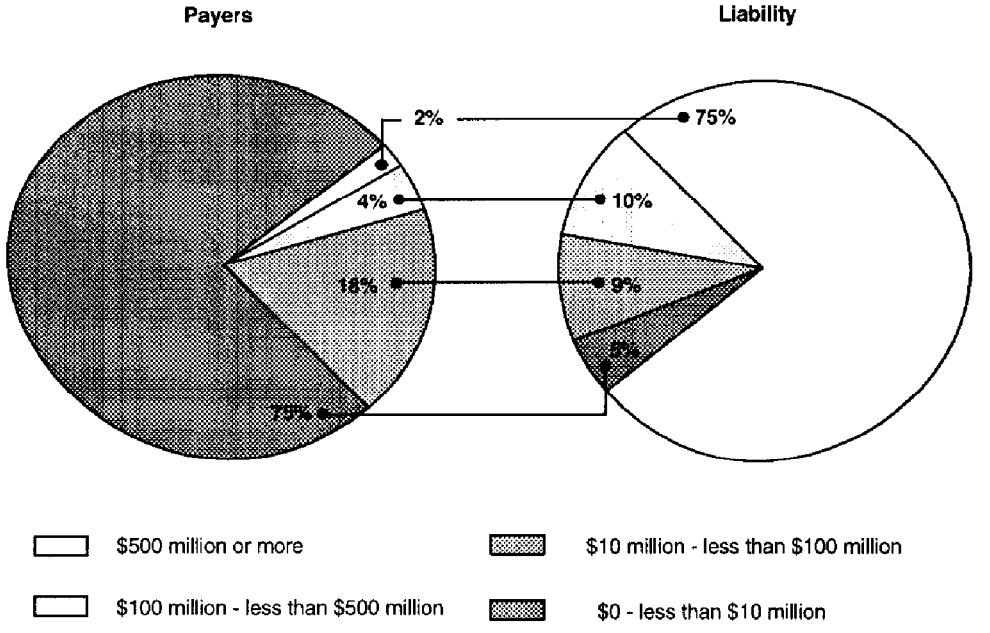
## Which Corporations Paid AMT?

The total number of corporations paying AMT was small. About 28,000, or about 1.3 percent of the 2.1 million corporations subject to AMT in 1992, paid AMT in 1992. The corresponding percentage ranged from 0.7 to 1.5 percent in the 1987 through 1992 period.

Although only about 28,000 firms paid AMT in 1992, many more corporations were affected by it. For example, almost 400,000 corporations filed the AMT form with IRS in 1992 even though they owed no AMT.

Of the approximately 2.1 million corporations that were subject to AMT in 1992, about 2,000 corporations with assets of $100 million or more paid 85 percent of the total corporate AMT liability. This was a pattern that generally held true for 1987 through 1991 also. As shown in figure 2, corporations with assets of $500 million or more paid 75 percent of all AMT in 1992, irrespective of the credit they may have received.

**Figure 2: Distribution of AMT Payers and Liability by Asset Size, 1992**




Note: Numbers do not add to 100 percent due to rounding.

Source: GAO calculations based on IRS Statistics of Income data.

However, most corporations that paid AMT from 1987 through 1992 were relatively small. In most years, more than 70 percent of corporations paying AMT had less than $10 million in assets. In 1992, 75 percent of AMT payers had less than $10 million in assets, as is also shown in figure 2. Nevertheless, relatively large corporations were more likely than smaller corporations to pay AMT. For instance, in all years except one, about 20 percent of corporations with assets of $500 million or more paid AMT; in contrast, no more than half of 1 percent of corporations with less than $1 million in assets paid AMT.

The industries in which corporations paid the most AMT were manufacturing, transportation, and finance. At the industry level, AMT generally increased the amount of tax paid by about 1 or 2 percent of taxable income. Eight specific industry subclasses that we examined—auto, steel, chemicals, utilities, transportation, paper, oil and gas extraction, and mining other than oil—had generally higher percentages of AMT payers than existed in the nation as a whole during the 6 years we examined.

Firms differed from each other in how often they paid AMT and the extent to which AMT increased their taxes. Of approximately 10,000 corporations with over $50 million in assets that we tracked over a 5-year period, about half paid AMT in at least one year. Of those that paid AMT at least once, most paid it for only one year. Only about 160 of the 10,000 corporations we studied paid AMT in all five years. In the larger universe of all AMT payers, about a third of the AMT payers that also paid regular tax had their taxes at least doubled by AMT.

## Why Did Corporations Pay AMT?

By far the most important elements that caused corporations to pay AMT were the depreciation adjustment for property placed in service after 1986 and the book income and adjusted current earnings adjustments. For instance, in 1992 the depreciation adjustment was included on about 87 percent of AMT returns and raised taxable income by about $23 billion. The ACE adjustment was included on about 67 percent of AMT returns and raised taxable income by about $19 billion. No other preference item or adjustment was present in more than 10 percent of AMT returns.

AMT also caused corporations to pay tax by limiting their ability to take net operating loss deductions and the foreign tax credit (FTC). About 32 percent of AMT payers in 1992 included net operating losses in their AMT calculations, and about 19 percent reached the limitation on the use of the

deduction. About 3 percent of AMT payers had FTC as part of their AMT computation, and about one-fourth of FTC claimants were constrained by the 90 percent FTC limit. FTC claims reduced overall AMT before credits by 32 percent.

## Has AMT Achieved Its Purposes?

AMT has partially achieved the congressional objectives of ensuring that taxpayers with substantial economic income in a given year, and taxpayers with positive book income in a given year, pay some tax in that year. By including tax preferences in its tax base and by more closely approximating economic depreciation when inflation is low, AMT leads to a tax more closely based on economic income. In addition, in every year from 1987 through 1992, at least 6,000 corporations with positive book income that paid no regular tax paid some AMT, and at least 9,000 corporations with positive book income subject to regular tax paid an additional AMT amount, as shown in appendix III.

### AMT Leads to a Closer Measurement of Economic Income When Inflation Is Low

A corporate tax based on economic income would deny many of the preferences and exclusions now in the regular tax code, index the value of assets and costs for inflation, and base depreciation deductions on economic depreciation. AMT moves the tax code closer to taxing economic income by including several preferences and exclusions in its tax base. With respect to inflation, neither the regular tax nor AMT rules adjust the measurement of income for inflation. Concerning depreciation, AMT depreciation rules lead to deductions that more closely approximate economic depreciation when inflation is low. However, AMT depreciation deviates further from economic income than does regular tax depreciation in the presence of moderate or high rates of inflation. AMT may also reduce the generous deductions of nominal interest expense (rather than inflation-adjusted interest expense) that corporations can claim at high rates of inflation. (App. III provides additional information on corporations' book income, economic income, and AMT depreciation rules.)

### AMT Has Made More Corporations With Positive Book Income Pay Taxes

In 1992, AMT provisions were successful in making about 9,900 corporations with positive book income and no regular tax liability pay some AMT, as shown in table 1. Also, about 13,800 corporations with positive book income subject to regular tax paid an additional AMT amount. About 4,300 corporations with negative book income also paid AMT—1,800 of these corporations paid both regular tax and AMT, and almost 2,500 of

these corporations paid AMT but no regular tax. This payment of taxes by corporations with losses may have been due to the fact that some revenues were recognized for financial accounting purposes after they were included on tax returns and/or expenses were recorded in accounting records before they were deducted for tax purposes, as explained in appendix III.

On the other hand, AMT did not reach all corporations with positive book income. Of 2.1 million corporate returns subject to AMT in 1992, about 306,000 corporate returns reported positive book income but did not pay regular or alternative minimum tax. The vast majority of these corporations were small and had less than $40,000 in net income, so they probably qualified for the AMT exemption. Of the larger corporations with positive book income, most were investment companies, which generally flow out all their income to shareholders. Because of this feature of their business, these companies are exempt from the book income and ACE adjustments.

**Table 1: Book Income and Taxes of Corporations Subject to AMT in 1992**

Dollars in millions

| Book income and tax status | Number of returns | Total regular tax | Total AMT |
|---|---|---|---|
| **Corporations with positive book income** | | | |
| No regular tax, no AMT | 306,371 | $0 | $0 |
| No regular tax, some AMT | 9,855 | $0 | $1,770 |
| Some regular tax, no AMT | 660,632 | $82,905 | $0 |
| Some regular tax, some AMT | 13,843 | $6,495 | $2,172 |
| **Total** | **990,701** | **$89,400** | **$3,942** |
| **Corporations with negative book income** | | | |
| No regular tax, no AMT | 983,603 | $0 | $0 |
| No regular tax, some AMT | 2,486 | $0 | $370 |
| Some regular tax, no AMT | 105,044 | $5,539 | $0 |
| Some regular tax, some AMT | 1,818 | $1,023 | $544 |
| **Total** | **1,092,951** | **$6,562** | **$914** |
| **Grand total** | **2,083,652** | **$95,962** | **$4,856** |

Note: Tax returns with AMT totaled 28,001.

Source: GAO calculations based on IRS Statistics of Income data.

## How Might AMT Affect Corporate Investment?

The effects of AMT on corporate investment are not clear. Studies and comments by economists have examined two ways in which AMT might affect investment: by (1) reducing cash flow and thus discouraging investment, or (2) changing marginal incentives to invest, leading to changes in investment.

### Cash Flow

Corporations finance investment through internal funds—retained earnings or profits—or external funds such as debt or new stock issues. For corporations that must use external sources and pay significantly higher costs compared to their opportunity costs (earnings from investing their own funds), investment could be sensitive to the current profitability or cash-flow position of the firm.

A number of recent studies have found significant effects of cash flow on investment, and some authors have concluded that some corporations find external funds significantly more expensive than internal funds. These studies have concluded that this is more likely to be the case for smaller firms, firms that pay relatively small amounts of dividends, firms that do not participate in the corporate bond market, and firms that cannot use working capital to smooth investment spending over time.[5] Thus, for such firms, AMT might reduce investment by reducing cash flow and forcing them to finance investment with costly external funds.

It is not clear how many AMT payers meet these conditions. No study has directly tested the extent to which such cash-flow constraints affect corporations that paid AMT. The tax return data we used were limited in their ability to directly test many of these factors. However, the data did show that most AMT is paid by relatively large corporations. To the extent that investment by large corporations is less dependent on current cash flow than is the case for small corporations, the effect of the AMT on investment would be limited. In addition, as AMT credits are reclaimed in the future, cash flow would increase at that time, possibly increasing investment.

[5]Recent studies include R. Glenn Hubbard, Anil K. Kashyap, and Toni M. Whited, Internal Finance and Firm Investment, National Bureau of Economic Research Working Paper 4392, June 1993; Toni M. Whited, "Debt, Liquidity Constraints, and Corporate Investment: Evidence from Panel Data," The Journal of Finance, XLVII:4 (September 1992); Stephen D. Oliner and Glenn D. Rudebusch, "Sources of the Financing Hierarchy for Business Investment," The Review of Economics and Statistics, 1992; Steven M. Fazzari and Bruce C. Petersen, "Working Capital and Fixed Investment: New Evidence on Financing Constraints," Rand Journal of Economics, 24:3 (Autumn 1993); and Steven D. Oliver and Glenn D. Rudebusch, Is There a Broad Credit Channel for Monetary Policy?, Board of Governors of the Federal Reserve System Working Paper 146, January 1994.

## Marginal Incentives to Invest

Many studies have been done on the effects of corporate income taxes on marginal incentives to invest, and several have directly investigated the effects of the AMT on marginal incentives to invest. These studies have investigated how the regular corporate income tax and AMT might affect the incentive to invest through their tax rates, depreciation provisions, the deductibility of interest payments and the nondeductibility of dividends, loss provisions, and credits for certain types of investment. Relative to the regular tax, AMT has a lower rate, a generally slower depreciation schedule, and additional limitations on credits and losses. Because the lower tax rate by itself would lower the cost of investment but the other two features would raise the cost of investment, investment incentives may be increased or decreased relative to the regular tax.

Several studies have investigated how AMT affects incentives to invest for corporations that are consistently paying AMT or recovering AMT credits over long periods. Studies we reviewed contained the following conclusions:

- Incentives to invest were greater under AMT than under the regular tax for firms permanently paying AMT that financed investments with equity. In this case, the value of the lower tax rate more than offset slower depreciation deductions, so the effective tax rate was lower.
- Investment incentives were reduced under AMT relative to the regular tax for debt-financed investments. Because interest is deductible under both AMT and the regular tax, a dollar of interest payments will reduce taxes by a greater amount under the higher regular tax rate.[6]
- For investments financed with a mixture of debt and equity, investment incentives under AMT can be higher or lower than the regular tax, depending on the amount of debt used. For the mix of debt and equity described as typical by two authors, investment incentives are greater under AMT than under the regular tax.[7]

Another study addressed the more general situation where firms could switch from the regular tax to AMT or pay AMT and then return to the regular tax and recover all their AMT credits. In this circumstance, the effect of AMT on investment incentives is more complicated. In this case, the effect of taxes on the cost of capital investment will depend on the

[6]Since the regular tax code favors debt-financed investment, because interest payments are deductible while dividends are not, AMT may reduce this distortion.

[7]See Jane G. Gravelle, The Economic Effects of Taxing Capital Income (Cambridge, MA: The MIT Press, 1994), chapter 7; and B. Douglas Bernheim, "Incentive Effects of the Corporate Alternative Minimum Tax," in Lawrence H. Summers, ed., Tax Policy and the Economy, National Bureau of Economic Research (Cambridge, MA: The MIT Press, 1989).

timing of investment relative to when and how long the corporation pays AMT, as well as on the source of financing for the investment. If depreciation deductions are taken when the firm is paying the regular tax, and income from the investment is received when the firm is paying AMT, the cost of investment is relatively low. If depreciation deductions are taken when the firm is paying AMT and income is taxed at the higher regular tax rate, the cost of investment is higher.[8]

Our analysis showed that the circumstance envisioned in this later study was the more common for AMT corporations—such firms were more likely to switch between the regular tax and AMT. We tracked the 1987 through 1991 tax situations of 10,000 corporations with assets of $50 million or more. Fifty-one percent did not pay AMT in any year. About 13 percent either paid AMT or had unrecovered AMT credits in all 5 years. The remaining 36 percent switched back and forth from the regular tax to AMT.

Our review of the available studies indicated that determining the effect of AMT on investment is further complicated by the lack of consensus on how significantly actual investments are affected by changes in investment incentives. Analysts have widely differing views on how responsive investment is to changes in tax rules. Some studies have concluded that investment is very responsive to changes in tax incentives, while others have found small effects. The difficulty stems from a lack of consensus on the nontax determinants of investment; without a clear model of how other factors affect investment, it is difficult to isolate the effects of taxes, holding other factors fixed.

## Objectives, Scope, and Methodology

Our objectives for this report were to (1) determine which corporations paid AMT and why they were liable for it, (2) examine whether AMT has achieved its purpose, and (3) discuss how AMT might affect corporate investment.

To meet our first objective, we analyzed the IRS Statistics of Income corporate databases for 1987 through 1992, the most recent data available at the time of our review. These data files of over 70,000 tax returns per year include all corporations with assets of over $100 million and a stratified probability sample of all other corporations organized for profit. Results from firms with assets of less than $100 million are thus subject to sampling errors. With the large sample sizes, the calculations of sampling

[8]See Andrew Lyon, "Investment Incentives Under the Alternative Minimum Tax," National Tax Journal, XLIII:4 (1990), pp. 451-65.

errors for 1989 and 1990 showed that the 95-percent confidence intervals for statistics based on all AMT-paying firms were within 5 percentage points of percentage estimates and within 5 percent of the value of other estimates. Where larger confidence intervals were found, they are noted in the report. We also constructed a database consisting of tax returns for corporations that filed returns in each year from 1987 through 1991. This database included about 10,000 corporations that had assets of over $50 million in each of these years. Corporations in this database paid 73 percent of the total regular tax liability and 77 percent of all AMT paid in 1991. We tracked these corporations over time to assess their experience with AMT. The major limitations of this database are that it does not include (1) all corporations and (2) larger corporations that either went out of business between 1987 and 1991 or merged with another corporation and therefore did not file their own tax returns.

To address the second objective, we reviewed AMT's legislative history. Using the previously described tax return data, we also analyzed the relationship between the income or losses corporations showed on their books and the regular tax and/or AMT they paid. To assess whether AMT effectively taxes corporate economic income, we compared the AMT tax base with the tax base proposed by the Treasury Department in 1984. Treasury's proposal was to change the tax system so that real economic income would be taxed. We also compared the AMT tax base with the list of tax expenditures published by the Joint Committee on Taxation to determine the extent to which AMT includes items that are preferences or exclusions in the regular tax. To determine whether the AMT depreciation provisions are consistent with economic depreciation, we obtained estimates of the present value of economic depreciation deductions under the regular tax and AMT from the Congressional Research Service. These estimates, while comprehensive and widely used by researchers, were based on work on economic depreciation published in 1981. Therefore, the estimates are subject to error and would not reflect any changes in economic depreciation rates that might have occurred since 1981.

To meet the third objective, we reviewed various academic studies and articles. In addition, we reviewed the literature on the determinants of business investment.

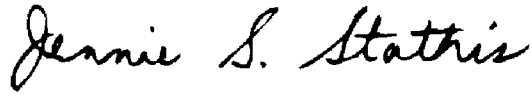
We did not obtain IRS comments on this report because we did not address tax administration issues.

We did our work in Washington, D.C., between May 1993 and February 1995 in accordance with generally accepted government auditing standards. Appendixes II through IV provide more detail on our findings as they relate to our objectives.

We are sending copies of this report to various congressional committees and Members of Congress, the Secretary of the Treasury, and other interested parties. Copies will be made available to others upon request.

The major contributors to this report are listed in appendix V. If you have any questions, please contact me on (202) 512-5407.

Sincerely yours,



Jennie S. Stathis
Director, Tax Policy and
Administration Issues

# Contents


| | | |
|---|---|---|
| Letter | | 1 |
| Appendix I AMT's Purpose: Taxpayers With Substantial Income Should Pay Some Tax | | 20 |
| | Legislative History of AMT | 20 |
| | Overview: How the Corporate AMT Works | 22 |
| | AMT Preferences and Adjustments | 24 |
| | AMT Limits on Net Operating Loss Deductions and Tax Credits | 29 |
| Appendix II Which Corporations Paid AMT and Why? | | 33 |
| | AMT Accounts for Significant Revenues From Corporations | 33 |
| | While Few Corporations Have Paid AMT, Large Firms Are More Likely to Pay AMT | 34 |
| | AMT Liability by Industry | 37 |
| | AMT Significantly Increased Tax Liability for Some Taxpayers | 41 |
| | About Half of Large Corporations Paid AMT at Some Time | 42 |
| | The Book/ACE Adjustment and Depreciation Were the Most Significant AMT Components | 45 |
| | AMT Limits Tax Credits and Deductions for Prior Losses | 48 |
| Appendix III Has AMT Achieved Its Goals? | | 52 |
| | Is AMT Designed to Tax Economic Income? | 52 |
| | Has AMT Ensured That Corporations With Positive Book Income in a Given Year Paid Some Tax in That Year? | 61 |
| Appendix IV Has AMT Affected Corporate Investment? | | 69 |
| | Effects of AMT on Cash Flow and Investment | 69 |
| | Taxes Affect Investment Incentives | 70 |
| Appendix V Major Contributors to This Report | | 75 |
| Tables | Table 1: Book Income and Taxes of Corporations Subject to AMT in 1992 | 10 |
| | Table I.1: Calculation of AMTI | 22 |

Table I.2: Calculation of Net AMT 23
Table I.3: AMT Preference Items—Regular Tax and AMT Treatment 25
Table I.4: AMT Adjustments—Regular Tax and AMT Treatment 26
Table I.5: ACE Adjustment Calculation 28
Table I.6: Net Operating Loss and Tax Credit Rules Under the Regular Tax and AMT 31
Table II.1: Size of Regular Tax Revenues, AMT Revenues, and AMT Credits 33
Table II.2: Percentage of All Corporations Paying AMT 34
Table II.3: Percentage of AMT Payers by Size of Corporation 35
Table II.4: Percentage of Corporate Returns With AMT by Size of Corporation 36
Table II.5: Percentage of Total Assets in Corporations by AMT Status 36
Table II.6: Percentage of AMT Liability by Size of Corporation 37
Table II.7: Percentage of Corporations Paying AMT by Industry 38
Table II.8: AMT Liability by Industry 39
Table II.9: Average Tax Rates Without and With AMT by Industry 40
Table II.10: Percentage of Corporations Paying AMT in Eight Industry Subclasses 40
Table II.11: AMT Liability for Eight Industry Subclasses 41
Table II.12: Average Tax Rates Without and With AMT by Industry Subclass 41
Table II.13: Percentage of AMT Payers by Percentage Increase in Tax Due to AMT 42
Table II.14: Percentage of $50+ Million Corporations Paying AMT by the Number of Years Paying AMT and Percentage of Corporate Assets in Those Corporations 43
Table II.15: Percentage of AMT Payers With Consecutive Years Paying AMT by Number of Years Paying AMT 43
Table II.16: Percentage of AMT Payers That Recovered AMT Liability, by Tax Year of AMT Liability 44
Table II.17: Percentage of AMT Payment Recovered by All AMT Credit Claimants, by Year of AMT Liability 44
Table II.18: Percentage of Firms in GAO Database Either Paying AMT or Having Unused AMT Credits and Percentage of Assets in Those Firms 45

Table II.19: Percentage of $50+ Million Corporations Either Paying AMT or Having Excess AMT Credits by the Number of Years in This Position and Percentage of Corporate Assets in Those Corporations 45
Table II.20: AMT Preferences and Adjustments 47
Table II.21: Percentage of AMT Payers With Adjustments and Preferences 48
Table II.22: Percentage of AMT Payers With Deduction for AMT NOL 49
Table II.23: Percentage of AMT Payers With AMT NOL Deductions by Size of AMT NOL Deduction Relative to AMTI Before Losses 49
Table II.24: Percentage of AMT Payers Claiming AMT FTC and Resulting Reduction in Aggregate AMT 50
Table II.25: Percentage of AMT Payers With AMT FTC by Size of AMT FTC Relative to AMT Before Credits 50
Table II.26: Percentage of AMT Payers With AMT NOL and FTC by Size of AMT NOL and FTC Relative to AMTI 51
Table III.1: Present Value of Depreciation Under Regular Tax, AMT, and Economic Depreciation 55
Table III.2: Percentage Difference in Present Value of Regular Tax and AMT Depreciation From Economic Depreciation 57
Table III.3: AMT Tax Base and Corporate Tax Expenditures 59
Table III.4: Percentage of Corporations in Net Income and Book Income Categories 62
Table III.5: Percentage of Corporations in Regular Taxable Income and Book Income Classes 63
Table III.6: Percentage of Corporations With Regular Tax Payment, by Book Income Status 63
Table III.7: Number of Corporations Paying Some and No Regular Tax and AMT, by Book Income Status, by Year 64
Table III.8: Percentage of Corporations Paying AMT by Regular Tax Status 64
Table III.9: Percentage of AMT Payers by Regular Tax Status and Net Income Status 65
Table III.10: Percentage of AMT Liability by Regular Tax Status and Net Income Status 65
Table III.11: Percentage of AMT-Paying Corporations by Book Income Status 66
Table III.12: Percentage of Taxpayers With Positive Book Income by Tax Status 66

Table III.13: Percentage of AMT Liability by Regular Tax and Book Income Status 67
Table III.14: Characteristics of Corporations With Positive Book Income Paying No Regular Tax or AMT 68
Table IV.1: Major Tax Code Features Affecting Investment in Regular Tax and AMT 71

## Figures

Figure 1: AMT Liabilities and AMT Credits Claimed 6
Figure 2: Distribution of AMT Payers and Liability by Asset Size, 1992 7

## Abbreviations

| | |
|---|---|
| ACE | adjusted current earnings |
| AMT | alternative minimum tax |
| AMTI | alternative minimum taxable income |
| FTC | foreign tax credit |
| IRS | Internal Revenue Service |
| JCT | Joint Committee on Taxation |
| NOL | net operating loss |
| OBRA | Omnibus Budget Reconciliation Act |
| TAMT | tentative alternative minimum tax |
| TRA | Tax Reform Act of 1986 |

# AMT's Purpose: Taxpayers With Substantial Income Should Pay Some Tax

In addition to the regular income tax, both corporations and individuals are subject to an alternative minimum tax (AMT). The tax system has historically tried to achieve two potentially conflicting goals. One goal has been to raise revenue in relation to taxpayers' ability to pay, which is generally measured by annual income.[1] Another has been to encourage certain types of economic activity thought to be beneficial to society. This goal has been pursued through provisions (tax preferences) that exclude various types of income from tax, delay the payment of tax on certain types of income, or grant tax credits for certain activities.

These two goals can conflict with each other. At various times, reports that individuals and corporations were able to pay no tax through the direct use of tax preferences and through interactions of preferences and other features of the tax code led to concerns that the ability-to-pay goal was not being met. These concerns led Congress to set limits on preferences in the regular tax code and to create AMT.

## Legislative History of AMT

The idea of AMT was originally developed by the Treasury Department in 1969. Treasury studies found that some high income individuals paid little or no tax, and that many high income individuals paid tax at a lower rate than individuals with lower income. In response to these findings, Treasury proposed establishing a minimum tax for individuals.

The Tax Reform Act of 1969 included an add-on minimum tax for both noncorporate and corporate taxpayers on certain tax preferences. A 10-percent tax was levied on the corporate minimum tax base, which was the sum of corporate tax preferences[2] minus a $30,000 exemption amount and a corporation's regular tax liability. Levied in addition to the taxpayer's regular tax liability, this was an add-on rather than an alternative tax. The Tax Reform Act of 1976 added preferences and changed the exemption amount.

In 1978, concerns about the effectiveness of the individual AMT led to changes. In contrast to an add-on minimum tax, the tax introduced in 1978

[1]Certain provisions of the tax code are consistent with lifetime income or consumption being the preferred measure of a taxpayer's ability to pay, and debate continues over which is the most appropriate measure of ability to pay.

[2]The tax preferences included in the corporate add-on tax base were excess accelerated depreciation on real property; amortization of certain rehabilitation expenditures, certified pollution control facilities, and railroad rolling stock; excess bad debt reserves for financial institutions; excess depletion; certain capital gains; and the excess of the fair market value over the option price of certain stock options.

developed the AMT concept of levying a tax on an alternative income base when the liability under the alternative base is greater than the regular tax liability. From 1978 to 1982, individuals were subject to both AMT and the add-on minimum tax. In 1982, the add-on tax for individuals was repealed and the AMT base broadened. Throughout this period, the corporate add-on tax was essentially unchanged.

In its 1984 tax reform proposal, the Treasury Department proposed changing business taxes, including the corporate income tax, so that the tax base more closely approximated the real economic income of businesses.[3] In addition to several important structural changes, Treasury recommended eliminating over 45 existing tax preferences and limiting many others. In particular, Treasury proposed eliminating most of the preferences in the regular tax that were included in the add-on tax. Treasury concluded that a minimum tax or an add-on tax would not be necessary if the preferences in the tax code were eliminated directly.

In contrast to the Treasury Department proposal, the administration's 1985 tax reform proposal recommended that the corporate add-on minimum tax be replaced with an AMT.[4] Also in contrast to the Treasury proposal, the President's proposal included additional preferences in the regular tax, did not repeal others, and did not index the corporate tax base for inflation. The proposal called for an AMT under which taxpayers would calculate their income under two systems and pay AMT when it reflected greater tax liability. The President's proposal also called for an expanded list of preferences to be covered by AMT.

The changes actually made to the corporate AMT were substantial and were included in the Tax Reform Act of 1986 (TRA). The former add-on tax was repealed and replaced with an AMT similar to the minimum tax that had applied to individuals before 1986. Using language that mirrored both House and Senate reports, the Joint Committee on Taxation (JCT) staff's explanation of the act discussed the rationale for the changes in AMT:

"Congress concluded that the minimum tax should serve one overriding objective: to ensure that no taxpayer with substantial economic income can avoid significant tax liability by using exclusions, deductions, and credits. Although these provisions may

[3]Tax Reform for Fairness, Simplicity, and Economic Growth (Washington, D.C.: U.S. Department of the Treasury, November 1984).

[4]The President's Tax Proposals to the Congress for Fairness, Growth, and Simplicity (Washington, D.C.: May 1985).

provide incentives for worthy goals, they become counterproductive when taxpayers are allowed to use them to avoid virtually all tax liability....

"In particular, Congress concluded that both the perception and the reality of fairness have been harmed by instances in which corporations paid little or no tax in years when 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, Congress concluded that they demonstrated a need for change."[5]

Since the passage of TRA, several other important changes have been made to the corporate AMT. However, the overall structure of AMT has remained essentially the same. AMT is governed by sections 55 to 59 of the Internal Revenue Code.

## Overview: How the Corporate AMT Works

Under current law, corporations are to calculate tax liability under two separate systems—the regular tax and AMT. To comply with the AMT provisions, taxpayers go through the following process:

- First, they calculate Alternative Minimum Taxable Income (AMTI). To do this, taxpayers start with their taxable income, add the value of a number of preference items and adjustments, and then deduct any available AMT net operating losses. Table I.1 shows this calculation.

**Table I.1: Calculation of AMTI**

| Operation | Item |
|---|---|
| | Taxable income before net operating loss (NOL) deduction |
| Plus | AMT preferences |
| Plus or minus | AMT adjustments |
| Equals | Tentative AMTI |
| Minus | AMT NOL deduction (limited to 90 percent of tentative AMTI) |
| Equals | AMTI |

Sources: GAO; Stewart S. Karlinsky, Alternative Minimum Tax (New York: Research Institute of America, 1993).

- Next, taxpayers calculate Tentative Alternative Minimum Tax (TAMT). To do this, they reduce AMTI by an exemption amount and multiply the

[5]Staff of the Joint Committee on Taxation, General Explanation of the Tax Reform Act of 1986 (Washington, D.C.: U.S. Government Printing Office, 1987), pp. 432-33.

remainder by the AMT tax rate, which is 20 percent. They then subtract any allowable credits, primarily the AMT foreign tax credit.

- Finally, taxpayers compare TAMT liability with regular tax liability. If TAMT is more than the regular tax, the taxpayer is subject to AMT. The taxpayer will pay the government the amount of TAMT liability. The difference between TAMT and the regular tax is the amount of AMT actually owed. If regular tax is more than TAMT, the taxpayer is subject to the regular tax. The calculation of regular tax owed can include a credit for AMT paid in earlier years. Because of the AMT credit, any AMT paid may be recouped in future years when the taxpayer returns to the regular tax. In this regard, AMT more closely resembles a prepayment of tax than a permanent increase in tax liability. However, taxpayers cannot reduce their regular tax liability below TAMT through the use of the AMT credit. Table I.2 shows this calculation.

**Table I.2: Calculation of Net AMT**

| Operation | AMT item | Comments |
|---|---|---|
| | AMTI | |
| Minus | AMT exemption amount | Generally $40,000; phased out for corporate taxpayers with AMTI above $150,000. |
| Multiply by | AMT rate (20 percent) | |
| Equals | AMT before allowable credits | |
| Minus | AMT foreign tax credit | Limit rules require worldwide AMTI to be calculated; AMT foreign tax credit (in conjunction with allowable investment credits) cannot reduce AMT liability by more than 90 percent; the credit can be carried back 2 years or forward 5 years. |
| Minus | AMT investment tax credit carryforwards | Credits cannot reduce AMT by more than 25 percent. |
| Equals | Tentative AMT (TAMT) | |
| Compare | TAMT with regular tax liability | If tentative AMT > regular tax, tentative AMT is owed; net AMT is the amount by which TAMT exceeds regular tax liability; net AMT can be carried forward and credited against regular tax in future years. |

Sources: GAO; West's Federal Taxation: Corporations, Partnerships, Estates, and Trusts (St. Paul, MN: West Publishing Company, 1990).

An example will illustrate how AMT works. If a corporation computed its regular tax as $1 million and its tentative AMT as $1.5 million, it would pay $1.5 million. One million dollars of this payment would be classified as regular tax, and $0.5 million would be classified as AMT.

If the same corporation found that in the next year it owed $2 million as its regular tax liability and $1 million of TAMT, the corporation would then be subject to just the regular tax. The corporation could claim a credit against its regular tax for the $0.5 million in AMT it paid the year before and then send $1.5 million to the government. In this case, it would recoup its AMT payment quickly. However, the AMT credit cannot reduce current year regular tax liability below current year AMT liability. If the corporation's TAMT in the second year had been $1.75 million instead of $1 million, it could only have claimed a credit of $0.25 million and would have had to carry the remaining $0.25 million in uncredited AMT payments ahead to future years.

## AMT Preferences and Adjustments

In general, AMT preferences and adjustments reflect aspects of the regular tax that either (1) defer tax by rapidly recognizing expenses or by delaying revenue recognition, or (2) always exclude certain income from the definition of taxable income.

### AMT Preferences

AMT preferences under the post-TRA AMT generally maintain the preferences that were in place under the add-on minimum tax. Table I.3 lists the AMT preference items and describes how their regular tax treatment differs from their AMT treatment.

**Table I.3: AMT Preference Items—Regular Tax and AMT Treatment**

| AMT preference | Regular tax treatment | AMT treatment |
|---|---|---|
| Real estate depreciation (pre-1987 property) | Depreciated over 15, 18, or 19 years using 175-percent declining-balance method | Depreciated over 15, 18, or 19 years using straight-line method |
| Certified pollution control facilities amortization (pre-1987 property) | Taxpayers can elect 5-year amortization | The excess of the amortization deduction over the amount that would have been allowed as depreciation under section 167 or 168 |
| Appreciated capital gain property contributed to charity (repealed in the Omnibus Budget Reconciliation Act (OBRA) of 1993) | Market value of contributed property may be deducted, subject to a cap of 10 percent of income | Capital gain on the property is included in AMTI |
| Percentage depletion | Certain percentage of income can be deducted for depletion, regardless of the amount of the investment | Excess of the depletion deduction over the property's adjusted basis is added to AMTI |
| Intangible drilling costs | Seventy percent of drilling costs for domestic oil, gas, and geothermal wells can be deducted immediately | "Excess" intangible drilling costs are the amount that regular tax deductions exceed deductions over 10-year amortization. The amount of excess drilling costs over 65 percent of income is included in AMTI |
| Financial institution reserve for bad debts | Thrifts and certain banks may elect to deduct a percentage of income as an addition to their bad debt reserve | Amount by which regular tax deduction exceeds deduction based on actual experience of bad debts included in AMTI |
| Certain tax-exempt income | Interest from certain private activity bonds is exempt | Interest from small issue, mortgage revenue, student loan, and redevelopment bonds is included in AMTI |

## AMT Adjustments

AMT adjustments differ from AMT preferences in that adjustments can be positive or negative. Thus, adjustments related to the deferral of tax will generally be positive in the early years of an asset's useful life, increasing AMTI, and negative in the later years, decreasing AMTI. Table I.4 describes their regular and AMT tax treatments.

**Table I.4: AMT Adjustments—Regular Tax and AMT Treatment**

| AMT adjustment | Regular tax treatment | AMT treatment |
|---|---|---|
| Real estate depreciation (post-1986 structures) | Depreciated using straight-line method over 27.5- or 31.5-year useful life; post-OBRA 1993, nonresidential real property is depreciated over 39 years | Depreciated using straight-line method over 40-year useful life |
| Personal property depreciation (post-1986 equipment) | Depreciated using 200-percent declining-balance method over asset's recovery period | Depreciated using 150-percent declining-balance method over asset's (generally longer) adjusted depreciation schedule life |
| Long-term contracts | Limited use of completed-contract method of accounting is allowed (income is not recognized until contract is completed) | Percentage-completed method of accounting must be used (except for home construction contracts) |
| Installment sales | Pre-OBRA 1987, installment method of accounting available for some businesses | Businesses must recognize gain or loss at the time of sale of assets |
| Amortization of pollution control facilities (post-1986) | Eighty percent of amortizable basis can be amortized over 5 years | Must be amortized over asset's class life using straight-line method |
| Mining exploration and development costs | Certain costs can be expensed (deducted immediately) | Costs must be capitalized and amortized over 10 years |

Source: GAO.

## Book Income and ACE Adjustments

One of the most important components of the corporate AMT has been the book income adjustment and its successor, the adjusted current earnings (ACE) adjustment. During the debate over TRA, the Senate added an adjustment to AMT based on a corporation's reported financial statement income. The final bill included an adjustment based on book income for tax years 1987 through 1989, and specified that, after 1989, the book profits adjustment would be replaced by the ACE adjustment. The ACE adjustment is patterned after the calculations required in the tax code for calculating earnings and profits. The JCT also described the reasons for book income and ACE adjustments:

"With respect to corporations, Congress concluded that the goal of applying the minimum tax to all companies with substantial economic incomes cannot be accomplished solely by compiling a list of specific items to be treated as preferences. In order to achieve both real

and apparent fairness, Congress concluded that there must be a reasonable certainty that, whenever a company publicly reports significant earnings, that company will pay some tax for the year.

"For the years from 1987 through 1989, Congress concluded that this goal should be accomplished by means of a preference based upon financial statement or book income reported by the taxpayer pursuant to public reporting requirements or in disclosures made for nontax reasons to regulators, shareholders, or creditors. Congress concluded that it was particularly appropriate to base minimum tax liability in part upon book income during the first three years after enactment of the Act, in order to ensure that the Act will succeed in restoring public confidence in the fairness of the tax system.

"For taxable years beginning after 1989, Congress concluded that the book income preference should be replaced by the use of a broad-based system that is specifically defined by the Internal Revenue Code. Congress intended that this system should generally be at least as broad as book income, as measured for financial reporting purposes, and should rely on income tax principles in order to facilitate its integration into the general minimum tax system."[6]

## Book Income Adjustment

The book income adjustment was in effect from 1987 through 1989. Under its rules, if a corporation's adjusted net book income exceeded AMTI, 50 percent of the difference was added to AMTI. Although the book income adjustment was described as an adjustment, it was similar to a preference because it could not be negative. If net book income was less than AMTI, no adjustment was made. Because the AMT tax rate was 20 percent, effectively book income (if greater than AMTI) was taxed at a rate of 10 percent (20 percent of 50 percent).

TRA specified the financial statements to be used to calculate the book income adjustment. For example, if a corporation had filed a financial statement with the Securities and Exchange Commission, this statement was to be used in the calculation. If the corporation was not required to file this statement, other audited financial statements prepared for nontax purposes could be used.

## ACE Adjustment

The ACE adjustment replaced the book income adjustment in 1990. The ACE adjustment is a modified version of the calculation of earnings and profits. Conceptually, earnings and profits are a measure of the economic resources available to corporations to pay dividends without drawing

[6]General Explanation of the Tax Reform Act of 1986 (Washington, D.C.: U.S. Government Printing Office, 1987), pp. 434-35.

down their capital. While not specifically defined in the tax code, the earnings and profit concept is developed in several code sections and regulations.

Many of the adjustments required to calculate ACE involve items that are also AMT adjustments and preferences. Once ACE is calculated, it is compared to AMTI, and 75 percent of the difference between the two is added to AMTI. Unlike the book income adjustment, ACE can be a negative amount (to the extent to which positive ACE adjustments were made in prior years) and can therefore reduce AMT liability. Table I.5 summarizes the ACE calculation.

**Table I.5: ACE Adjustment Calculation**

| Operation | Preadjustment AMTI | Comments |
|---|---|---|
| Plus or minus | ACE depreciation adjustment | Straight-line depreciation used; this adjustment was repealed in OBRA 1993 for personal property placed in service after 1993 |
| Plus | Items included in earnings and profits | (1) Tax-exempt interest; (2) certain distributions from life insurance contracts; (3) inside buildup on life insurance contracts |
| Plus | Disallowance of items not deductible in computing earnings and profits | (1) Certain dividends received; (2) certain dividends paid; (3) other |
| Plus or minus | Other adjustments based on earnings and profit rules | (1) Intangible drilling costs; (2) circulation expenses; (3) organization expenses; (4) last-in-first-out inventory adjustments; (5) installment sales |
| Plus or minus | Other items | (1) Disallowance of loss on exchange of debt pools; (2) certain acquisition expenses; (3) depletion; (4) basis adjustment in determining loss or gain from sale or exchange of property |
| Equals | ACE | |

Source: ACE worksheet, IRS Form 4626 instructions.

## AMT Limits on Net Operating Loss Deductions and Tax Credits

AMT places limits on the availability of credits and deductions in order to prevent taxpayers from eliminating all tax liability in a given year. As the JCT reported:

"In addition, Congress concluded that a change was necessary with regard to the use of net operating losses, foreign tax credits and investment tax credits to avoid all U.S. tax liability. Absent a special rule, a U.S. taxpayer with substantial economic income for a taxable year potentially could avoid all U.S. tax liability for such year so long as it had sufficient such credits and losses available. While Congress viewed allowance of the foreign tax credit and net operating loss deduction, along with the transitional relief relating to the investment tax credit, as generally appropriate for minimum tax purposes, it was considered fair to mandate at least a nominal tax contribution from all U.S. taxpayers with substantial economic income."[7]

### Net Operating Loss Deduction

Losses are generally recognized when they occur for financial accounting purposes, and corporations can report negative amounts of income on their tax returns. However, under current law, a corporation that loses money in a given year does not get a tax refund for that tax year. This means that expenses that would reduce taxable income and reduce taxes had the firm made money do not reduce taxes if the firm loses money. Without a carryforward or carryback provision, corporations that made profits in each year would pay less tax over time than corporations that earned the same profits over time but had some years with profits and some years with losses. Under current law, corporations can carry losses forward to 15 future years and deduct them when they have positive income. Corporations can also carry losses back 3 years.

Although deductions for net operating losses are allowed in the calculation of AMTI, the deduction cannot exceed 90 percent of AMTI. With an AMT tax rate of 20 percent, this guarantees that (aside from the exemption amount and other credits) corporations subject to AMT will pay tax equal to at least 2 percent of AMTI (20 percent times at least 10 percent of AMTI).

### Foreign Tax Credit (FTC)

In general, U.S. corporations are subject to U.S. income tax on their worldwide income. However, corporations that operate abroad may also be subject to foreign income taxes. Like most countries, the United States allows taxpayers a tax credit for foreign income taxes paid so that

[7]General Explanation of the Tax Reform Act of 1986 (Washington, D.C.: U.S. Government Printing Office, 1987), p. 436.

corporations that operate internationally are not taxed twice on the same income. At the same time, the amount of foreign tax that can be credited is limited so that FTCs do not offset U.S.-source income.

Under AMT, taxpayers must recalculate their foreign-source income and the FTC limitations according to AMT rules. AMT also places an additional limit on FTC. The AMT FTC cannot reduce AMT (determined without regard to the AMT net operating loss deduction) by more than 90 percent. If the AMT FTC exceeds 90 percent, the excess amount can be carried back 2 years or forward 5 years, as can the regular tax FTC.

## Other Tax Credits

Historically, taxpayers who have undertaken a variety of activities have qualified for credits. Before TRA, corporations could earn investment tax credits for investing in qualified capital assets. Currently, corporations can earn tax credits for qualified research and development spending, income earned in U.S. possessions, spending on rehabilitation of qualified structures, wages on qualified jobs, and other tax-related activity. The purpose of these credits is to encourage certain types of activity that is thought to lead to social benefits. The regular tax places limits on the extent that corporations can use credits to reduce their tax liability.

Under AMT, these credits generally cannot be used to reduce AMT liability.[8] Additionally, many tax credits cannot be used for the regular tax if they reduce regular tax liability below AMT liability. An exception to this rule exists for the possessions credit; it cannot reduce AMT, but it is included in the calculation of regular tax.

Table I.6 compares the tax rules for the deduction of net operating losses with those for tax credits under the regular tax and AMT.

[8]Investment tax credits earned before the passage of TRA could be used to reduce AMT; the use of these credits was phased out over time.

**Table I.6: Net Operating Loss and Tax Credit Rules Under the Regular Tax and AMT**

| Provision | Regular tax treatment | AMT treatment |
|---|---|---|
| Net operating loss deduction | Can be carried back 3 years or forward 15 years; can be used to eliminate all current year tax liability. | Alternative tax net operating loss can reduce AMTI by at most 90 percent; unused alternative losses can similarly be carried forward or back. |
| Foreign tax credit | Can be carried back 2 years and forward 5 years; can eliminate all U.S. tax on foreign-source income. | Calculated on AMTI base; limited to 90 percent of AMT. |
| General business credit includes (1) investment credit, (2) jobs credit, (3) alcohol fuels credit, (4) research credit, and (5) low-income housing credit | Can be carried back 3 years and forward 15 years; cannot exceed difference between regular tax and tentative AMT, or 25 percent of regular tax liability in excess of $25,000. | Generally cannot be used to reduce AMT; before 1991, corporations could use the investment credit to reduce AMT by up to 25 percent. |
| Possessions tax credit | Credit for U.S. tax on income earned in active business in U.S. possession. | Possessions income not included in AMTI; credit cannot reduce AMT. |
| Nonconventional fuel credit | Cannot exceed difference between regular tax and tentative AMT; no carryforwards or carrybacks. | Cannot be used to reduce AMT. |
| Orphan drug credit | Cannot exceed difference between regular tax and tentative AMT; no carryforwards or carrybacks. | Cannot be used to reduce AMT. |

Source: GAO; West's Federal Taxation.

## AMT Credit

AMT and the regular tax are coordinated through the AMT credit mechanism. The JCT explained the reasons for the AMT credit:

"Finally, Congress concluded that it was desirable to change the underlying structure of the minimum tax in certain respects. In particular, to the extent that tax preferences reflect deferral, rather than permanent avoidance, of tax liability, some adjustment was considered necessary with respect to years after the taxpayer has been required to treat an item as a minimum tax preference, and potentially to incur minimum tax liability with respect to the item. Absent such an adjustment, taxpayers could lose altogether the benefit of certain deductions that reflect costs of earning income."[9]

[9]General Explanation of the Tax Reform Act of 1986 (Washington, D.C.: U.S. Government Printing Office, 1987), p. 436.

The rationale behind the AMT credit can be illustrated for the case of depreciation. As shown in table I.3, the depreciation rates for AMT purposes are slower and useful lives are longer than under the regular tax. This means that depreciation deductions early in an asset's useful life are smaller than under the regular tax. Later in the asset's useful life, depreciation deductions will be greater under the AMT schedule than under the regular tax. If a taxpayer is under AMT when an asset is purchased and later returns to the regular tax, the total amount of depreciation deductions the taxpayer claimed for the asset could be significantly less than the original cost. In this case, the taxpayer's larger regular tax depreciation deductions are effectively disallowed by AMT in favor of smaller deductions. The AMT credit allows the taxpayer to eventually deduct the cost of the asset, either through depreciation deductions directly or through AMT credits that restore the previously disallowed depreciation deductions.

Before 1989, the AMT credit carryforward was limited to those items involving deferral of tax only. In OBRA 1989, this rule was changed so that all items that generate AMT, whether timing or permanent differences, lead to a creditable carryforward for tax years after 1989. Unlike the net operating loss deduction carryforward or foreign tax credit carryforward for the regular tax, the AMT credit has no time limit. Like these other deductions and credits, the carryforward does not earn interest. Therefore, taxpayers who use AMT credit carryforwards lose the time value of money (potential interest) on the amount of AMT paid from the time AMT liability is incurred until they can use the credit.

# Which Corporations Paid AMT and Why?

This appendix contains information on the amount of corporate AMT payments, the size of the firms paying AMT, the industry breakdown of these firms, the frequency of AMT payments and AMT credits claimed, the significant elements of AMT, and the relationship of AMT to net operating losses (NOL) and to the foreign tax credit (FTC).

## AMT Accounts for Significant Revenues From Corporations

Table II.1 shows regular tax and AMT revenues for the years since the major revision of AMT in 1986. AMT revenues were between $2.7 and $8.6 billion, or between 3 and 9 percent of the regular tax revenues collected during the period. The table also shows that the use of the AMT credit has grown as more firms that paid AMT use the credit against regular tax liability.

**Table II.1: Size of Regular Tax Revenues, AMT Revenues, and AMT Credits**

Dollars in billions

| Category | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| **1992 dollars** | | | | | | |
| Regular tax revenue | $101.0 | $106.2 | $102.0 | $93.4 | $90.1 | $96.0 |
| AMT | 2.7 | 4.0 | 3.9 | 8.6 | 5.4 | 4.9 |
| AMT credits | NA | 0.6 | 0.9 | 0.7 | 1.5 | 2.3 |
| **Current year dollars** | | | | | | |
| Regular tax revenue | $83.5 | $91.3 | $91.5 | $87.5 | $87.6 | $96.0 |
| AMT | 2.2 | 3.4 | 3.5 | 8.1 | 5.3 | 4.9 |
| AMT credits | NA | 0.5 | 0.8 | 0.7 | 1.5 | 2.3 |

Note: NA means not applicable.

Source: GAO calculations based on Internal Revenue Service (IRS) Statistics of Income data. Regular tax does not include tax from Subchapter S corporations.

AMT revenue is likely to decline in the future for several reasons. First, the Omnibus Budget and Reconciliation Act (OBRA) of 1993 made two changes that should reduce the number of taxpayers using AMT. OBRA eliminated the ACE depreciation adjustment for property placed in service after 1993. The Joint Committee on Taxation estimated that this change would reduce revenue by about $4.3 billion from 1994 through 1998. OBRA also increased the useful life for nonresidential real estate under the regular tax from 31.5 to 39 years. Because the 39 years is only slightly different from the 40 years for AMT purposes, less in AMT revenues related to this real estate can be expected than otherwise.

A second reason for the likely decline in AMT revenue is related to the relatively short-lived equipment placed in service since the 1986 TRA that has added to the depreciation adjustment. Much of this equipment should reach the point in its useful life where depreciation under the AMT system will be less than that under the regular tax, generating a negative adjustment.

A third reason is that more taxpayers may be subject to the regular tax as the economy moves out of the recession. With fewer taxpayers paying AMT, AMT revenue should fall and recovery of past AMT credits should speed up.

## While Few Corporations Have Paid AMT, Large Firms Are More Likely to Pay AMT

As table II.2 shows, only 0.7 to 1.5 percent of corporations paid AMT in any given year. For example, about 32,000 of 2.1 million 1990 corporate returns included AMT.[1]

**Table II.2: Percentage of All Corporations Paying AMT**

| AMT status | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Paying AMT | 0.7 | 1.1 | 1.1 | 1.5 | 1.5 | 1.3 |
| Not paying AMT | 99.3 | 98.9 | 98.9 | 98.5 | 98.5 | 98.7 |

Source: GAO calculations based on IRS Statistics of Income data.

Table II.3 shows that a high percentage of corporate AMT payers were relatively small corporations. The relationship between firm size and AMT payment stems from the fact that there are many more small corporations than large corporations. For most of the years between 1987 and 1992, more than 70 percent of AMT payers had less than $10 million in assets. Large corporations represented a small percentage of AMT payers.

[1]These figures do not include about 1.6 million Subchapter S corporation returns. S corporations are taxed like partnerships and are not subject to the corporate AMT.

**Table II.3: Percentage of AMT Payers by Size of Corporation**

Dollars in millions

| Asset size class | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| $0 - less than $1 | 20.8 | 29.0 | 25.0 | 29.6 | 27.6 | 29.1 |
| $1 - less than $10 | 42.7 | 42.0 | 46.5 | 44.6 | 47.3 | 46.3 |
| $10 - less than $50 | 19.6 | 16.5 | 16.4 | 14.1 | 14.5 | 14.0 |
| $50 - less than $100 | 6.2 | 4.7 | 4.4 | 4.2 | 3.8 | 3.8 |
| $100 - less than $250 | 5.1 | 3.7 | 3.6 | 3.5 | 3.2 | 3.0 |
| $250 - less than $500 | 2.0 | 1.5 | 1.6 | 1.5 | 1.3 | 1.3 |
| $500 - less than $1,000 | 1.1 | 0.8 | 1.0 | 0.8 | 0.8 | 0.8 |
| $1,000 and above | 2.4 | 1.7 | 1.6 | 1.8 | 1.5 | 1.6 |

Note: Numbers may not add to 100 percent due to rounding.

Source: GAO calculations based on IRS Statistics of Income data.

Table II.4 shows the percentage of corporations in each size class that paid AMT.[2] While table II.3 showed that most AMT payers were relatively small, small corporations were much less likely to be paying AMT than large corporations. While less than half of 1 percent of corporations with less than $1 million in assets were paying AMT, more than 20 percent of the corporations with more than $1 billion in assets were. However, since there were so many more small corporations than large ones, most AMT payers were relatively small.

[2]For a similar analysis of AMT liability by firm size and other calculations similar to those in this appendix, see Geraldine Gerardi, Hudson Milner, and Gerald Silverstein, "Temporal Aspects of the Corporate Alternative Minimum Tax: Results From Corporate Panel Data for 1987-1990," Proceedings of the Eighty-Fifth Annual Conference on Taxation, National Tax Association - Tax Institute of America, 1992; and "The Effects of Corporate Alternative Minimum Tax: Additional Results From Panel Data for 1987-1991," Proceedings of the Eighty-Sixth Annual Conference on Taxation, National Tax Association, 1993.

**Table II.4: Percentage of Corporate Returns With AMT by Size of Corporation**

Dollars in millions

| Asset size class | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| $0 - less than $1 | 0.2 | 0.4 | 0.3 | 0.5 | 0.5 | 0.4 |
| $1 - less than $10 | 3.7 | 5.3 | 6.1 | 7.7 | 7.8 | 7.0 |
| $10 - less than $50 | 12.1 | 15.2 | 15.1 | 16.7 | 16.6 | 14.8 |
| $50 - less than $100 | 17.3 | 17.9 | 16.4 | 20.0 | 16.7 | 15.0 |
| $100 - less than $250 | 18.5 | 18.2 | 16.9 | 20.0 | 17.0 | 13.7 |
| $250 - less than $500 | 17.8 | 18.4 | 18.1 | 20.8 | 16.7 | 14.0 |
| $500 - less than $1,000 | 17.4 | 17.4 | 18.1 | 19.4 | 16.5 | 14.6 |
| $1,000 and above | 23.7 | 23.7 | 21.0 | 30.0 | 23.2 | 20.1 |

Source: GAO calculations based on IRS Statistics of Income data.

To further understand the relative importance of AMT, we calculated the percentage of corporate assets that were in firms that paid AMT and in those that did not. Because large corporations paid AMT more frequently, the percentage of assets that were in firms paying AMT was much larger than the percentage of taxpayers paying AMT. Thus, even though less than 2 percent of taxpayers paid AMT, table II.5 shows that about a quarter of corporate assets were in firms that paid AMT.

**Table II.5: Percentage of Total Assets in Corporations by AMT Status**

| AMT status | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| AMT | 23 | 24 | 24 | 37 | 25 | 24 |
| No AMT | 77 | 76 | 76 | 63 | 75 | 76 |

Source: GAO calculations based on IRS Statistics of Income data.

Table II.6 shows the percentage of AMT liability paid by corporations by asset size class. Despite the fact that most AMT payers were relatively small, most AMT liability came from the largest firms. Referring to table II.3, large corporations, generally comprising about 2 to 3 percent of AMT payers, usually paid about 75 percent of AMT liability. In contrast, the smallest two size classes contained 75 percent of AMT payers, but they paid less than 10 percent of the AMT liability.

**Table II.6: Percentage of AMT Liability by Size of Corporation**

Dollars in millions

| Asset size class | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| $0 - less than $1 | 3 | 2 | 3 | 1 | 2 | 1 |
| $1 - less than $10 | 5 | 5 | 5 | 3 | 4 | 4 |
| $10 - less than $50 | 6 | 6 | 6 | 3 | 5 | 6 |
| $50 - less than $100 | 3 | 3 | 3 | 2 | 3 | 3 |
| $100 - less than $250 | 5 | 5 | 5 | 3 | 5 | 5 |
| $250 - less than $500 | 5 | 4 | 6 | 4 | 4 | 5 |
| $500 - less than $1,000 | 4 | 5 | 8 | 6 | 6 | 8 |
| $1,000 and above | 68 | 70 | 64 | 78 | 71 | 67 |

Note: Numbers may not add to 100 percent due to rounding.

Source: GAO calculations based on IRS Statistics of Income data.

## AMT Liability by Industry

Table II.7 shows the percentage of firms paying AMT by industry. The industry classifications are the major industry groups as defined by IRS. The table shows that corporations in the mining, manufacturing, and transportation industries were more likely to have paid AMT. Corporations in wholesale and retail trade and services were less likely to have paid AMT.

**Table II.7: Percentage of Corporations Paying AMT by Industry**

| Industry | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Agriculture | 0.4 | 1.2 | 0.8 | 1.4 | 1.4 | 1.2 |
| Mining | 3.2 | 3.3 | 4.0 | 5.7 | 4.4 | 4.9 |
| Construction | 1.1 | 1.8 | 1.9 | 1.9 | 1.6 | 1.2 |
| Manufacturing | 1.2 | 2.2 | 2.3 | 3.5 | 3.7 | 3.5 |
| Transportation and public utilities | 1.2 | 1.9 | 2.6 | 2.9 | 3.0 | 2.9 |
| Wholesale trade | 0.6 | 0.8 | 0.9 | 1.2 | 1.0 | 1.0 |
| Retail trade | 0.3 | 0.4 | 0.4 | 0.6 | 0.7 | 0.6 |
| Finance, insurance, and real estate | 1.3 | 1.4 | 1.4 | 1.7 | 1.7 | 1.4 |
| Services | 0.3 | 0.6 | 0.6 | 0.9 | 0.8 | 0.9 |
| Other | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Overall average | 0.7 | 1.1 | 1.1 | 1.5 | 1.5 | 1.3 |

Source: GAO calculations based on IRS Statistics of Income data.

Table II.8 shows AMT liability by industry. The data show that the manufacturing, transportation, and finance industries paid the most AMT.

**Table II.8: AMT Liability by Industry**

1992 dollars in millions

| Industry | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Agriculture | $8.6 | $14.7 | $19.3 | $20.1 | $20.4 | $19.3 |
| Mining | 110.5 | 244.9 | 298.7 | 351.8 | 306.9 | 222.2 |
| Construction | 110.1 | 121.4 | 99.7 | 109.7 | 85.6 | 79.8 |
| Manufacturing | 861.4 | 1,709.5 | 1,320.7 | 3,647.2 | 1,946.9 | 1,822.2 |
| Transportation and public utilities | 584.4 | 533.1 | 835.2 | 1,931.8 | 1,186.6 | 970.5 |
| Wholesale trade | 69.9 | 74.4 | 115.6 | 179.1 | 156.7 | 261.2 |
| Retail trade | 99.6 | 100.9 | 149.9 | 312.7 | 227.9 | 167.4 |
| Finance, insurance, and real estate | 718.5 | 933.3 | 903.4 | 1,772.4 | 1,333.4 | 1,107.2 |
| Services | 131.3 | 169.1 | 202.7 | 322.6 | 203.7 | 206.3 |
| Other | 0.6 | 0.2 | 0.6 | 0.0 | 0.0 | 0.0 |

Source: GAO calculations based on IRS Statistics of Income data.

In order to see the importance of AMT relative to the regular tax for different industries, we calculated industry average tax rates for the regular tax and for AMT. The regular tax rate is regular tax (not including the AMT credit) divided by taxable income (as defined under the regular tax). The AMT average tax rate is the regular tax and AMT less the AMT credit, also divided by taxable income. The difference between the two figures shows the extent to which AMT (both tax and credit) changes the aggregate tax payment of the industry. Table II.9 shows that AMT generally resulted in relatively small changes at the industry level.

**Table II.9: Average Tax Rates (Percentages of Taxable Income) Without and With AMT by Industry**

| Industry | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Agriculture | 27/27 | 24/25 | 25/26 | 26/26 | 24/25 | 24/25 |
| Mining | 29/33 | 18/22 | 19/24 | 19/24 | 17/23 | 18/23 |
| Construction | 29/31 | 26/27 | 26/27 | 27/28 | 25/26 | 25/26 |
| Manufacturing | 25/25 | 20/21 | 21/21 | 20/22 | 20/21 | 21/21 |
| Transportation and public utilities | 36/37 | 29/30 | 31/32 | 31/35 | 31/33 | 32/33 |
| Wholesale trade | 34/34 | 27/28 | 29/30 | 29/30 | 28/28 | 27/28 |
| Retail trade | 34/34 | 29/29 | 30/30 | 28/30 | 30/30 | 30/30 |
| Finance, insurance, and real estate | 37/38 | 28/29 | 30/31 | 28/31 | 32/33 | 30/30 |
| Services | 27/27 | 24/25 | 26/27 | 26/28 | 27/28 | 28/28 |
| Other | 27/27 | 20/20 | 25/26 | 23/23 | 24/24 | 13/13 |

Source: GAO calculations based on IRS Statistics of Income data.

As requested, we computed the same information for eight industry subclasses. Table II.10 shows the percentage of firms paying AMT in these industry subclasses. The percentage of corporations that paid AMT in these subclasses was above the average for all corporations, with the possible exception of utilities due to the statistical imprecision in the percentage of that subclass.

**Table II.10: Percentage of Corporations Paying AMT in Eight Industry Subclasses**

| Industry | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Auto | 2.0 | 2.3 | 3.4 | 6.6 | 7.6 | 5.5 |
| Steel | 1.5 | 3.4 | 5.4 | 6.2 | 5.5 | 4.8 |
| Chemicals | 2.3 | 2.2 | 2.7 | 4.7 | 4.8 | 5.9 |
| Utilities | 1.5 | 2.5 | 2.9 | 2.5 | 2.9 | 3.4 |
| Transportation | 1.2 | 1.9 | 2.5 | 2.9 | 2.9 | 2.8 |
| Paper | 6.9 | 3.2 | 7.0 | 8.2 | 8.9 | 9.7 |
| Oil and gas extraction | 2.4 | 2.8 | 3.3 | 5.1 | 4.0 | 4.1 |
| Mining (other than oil) | 6.3 | 5.1 | 6.7 | 8.0 | 5.7 | 7.9 |
| Overall average | 0.7 | 1.1 | 1.1 | 1.5 | 1.5 | 1.3 |

Note: The estimate for utilities for 1990, the only year for which we examined the statistical significance of the utilities estimate, was not significantly different from the overall average at a 95-percent level of confidence.

Source: GAO calculations based on IRS Statistics of Income data.

Table II.11 shows AMT liability for these industries.

**Table II.11: AMT Liability for Eight Industry Subclasses**

1992 dollars in millions

| Industry | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Auto | $50.9 | $174.7 | $45.5 | $999.5 | $31.3 | $136.7 |
| Steel | 25.6 | 44.7 | 54.4 | 49.0 | 23.0 | 29.8 |
| Chemicals | 86.2 | 81.6 | 173.4 | 500.8 | 244.2 | 306.6 |
| Utilities | 418.8 | 343.2 | 523.0 | 841.5 | 642.4 | 629.3 |
| Transportation | 147.3 | 121.7 | 177.8 | 467.1 | 259.9 | 213.6 |
| Paper | 81.0 | 60.7 | 58.4 | 172.3 | 252.1 | 223.5 |
| Oil and gas extraction | 39.3 | 67.1 | 104.7 | 174.4 | 232.5 | 80.8 |
| Mining (other than oil) | 71.2 | 177.8 | 194.0 | 177.5 | 74.4 | 141.3 |

Source: GAO calculations based on IRS Statistics of Income data.

Table 11.12 shows the average tax rate without and with AMT for these eight industry subclasses.

**Table II.12: Average Tax Rates (Percentages of Taxable Income) Without and With AMT by Industry Subclass**

| Industry | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Auto | 30/31 | 17/18 | 13/14 | 6/20 | 24/28 | 24/28 |
| Steel | 34/36 | 27/28 | 30/32 | 30/34 | 31/33 | 30/32 |
| Chemicals | 23/24 | 19/19 | 18/18 | 17/19 | 16/17 | 17/17 |
| Utilities | 35/37 | 29/30 | 31/33 | 31/35 | 32/34 | 32/35 |
| Transportation | 35/37 | 29/30 | 28/30 | 29/36 | 29/33 | 26/33 |
| Paper | 35/36 | 27/28 | 28/28 | 26/28 | 25/30 | 28/29 |
| Oil and gas extraction | 18/21 | 11/13 | 16/18 | 15/19 | 14/20 | 15/16 |
| Mining (other than oil) | 41/46 | 27/34 | 24/34 | 27/35 | 25/30 | 24/32 |

Source: GAO calculations based on IRS Statistics of Income data.

## AMT Significantly Increased Tax Liability for Some Taxpayers

For many AMT payers, AMT led to a large percentage increase in taxes owed. To determine whether AMT led to only very small tax changes or to large tax changes for AMT payers, we calculated the percentage increase in tax from AMT. For AMT taxpayers who had no regular tax liability, AMT was 100 percent of the taxes paid. As shown in appendix III (table III.8), about

40 percent of AMT payers owed no regular tax in the year they paid AMT. Table II.13 shows the percentage increase in tax resulting from AMT for AMT taxpayers who also had positive regular tax liability. In 1990, for example, 8.5 percent of AMT payers had their total tax increased by less than 5 percent by AMT. On the other hand, a third of AMT payers had their taxes at least doubled by AMT.

**Table II.13: Percentage of AMT Payers by Percentage Increase in Tax Due to AMT**

| Percent | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| 0 - 5 | 13.5 | 9.8 | 10.4 | 8.5 | 8.1 | 11.8 |
| More than 5 ≤ 10 | 6.7 | 9.3 | 7.1 | 6.2 | 6.0 | 6.4 |
| More than 10 ≤ 25 | 16.1 | 15.7 | 14.3 | 14.2 | 15.9 | 14.9 |
| More than 25 ≤ 50 | 14.3 | 17.1 | 15.0 | 19.3 | 15.3 | 20.4 |
| More than 50 ≤ 100 | 15.6 | 16.3 | 17.9 | 18.7 | 19.0 | 15.7 |
| Above 100 | 33.8 | 31.8 | 35.3 | 33.2 | 35.6 | 30.8 |

Note: Numbers may not add to 100 percent due to rounding.

Source: GAO calculations based on IRS Statistics of Income data.

## About Half of Large Corporations Paid AMT at Some Time

In order to see whether corporations paid AMT consistently between 1987 and 1991 or fluctuated between the regular tax and AMT, it is necessary to track individual corporations over time. To do this, we developed a database containing 5 years of tax returns for corporations that had total assets of more than $50 million in each year from 1987 through 1991.[3] This database also allows us to determine how quickly AMT payers were able to use the AMT credit.[4] Of the approximately 10,000 corporations in the database, about 50 percent did not pay AMT at any time over the 5-year period, as shown in table II.14. Very few (about 3.2 percent of AMT payers, or about 1.6 percent of the 10,000 corporations in the database) paid AMT in all 5 years. The greatest percentage of AMT payers paid once in the 5 years. Table II.14 also shows the percentage of assets in different categories as a percentage of the sum of all corporate assets over the 5 years.

[3]Due to time constraints, we were not able to incorporate 1992 data into this database.

[4]Gerardi, Milner, and Silverstein analyzed AMT using a similar database. The database we used contained about 800 more companies because we were able to use the final rather than the preliminary SOI data to develop our database. However, in those cases where we performed similar calculations, our results were generally very close to theirs.

**Table II.14: Percentage of $50+ Million Corporations Paying AMT by the Number of Years Paying AMT and Percentage of Corporate Assets in Those Corporations**

| | Never paid AMT | 1 year | 2 years | 3 years | 4 years | 5 years |
|---|---|---|---|---|---|---|
| Corporations (percent) | 51.0 | 20.2 | 14.2 | 8.6 | 4.4 | 1.6 |
| Assets (percent) | 33.8 | 24.0 | 19.1 | 14.3 | 7.3 | 1.5 |

Source: GAO database developed from IRS Statistics of Income data.

To understand whether corporations tended to pay AMT in consecutive years or moved back and forth between AMT and the regular tax, we tracked the years that taxpayers paid and did not pay AMT. Table II.15 shows the percentage of taxpayers that paid AMT in consecutive years by the number of years that they paid AMT. About two-thirds of the corporations that paid AMT twice in the 5 years did so in consecutive years. About half of 3-year payers paid in 3 consecutive years.

**Table II.15: Percentage of AMT Payers With Consecutive Years Paying AMT by Number of Years Paying AMT**

| Number of years paying AMT | Percentage paying for no consecutive years | Percentage paying for 2 consecutive years | Percentage paying for 3 consecutive years | Percentage paying for 4 consecutive years |
|---|---|---|---|---|
| 2 | 33 | 67 | NA | NA |
| 3 | 8 | 38 | 53 | NA |
| 4 | NA | 11 | 23 | 66 |

Note: Percentages may not add to 100 percent across the table due to rounding. NA means not applicable.

Source: GAO database developed from IRS Statistics of Income data.

To determine how long it took AMT payers to recover their payments via the AMT credit, we calculated the percentage of firms that had fully recovered their payment by year of AMT liability. In making this calculation, we assumed that receipt of an AMT credit recovered the first possible year of AMT payments. Table II.16 shows that the majority of AMT payers for tax year 1987 had not fully recovered their 1987 AMT payment via the AMT credit by the 1991 tax year.

**Table II.16: Percentage of AMT Payers That Recovered AMT Liability, by Tax Year of AMT Liability**

| Tax year of AMT liability | Tax year that AMT was recovered | | | | Not fully recovered |
|---|---|---|---|---|---|
| | 1988 | 1989 | 1990 | 1991 | |
| 1987 | 13.7 | 11.9 | 7.4 | 8.1 | 58.8 |
| 1988 | NA | 11.3 | 7.8 | 9.0 | 71.9 |
| 1989 | NA | NA | 8.3 | 10.9 | 80.8 |
| 1990 | NA | NA | NA | 3.0 | 97.0 |

Note: NA means not applicable.

Source: GAO database developed from IRS Statistics of Income data.

Table II.17 shows the percentage of AMT payments recovered via the AMT credit. In contrast to the preceding table, table II.17 shows the amount of credit recovered by firms that fully recovered their AMT payment and by those that only partially recovered their credits. These calculations also assume that credits claimed are allocated to the first year of AMT liability for which AMT has not been fully recovered. The table shows that less than half of 1987 AMT liability had been recovered via the AMT credit by 1991.[5]

**Table II.17: Percentage of AMT Payment Recovered by All AMT Credit Claimants, by Year of AMT Liability**

| Year of AMT liability | Tax year that AMT was recovered | | | | Total recovered |
|---|---|---|---|---|---|
| | 1988 | 1989 | 1990 | 1991 | |
| 1987 | 20.6 | 14.1 | 3.1 | 5.8 | 43.6 |
| 1988 | NA | 16.0 | 3.3 | 4.7 | 24.0 |
| 1989 | NA | NA | 11.5 | 9.3 | 20.8 |
| 1990 | NA | NA | NA | 7.0 | 7.0 |

Note: NA means not applicable.

Source: GAO database developed from IRS Statistics of Income data.

Table II.18 shows the percentage of corporations and the percentage of assets of firms in the database that either paid AMT or paid regular tax and had not been able to reclaim all outstanding AMT credits in a particular year. The data indicate that about 40 percent of the large corporations in the database were in this position after tax year 1991. This percentage may have fallen in tax year 1992 as the amount of AMT credits claimed rose significantly, as shown in table II.1.

[5]Gerardi, Milner, and Silverstein performed this calculation for their database and found faster recovery of credits. For example, they found that 65.8 percent of 1987 AMT payments had been recovered through tax year 1991.

**Table II.18: Percentage of Firms in GAO Database Either Paying AMT or Having Unused AMT Credits and Percentage of Assets in Those Firms**

| | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|
| Corporations (percent) | 19 | 27 | 31 | 38 | 40 |
| Assets (percent) | 24 | 32 | 36 | 54 | 52 |

Source: GAO database developed from IRS Statistics of Income data.

We also calculated the length of time that corporations spent either paying AMT or recovering credits. Table II.19 shows the percentage of corporations that either paid AMT or had unusable AMT credits by the number of years that they were in this position. For example, the table shows that 9.2 percent of companies paid AMT or had unusable credits in only 1 year, which means that they paid AMT in 1 year and fully recovered the payment with the AMT credit in the following year. About 10 percent of firms either paid AMT in 2 years and recovered their credits in the next year or they paid AMT in 1 year and were unable to recover credits for an additional year. Thirteen percent of the companies either paid AMT or had outstanding credits in all 5 years. These firms could have been AMT payers in all 5 years, paid AMT once but never recovered their credits, or paid AMT in several years and never recovered credits. Thus, while table II.14 showed that only 1.6 percent of the companies in the database paid AMT in all 5 years, 13 percent of the companies were either paying AMT or had excess AMT credits in all 5 years.

**Table II.19: Percentage of $50+ Million Corporations Either Paying AMT or Having Excess AMT Credits by the Number of Years in This Position and Percentage of Corporate Assets in Those Corporations**

| | Never paid AMT | 1 year | 2 years | 3 years | 4 years | 5 years |
|---|---|---|---|---|---|---|
| Corporations (percent) | 51.0 | 9.2 | 9.7 | 7.9 | 9.0 | 13.2 |
| Assets (percent) | 33.8 | 10.3 | 18.3 | 10.4 | 14.6 | 12.6 |

Source: GAO database developed from IRS Statistics of Income data.

## The Book/ACE Adjustment and Depreciation Were the Most Significant AMT Components

Table II.20 shows the relative size of the AMT preferences and adjustments. As can be seen, the book income and ACE adjustments were relatively large. The replacement of the book income adjustment with the ACE adjustment coincided with a large increase in the amount of the adjustment. Before 1990, the book income adjustment had been declining in importance.

The depreciation adjustment for post-1986 property grew as more depreciable assets were placed into service after the introduction of the adjustment. As time passes from the imposition of the tax, more new assets are put into service, increasing the adjustment. At the same time, more assets reach the point where depreciation is greater under the AMT rules than under the regular tax, leading to a negative adjustment. A similar pattern is apparent for the depreciation preferences related to pre-1986 assets; as time passes, fewer assets generate positive adjustment amounts.

Compared to the book/ACE adjustment and post-1986 property depreciation, the other components of AMTI were small overall, although they could be important for particular firms or industries.

**Table II.20: AMT Preferences and Adjustments**

1992 dollars in millions

| Item | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| **Adjustments** | | | | | | |
| Book income or ACE | $26,107 | $23,240 | $15,779 | $52,136 | $25,876 | $18,893 |
| Depreciation (post-1986 property) | 3,976 | 10,638 | 16,164 | 30,040 | 23,028 | 22,843 |
| Pollution facilities | –15 | 47 | 21 | NA | NA | 21 |
| Mining development | 179 | 319 | 324 | 295 | 195 | 108 |
| Basis | –47 | –422 | –904 | NA | NA | –3,368 |
| Long-term contracts | 1,504 | 1,125 | 1,471 | NA | NA | 95 |
| Installment sales | 304 | –535 | –178 | NA | NA | –14 |
| Merchant marine construction | 40 | 5 | 1 | NA | NA | 31 |
| Section 833 deduction | 17 | 9 | 664 | NA | NA | 1,478 |
| Farm losses | 27 | 0 | 13 | NA | NA | 0 |
| Passive losses | 168 | 125 | 38 | NA | NA | 34 |
| **Preferences** | | | | | | |
| Depletion | 1,351 | 1,870 | 2,224 | 1,489 | 925 | 1,620 |
| Tax-exempt bonds | 19 | 41 | 77 | 544 | 167 | 128 |
| Appreciated property charitable deduction | 48 | 33 | 64 | 73 | 81 | 82 |
| Intangible drilling costs | 247 | 171 | 145 | 376 | 232 | 176 |
| Reserves for bad debts | 91 | 41 | 30 | NA | NA | 86 |
| Accelerated depreciation of real property | 19 | 499 | 353 | 397 | 186 | 108 |
| Accelerated depreciation of personal property | 10 | 16 | 16 | 6 | NA | 4 |
| Amortized pollution control facilities | 22 | 12 | 9 | NA | NA | NA |

Note: NA means not available. For tax years 1990 and 1991, Statistics of Income entered fewer items from many corporate tax returns into its database, including items from the AMT form. Also, the estimates for several of the smaller adjustments and preferences are based on small samples and are thus imprecise. The amounts reported are from AMT payers only, and the adjustment amounts are net of negative adjustments.

Source: GAO calculations based on IRS Statistics of Income data.

The importance of the depreciation and the book income and adjusted current earnings adjustments is also apparent from data on the frequency of occurrence of different AMT components, as table II.21 shows. These items increased AMTI for most AMT payers. In contrast, the other preferences and adjustments increased AMTI for only a small percentage of AMT payers.

**Table II.21: Percentage of AMT Payers With Adjustments and Preferences**

| Item | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Depreciation adjustment | 65 | 79 | 84 | 86 | 86 | 87 |
| Mining development adjustment | 1 | 1 | 1 | 0 | 0 | 1 |
| Depletion preference | 5 | 4 | 5 | 5 | 4 | 4 |
| Intangible drilling preference | 2 | 1 | 1 | 1 | 1 | 1 |
| Tax-exempt income preference | 1 | 1 | 1 | 1 | 1 | 1 |
| Accelerated depreciation preferences | 21 | 15 | 13 | 12 | 10 | 9 |
| ACE/book income adjustment | 48 | 45 | 41 | 65 | 86 | 67 |

Source: GAO calculations based on IRS Statistics of Income data.

## AMT Limits Tax Credits and Deductions for Prior Losses

In order to ensure at least a small tax liability from corporations with prior year losses and foreign tax credits, the AMT rules include limits on the amounts these deductions and credits can reduce AMTI and AMT. The rules also include an overall limit on the amount by which both the AMT net operating loss deduction and the AMT FTC together can reduce AMT liability.

To determine how these rules affected AMT payers, we calculated the percentage of AMT payers that included NOLs and FTCs in their AMT computations. We also calculated the percentage by which AMT payers were able to reduce AMTI and AMT before credits, respectively, to determine whether the limitations had prevented firms from fully claiming deductions and credits.

Table II.22 shows the percentage of AMT payers that claimed a deduction for prior year net operating losses. The table shows that about a third of

AMT payers claimed the deduction, and in recent years the deduction reduced tentative AMTI by about 15 percent.

**Table II.22: Percentage of AMT Payers With Deduction for AMT NOL**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Percentage of AMT payers with AMT NOL deduction | 36 | 37 | 33 | 33 | 30 | 32 |
| Percentage of AMT payers with no AMT NOL deduction | 64 | 63 | 67 | 67 | 70 | 68 |
| Overall reduction in AMTI from AMT NOL deduction | 36 | 34 | 31 | 13 | 16 | 17 |

Source: GAO calculations based on IRS Statistics of Income data.

To determine whether corporations were constrained by the 90-percent net operating loss limit, we calculated the percentage reduction in AMTI for AMT payers who had a deduction for AMT net operating losses. Table II.23 shows that a significant percentage of AMT payers with NOL deductions may have been constrained by the limitation.

**Table II.23: Percentage of AMT Payers With AMT NOL Deductions by Size of AMT NOL Deduction Relative to AMTI Before Losses**

| Percentage reduction in AMTI from AMT NOL | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| 90 percent (at limit) | 65 | 60 | 62 | 56 | 55 | 59 |
| Above 75 through 89 percent | 4 | 6 | 5 | 5 | 3 | 5 |
| Above 50 through 75 percent | 9 | 7 | 8 | 10 | 12 | 7 |
| Above 25 through 50 percent | 10 | 15 | 10 | 11 | 14 | 13 |
| 0 through 25 percent | 12 | 13 | 15 | 20 | 17 | 15 |

Note: Numbers may not add to 100 percent because of rounding.

Source: GAO calculations based on IRS Statistics of Income data.

AMT payers can also claim AMT foreign tax credits for foreign taxes paid. Table II.24 shows that despite the fact that very few AMT payers claimed an AMT FTC, the credit reduced AMT before credits to a large extent on an aggregate level.

**Table II.24: Percentage of AMT Payers Claiming AMT FTC and Resulting Reduction in Aggregate AMT**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Percent of AMT payers with AMT FTC | 2 | 2 | 3 | 3 | 3 | 3 |
| Percent of AMT payers without AMT FTC | 98 | 98 | 97 | 97 | 97 | 97 |
| Overall percentage reduction in AMT before credits from AMT FTC | 33 | 43 | 31 | 30 | 33 | 32 |

Source: GAO calculations based on IRS Statistics of Income data.

Table II.25 shows the distribution of the percentage reduction of AMT before credits for corporations that claimed AMT FTC. The credit cannot be used to reduce AMT before credits by more than 90 percent. The table indicates that between 25 and 37 percent of AMT FTC claimants may have been constrained by the limitation.

**Table II.25: Percentage of AMT Payers With AMT FTC by Size of AMT FTC Relative to AMT Before Credits**

| Percentage reduction in TAMT from AMT FTC | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| 90 percent (at limit) | 27 | 37 | 30 | 25 | 28 | 27 |
| Above 75 through 89 percent | 5 | 11 | 6 | 5 | 6 | 7 |
| Above 50 through 75 percent | 9 | 9 | 12 | 10 | 10 | 10 |
| Above 25 through 50 percent | 9 | 11 | 10 | 9 | 10 | 9 |
| 0 through 25 percent | 50 | 32 | 43 | 52 | 45 | 47 |

Note: Numbers may not add to 100 percent due to rounding.

Source: GAO calculations based on IRS Statistics of Income data.

Taxpayers who claim the AMT NOL deduction and/or AMT FTC are also subject to an overall limit. The AMT NOL deduction and AMT FTC combined cannot reduce AMT liability by more than 90 percent. Few taxpayers claimed both NOL and FTC. Table II.26 shows the extent to which AMT payers reduced AMTI through the use of the credit and the deduction. It shows that the percent of firms that may have been constrained by the overall limitation varied, ranging from 29 percent in 1989 to 49 percent in 1992.

**Table II.26: Percentage of AMT Payers With AMT NOL and FTC by Size of AMT NOL and FTC Relative to AMTI**

| Percentage reduction in AMTI from AMT FTC and AMT NOL | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| 90 percent (at limit) | 33 | 42 | 29 | 31 | 41 | 49 |
| Above 75 through 89 percent | 10 | 15 | 10 | 14 | 9 | 7 |
| Above 50 through 75 percent | 23 | 18 | 32 | 16 | 13 | 12 |
| Above 25 through 50 percent | 19 | 13 | 8 | 13 | 10 | 10 |
| 0 through 25 percent | 15 | 12 | 21 | 26 | 28 | 23 |

Note: Numbers may not add to 100 percent due to rounding.

Source: GAO calculations based on IRS Statistics of Income data.

# Has AMT Achieved Its Goals?

According to the legislative history, the goals of AMT are to ensure that taxpayers with substantial economic income pay some tax, and to ensure that taxpayers with positive book income pay tax in the year of positive income.

## Is AMT Designed to Tax Economic Income?

Because we are not aware of the existence of an agreed-upon, detailed definition of economic income for corporations, we compared AMT to the proposals made by the Department of the Treasury in November 1984.[1] The Treasury proposals were designed to tax the real economic income of individuals and businesses, both corporate and noncorporate. We also compared the AMT provisions to the Joint Committee on Taxation's list of corporate tax expenditures, which are generally preferences and exclusions in the regular tax that deviate from a tax on economic income. The Treasury proposals provide a broad outline of a corporate tax based on economic income; the tax expenditure list goes into greater detail on particular tax code provisions.

Our comparisons showed that AMT moves the tax system closer to taxing economic income by including several tax preferences. In addition, firms paying AMT will have depreciation deductions that more closely match economic depreciation than do depreciation deductions under the regular tax if inflation rates are low. However, if inflation is moderate or high, depreciation deductions under AMT can be less generous than estimates of economic depreciation would dictate, leading to an overstatement of economic income. In times of moderate or high inflation, the overstatement of income due to the depreciation provisions may indirectly reduce the understatement of income that occurs when corporations deduct nominal, rather than inflation-adjusted, interest costs on debt incurred to finance investments. However, such indirect effects would not apply to investments financed by equity.

### Treasury Proposal

Treasury proposed three major structural changes to the corporate tax in order to tax economic income.

- First, it proposed that the double taxation of dividends be reduced. Under the regular corporate tax, dividends are taxed when received by shareholders but are not deducted by the corporation when paid. In

[1]Tax Reform for Fairness, Simplicity, and Economic Growth (Washington, D.C.: U.S. Department of the Treasury, November 1984).

contrast, interest paid is taxed when received by bondholders and is deducted by the corporation.

- Second, Treasury proposed that capital assets, inventories, and interest paid be indexed to inflation.
- Third, Treasury recommended that depreciation schedules be adjusted to more closely match estimates of economic depreciation. Economic depreciation is the reduction in the market value of a particular asset over a year. If the tax provisions for depreciation deductions matched economic depreciation, businesses would deduct the actual reduction in the value of their assets as a business cost each year.

Treasury maintained that these provisions and a reduction in the preferences and exclusions in the tax code would result in a tax more closely based on economic income. Using this proposal as a basis for comparison, we analyzed the tax base of AMT to judge whether AMT has moved the tax base closer to economic income.

First, AMT does not relieve the double taxation of dividends. The ACE adjustment further restricts the deductibility of dividends received by corporations and therefore moves the tax base further from a definition of economic income and closer to book income, reflecting another goal of AMT.

Second, AMT does nothing explicitly to adjust for inflation. Many items in the Treasury proposal related to the mismeasurement of income due to inflation. Inflation reduces the value of depreciation deductions because the amount of depreciation deducted reflects the historical cost of the asset when purchased, not its current replacement value. On the other hand, inflation increases the real value of the deduction for interest paid because interest costs unadjusted for inflation are deducted rather than the inflation-adjusted interest costs. However, the Tax Reform Act of 1986 did not include comprehensive indexing provisions.[2]

Third, AMT depreciation schedules are closer to economic income at 0 percent inflation, but not when the inflation rate is 3 percent or higher. The data in appendix II showed that the depreciation adjustment is a key component of AMT, responsible for $23 billion of AMTI and included on 87 percent of AMT returns in 1992. The question then is whether the AMT depreciation provisions are closer to economic depreciation than the

[2]For a discussion of plans for explicit indexing and the implicit indexing in the tax code, see Daniel Halperin and Eugene Steuerle, "Indexing the Tax System for Inflation," in Henry J. Aaron, Harvey Galper, and Joseph Pechman, eds., Uneasy Compromise: Problems of a Hybrid Income-Consumption Tax (Washington, D.C.: The Brookings Institution, 1988).

provisions under the regular tax. Under the current tax system, depreciation deductions are calculated using the historical cost of acquiring the asset. Because neither the regular tax nor the AMT depreciation schedules include adjustments for inflation, the value of these deductions erodes as the inflation rate increases. One justification for accelerating depreciation relative to economic depreciation is to offset the effects of inflation.

Table III.1 shows one set of estimates of the present value of depreciation deductions under the regular tax and AMT per dollar invested in 22 types of equipment and 6 types of structures, for different inflation rates. The table also shows estimates for the present value of economic depreciation for these asset classes. If the value for the regular tax or AMT for a particular asset is greater than that for economic depreciation, the tax schedules allow a more generous deduction than economic depreciation. If the values are smaller, the tax schedules allow for slower, less generous depreciation deductions.

For example, if a corporation purchases an automobile, it is entitled to depreciation deductions over the useful life that will eventually total the purchase price of the auto. However, since the deductions occur over time, they are worth less than the purchase price today. Table III.1 indicates that with no inflation, depreciation deductions under the regular tax today are worth 91 percent of the original investment, 89 percent under AMT depreciation, and 87 percent under economic depreciation. The table also shows the effects of inflation on depreciation deductions for regular tax and AMT; as inflation increases from 0 to 3 to 6 percent, the present value of depreciation deductions falls.[3]

[3]These estimates were provided by Jane Gravelle of the Congressional Research Service. Ms. Gravelle's estimates assumed a 5-percent real discount rate. The estimates of economic depreciation are based on Charles R. Hulten and Frank Wykoff, "The Measurement of Economic Depreciation," in Charles R. Hulten, editor, Depreciation, Inflation, and the Taxation of Income from Capital (Washington, D.C.: Urban Institute Press, 1981).

**Table III.1: Present Value of Depreciation Under Regular Tax, AMT, and Economic Depreciation**

| | Regular tax depreciation at different inflation levels | | | AMT depreciation at different inflation levels | | | |
|---|---|---|---|---|---|---|---|
| | 0% | 3% | 6% | 0% | 3% | 6% | Economic |
| **Equipment** | | | | | | | |
| Autos | 0.9054 | 0.8553 | 0.8094 | 0.8928 | 0.8363 | 0.7849 | 0.8695 |
| Office | 0.9054 | 0.8553 | 0.8094 | 0.8928 | 0.8363 | 0.7849 | 0.8451 |
| Trucks | 0.9054 | 0.8553 | 0.8094 | 0.8831 | 0.8223 | 0.7676 | 0.8353 |
| Aircraft | 0.8748 | 0.8112 | 0.7547 | 0.7768 | 0.6768 | 0.5954 | 0.7842 |
| Construction machinery | 0.9054 | 0.8553 | 0.8094 | 0.8734 | 0.8083 | 0.7502 | 0.7749 |
| Mining and oil field | 0.8715 | 0.8065 | 0.749 | 0.7768 | 0.6768 | 0.5954 | 0.7674 |
| Service | 0.8715 | 0.8065 | 0.749 | 0.8186 | 0.7322 | 0.6589 | 0.7674 |
| Tractors | 0.8815 | 0.8206 | 0.7663 | 0.8204 | 0.7345 | 0.6616 | 0.7655 |
| Instruments | 0.8605 | 0.793 | 0.7346 | 0.7548 | 0.6485 | 0.564 | 0.7465 |
| Other | 0.8715 | 0.8065 | 0.749 | 0.7849 | 0.6873 | 0.6073 | 0.7465 |
| General industrial | 0.8597 | 0.7926 | 0.7348 | 0.7657 | 0.6624 | 0.5793 | 0.7101 |
| Metal working | 0.8765 | 0.8135 | 0.7576 | 0.8083 | 0.7138 | 0.6427 | 0.7101 |
| Electric transmission | 0.7829 | 0.693 | 0.6223 | 0.6913 | 0.5709 | 0.4812 | 0.7022 |
| Communication | 0.9054 | 0.8553 | 0.8094 | 0.8015 | 0.7092 | 0.6323 | 0.7022 |
| Other electric | 0.8715 | 0.8065 | 0.749 | 0.78 | 0.681 | 0.6001 | 0.7022 |
| Furniture and fixtures | 0.8715 | 0.8065 | 0.749 | 0.8015 | 0.7092 | 0.6323 | 0.6875 |
| Special industrial | 0.8798 | 0.8183 | 0.7634 | 0.7768 | 0.6768 | 0.5954 | 0.6734 |
| Agricultural | 0.8715 | 0.8065 | 0.749 | 0.8015 | 0.7092 | 0.6323 | 0.66 |
| Fabricated metals | 0.7873 | 0.6993 | 0.6301 | 0.694 | 0.5741 | 0.4845 | 0.6771 |
| Engines and turbines | 0.6732 | 0.5502 | 0.4605 | 0.6253 | 0.4958 | 0.4059 | 0.6111 |
| Ships and boats | 0.8242 | 0.7413 | 0.6714 | 0.682 | 0.5599 | 0.4699 | 0.6 |
| Railroad | 0.8715 | 0.8065 | 0.749 | 0.774 | 0.6685 | 0.5891 | 0.5689 |
| **Structures** | | | | | | | |
| Mining, oil, and gas | 0.8961 | 0.8889 | 0.8823 | 0.8782 | 0.8292 | 0.7903 | 0.57 |
| Other | 0.4398 | 0.3063 | 0.2299 | 0.4323 | 0.2997 | 0.2244 | 0.4758 |
| Industrial | 0.4398 | 0.3063 | 0.2299 | 0.4323 | 0.2997 | 0.2244 | 0.3975 |
| Public utility | 0.6732 | 0.5502 | 0.4605 | 0.5727 | 0.4401 | 0.3532 | 0.3872 |
| Commercial | 0.4398 | 0.3063 | 0.2299 | 0.4323 | 0.2997 | 0.2244 | 0.315 |
| Farm | 0.6564 | 0.5304 | 0.4401 | 0.5986 | 0.4671 | 0.3784 | 0.3215 |

Source: Jane Gravelle, Congressional Research Service.

Table III.2 shows the percentage difference between economic depreciation and regular and AMT depreciation. The table shows that the current regular tax depreciation schedule is generous relative to economic depreciation when there is no inflation and in most cases when inflation is 3 percent. AMT depreciation is closer to economic depreciation than regular depreciation at 0-percent inflation, but for 3- or 6-percent inflation it is less generous than economic depreciation for many assets. As the inflation rate rises to 6 percent, both regular tax and AMT would be less generous than economic depreciation would dictate for many assets.

**Table III.2: Percentage Difference in Present Value of Regular Tax and AMT Depreciation From Economic Depreciation**

| | Differences for regular tax depreciation schedules at different inflation levels | | | Differences for AMT depreciation schedules at different inflation levels | | |
|---|---|---|---|---|---|---|
| | 0% | 3% | 6% | 0% | 3% | 6% |
| **Equipment** | | | | | | |
| Autos | 4.1% | –1.6% | –6.9% | 2.7% | –3.8% | –9.7% |
| Office/computers | 7.1 | 1.2 | –4.2 | 4.9 | –1.7 | –7.8 |
| Trucks | 8.4 | 2.4 | –3.1 | 5.7 | –1.6 | –8.1 |
| Aircraft | 11.6 | 3.4 | –3.8 | –0.9 | –13.7 | –24.1 |
| Construction machinery | 16.8 | 10.4 | 4.5 | 12.7 | 4.3 | –3.2 |
| Mining/oil field | 13.6 | 5.1 | –2.4 | 1.2 | –11.8 | –22.4 |
| Service | 13.6 | 5.1 | –2.4 | 6.7 | –4.6 | –14.1 |
| Tractors | 15.2 | 7.2 | 0.1 | 7.2 | –4.0 | –13.6 |
| Instruments | 15.3 | 6.2 | –1.6 | 1.1 | –13.1 | –24.4 |
| Other | 16.7 | 8.0 | 0.3 | 5.1 | –7.9 | –18.6 |
| General industrial | 21.1 | 11.6 | 3.5 | 7.8 | –6.7 | –18.4 |
| Metal working | 23.4 | 14.6 | 6.7 | 13.8 | 0.5 | –9.5 |
| Electric transmission | 11.5 | –1.3 | –11.4 | –1.6 | 18.7 | –31.5 |
| Communication | 28.9 | 21.8 | 15.3 | 14.1 | 1.0 | –10.0 |
| Other electric | 24.1 | 14.9 | 6.7 | 11.1 | –3.0 | –14.5 |
| Furniture and fixtures | 26.8 | 17.3 | 8.9 | 16.6 | 3.2 | –8.0 |
| Special industrial | 30.7 | 21.5 | 13.4 | 15.4 | 0.5 | –11.6 |
| Agricultural | 32.0 | 22.2 | 13.5 | 21.4 | 7.5 | –4.2 |
| Fabricated metals | 16.3 | 3.3 | –6.9 | 2.5 | –15.2 | –28.4 |
| Engines and turbines | 10.2 | –10.0 | –24.6 | 2.3 | –18.9 | –33.6 |
| Ships and boats | 37.4 | 23.6 | 11.9 | 13.7 | –6.7 | –21.7 |
| Railroad | 53.2 | 41.8 | 31.7 | 36.1 | 17.5 | 3.6 |
| **Structures** | | | | | | |
| Mining, oil, and gas | 57.2 | 55.9 | 54.8 | 54.1 | 45.5 | 38.6 |
| Other | –7.6 | –35.6 | –51.7 | –9.1 | –37.0 | –52.8 |
| Industrial | 10.6 | –22.9 | –42.2 | 8.8 | –24.6 | –43.5 |
| Public utility | 73.9 | 42.1 | 18.9 | 47.9 | 13.7 | –8.8 |
| Commercial | 39.6 | –2.8 | –27.0 | 37.2 | –4.9 | –28.8 |
| Farm | 104.2 | 65.0 | 36.9 | 86.2 | 45.3 | 17.7 |

Source: GAO calculations based on data in table III.1.

To the extent that the AMT depreciation provisions are less generous than economic depreciation at moderate or high inflation rates, they tend to overstate economic income. However, as mentioned above, interest expenses are overstated in real terms when inflation exists. In this context, AMT may indirectly offset this inflation advantage for corporations with sizeable debt-financed capital investment and function as an implicit limit on interest deductions.

Whether such a limit is consistent with a tax on economic income depends largely on whether the personal tax is considered as well as the corporate tax. While corporations deduct interest unadjusted for inflation, this interest is in turn taxed when received at the individual level. Thus, income earned by the corporation is in fact taxed, but the revenue is received through the individual income tax rather than the corporate tax. However, many individuals are taxed at a rate lower than the corporate rate, so the deduction at the corporate level reduces taxes by an amount more than taxes are raised at the individual level. In addition, if the recipient of the interest is a pension fund, no tax is levied until the income is ultimately received by the pension recipient.[4]

For shareholders, corporate income can be received as dividends or as capital gains when stock shares are sold. Dividends are not deductible under the corporate tax, so there is no inflation-driven advantage at the corporation level for dividends. Capital gains are taxed on their amount unadjusted for inflation, overstating their real value, but have commonly been taxed under preferential rates and are taxed only when shares are sold (realized), allowing potentially substantial tax deferral. While AMT depreciation provisions may indirectly counteract inflation biases for debt at the corporate level, they do not do so for income received by shareholders.

## AMT Includes Several Tax Expenditures in Its Base

AMT adjustments and preferences include some, but not all, tax expenditures to broaden the tax base and move the tax base closer to economic income. Table III.3 shows corporate tax expenditures, as defined by the Joint Committee on Taxation, that have an estimated revenue loss of over $100 million in 1995. The table shows which tax

[4]For an analysis of limits on interest deductibility, see Alan J. Auerbach, "Should Interest Deductions Be Limited?" in Uneasy Compromise cited above.

expenditures are included directly in AMT as preferences or adjustments and which are included indirectly through the ACE adjustment.[5]

**Table III.3: AMT Tax Base and Corporate Tax Expenditures**

| Tax expenditure | AMT preference or adjustment | Included in ACE adjustment |
|---|---|---|
| Accelerated depreciation of equipment | yes | yes until 1993 |
| Accelerated depreciation of buildings other than rental housing | yes | yes until 1993 |
| Accelerated depreciation on rental housing | yes | yes until 1993 |
| Exclusion of interest on private purpose tax-exempt bonds | yes | yes |
| Exclusion of interest on governmental tax-exempt bonds | no | yes |
| Exclusion of income of foreign sales corporations | no | yes |
| Inventory property sales source rules exemption | no | no |
| Deferral of income from controlled foreign corporations | no | no |
| Interest allocation rules exception for certain nonfinancial corporations | no | no |
| Expensing of research and development expenditures | no | no |
| Expensing of exploration and development costs (fuels and nonfuel minerals) | yes | yes |
| Excess of percentage over cost depletion (fuels and nonfuel minerals) | yes | yes |
| Nonconventional fuel production credit | yes | no |
| Expensing of multiperiod timber growing costs | no | no |
| Investment tax credit for rehabilitation of historic structures | yes | no |
| Cash accounting for agriculture | no | no |
| Excess bad debt reserves of financial institutions | yes | no |
| Exclusion of interest on life insurance savings | no | yes |
| Small life insurance company taxable income adjustment | no | yes |
| Special treatment of life insurance company reserves | no | no |

(continued)

[5]In addition to other specific adjustments, if an amount is permanently excluded from gross income for purposes of determining AMTI, that amount must be included in ACE. This list was compiled using the specific adjustments for ACE in Internal Revenue Code section 56(g)(4) and by applying general earnings and profit principles. We consulted appropriate IRS officials in developing this table.

| Tax expenditure | AMT preference or adjustment | Included in ACE adjustment |
|---|---|---|
| Deduction of unpaid property loss reserves for property and casualty insurance companies | no | no |
| Special Blue Cross/Blue Shield deduction | yes | yes |
| Low-income housing credit | yes | no |
| Expensing of up to $17,500 of depreciable business property | no | yes |
| Reduced rates for first $10 million of corporate taxable income | no | no |
| Deferral of gain on nondealer installment sales | yes | yes |
| Completed contract rules | yes | yes |
| Deferral of gain on like-kind exchange | no | no |
| Exception from net operating loss limitations for corporations in bankruptcy proceedings | no | no |
| Deferral of gains from sale of broadcasting facilities to minority-owned businesses | no | no |
| Deferral of tax on capital construction funds of shipping companies | no | no |
| Regional economic development tax incentives: empowerment zones, enterprise communities, and Indian investment incentives | certain credits may be limited | certain expensing provisions may be limited |
| Deductibility of charitable contributions | certain contributions until 1993 | no |
| Employee stock option plan rules | no | no |
| Targeted jobs credit | yes | no |
| Possessions tax credit | no | no |

Note: This list of corporate tax expenditures follows Joint Committee on Taxation definitions for tax expenditures with more than $100 million in estimated revenue loss for 1995.

Source: GAO.

## Has AMT Ensured That Corporations With Positive Book Income in a Given Year Paid Some Tax in That Year?

AMT has generated tax from some firms with positive book income that otherwise would not have paid regular tax, but the percentage of firms with book income that paid tax in a given year was not changed very much by AMT. The data indicate that AMT has been successful in ensuring that large firms with book income paid some tax in that year. The corporations with book income that did not pay AMT or regular tax were generally small, and most had net income under $40,000, the AMT exemption amount. The large corporations that had book income but paid no tax were predominately mutual funds and investment companies, which generally pass all income to shareholders. Because of this feature of their business, these companies are exempt from the book income and ACE adjustments.[6]

### Differences Between Taxable Income and Financial Statement Income

The measurement of income for financial statement purposes and measurement for tax purposes differ in important ways. These differences make it possible for the same corporation to report positive income for financial statement purposes (book income) and a loss for tax purposes, or the opposite.

Some items of revenue and expense enter into the calculation of either taxable income or book income without ever affecting the other under current provisions of the tax laws. One example of a permanent difference between the two income measures is the treatment of income from tax-exempt securities. Corporations will include income from tax-exempt securities on their financial statements, but this income will never be included in taxable income. Another permanent difference is the treatment of dividends received by a corporation. For financial statements, dividends received are included in income. For tax purposes, only a fraction of dividends received are taxed. The purpose of the deduction for dividends received is to compensate in part for the lack of a deduction for dividends paid. Without a deduction for dividends received, income flowing through several corporations and ultimately to shareholders would be taxed at all levels.

Some items of revenue and expense are eventually recognized by both tax and financial accounting but are recognized at different times. Book income before tax can exceed taxable income if (1) revenue is recognized for accounting purposes prior to its recognition on the tax return, or (2) expenses are recognized for accounting purposes after their deduction on the tax return. On the other hand, book income before tax can be less than taxable income if (1) revenue is recognized for accounting purposes

[6]Internal Revenue Code sections 56(g)(6) and 56(f)(4).

after its inclusion on the tax return, or (2) expenses are recognized for accounting purposes prior to their deduction for tax purposes. In contrast to permanent differences, timing differences affect the timing of the recognition of income or expense; over time, the same amount of income and expense will be recognized for both book and tax purposes.

## How Different Are Tax and Book Income?

To show how book income and taxable income are related, we calculated the percentage of corporations in each of the classes in table III.4. The first row shows the percentage of corporations that reported a positive amount of book income and a positive amount of net income on their tax returns in a particular year. The middle two rows of the table show the percentage of corporations that differ in the sign of the two income measures in the year. The last row shows the percentage of corporations that reported losses on both their financial statements and for tax purposes in the year.

**Table III.4: Percentage of Corporations in Net Income (Taxable Income Before Loss and Dividend Deduction) and Book Income Categories**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Positive net income, positive book income | 50.8 | 48.4 | 47.6 | 46.2 | 45.4 | 46.1 |
| Positive net income, zero or negative book income | 6.4 | 7.0 | 6.9 | 6.9 | 6.6 | 7.8 |
| No net income, positive book income | 1.3 | 1.5 | 1.4 | 1.4 | 1.6 | 1.4 |
| No net income, zero or negative book income | 41.5 | 43.1 | 44.1 | 45.5 | 46.4 | 44.7 |

Source: GAO calculations based on IRS Statistics of Income data.

Table III.5 repeats this calculation after allowing for the deduction of dividends received and net operating losses from net income. The table shows that these two provisions have significant effects. In 1992, 13 percent of taxpayers with positive book income and positive current year net income reduced their current year taxable income to zero by using deductions for dividends received and prior year losses.

**Table III.5: Percentage of Corporations in Regular Taxable Income and Book Income Classes**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Positive regular taxable income, positive book income | 40.4 | 37.5 | 36.5 | 34.6 | 33.4 | 33.1 |
| Positive regular taxable income, no book income | 4.9 | 4.9 | 4.9 | 4.9 | 4.7 | 5.4 |
| No regular taxable income, positive book income | 11.7 | 12.4 | 12.5 | 13.1 | 13.6 | 14.4 |
| No regular taxable income, no book income | 43.0 | 45.2 | 46.1 | 47.5 | 48.4 | 47.1 |

Source: GAO calculations based on IRS Statistics of Income data.

Regular tax owed on taxable income is further reduced by any allowable credits. Table III.6 shows the percentage of corporations that have positive and zero regular tax liability while reporting positive or negative book income.[7]

**Table III.6: Percentage of Corporations With Regular Tax Payment, by Book Income Status**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Positive regular tax, positive book income | 37.1 | 35.7 | 35.2 | 33.6 | 32.6 | 32.4 |
| Positive regular tax, negative book income | 4.5 | 4.7 | 4.8 | 4.7 | 4.5 | 5.1 |
| Zero regular tax, positive book income | 15.0 | 14.2 | 13.8 | 14.0 | 14.4 | 15.2 |
| Zero regular tax, negative book income | 43.4 | 45.4 | 46.3 | 47.7 | 48.5 | 47.3 |

Source: GAO calculations based on IRS Statistics of Income data.

As one goal of AMT is to get taxpayers with positive book income in a given year to pay tax in that year, its design must "undo" many of the differences between regular tax income and book income. Many of the preference items and the adjustments serve this purpose, as do the book income and ACE adjustments.

[7]These figures will understate potential credit use in the absence of AMT. AMT limits the use of credits both by AMT payers and by non-AMT payers whose potential credit use would reduce regular tax below tentative AMT.

**Table III.7: Number of Corporations Paying Some and No Regular Tax and AMT, by Book Income Status, by Year**

Numbers in thousands

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| **Corporations with positive book income** | | | | | | |
| No regular tax, no AMT | 367 | 318 | 295 | 291 | 293 | 306 |
| No regular tax, some AMT | 6 | 9 | 10 | 10 | 9 | 10 |
| Some regular tax, no AMT | 912 | 811 | 763 | 702 | 670 | 661 |
| Some regular tax, some AMT | 9 | 13 | 12 | 17 | 16 | 14 |
| **Total** | **1,294** | **1,151** | **1,080** | **1,020** | **989** | **991** |
| **Corporations with negative book income** | | | | | | |
| No regular tax, no AMT | 1,077 | 1,046 | 1,018 | 1,017 | 1,018 | 984 |
| No regular tax, some AMT | 1 | 2 | 2 | 4 | 3 | 2 |
| Some regular tax, no AMT | 111 | 106 | 104 | 99 | 93 | 105 |
| Some regular tax, some AMT | 1 | 2 | 1 | 2 | 2 | 2 |
| **Total** | **1,190** | **1,156** | **1,125** | **1,122** | **1,116** | **1,093** |
| **Grand total** | **2,484** | **2,306** | **2,205** | **2,142** | **2,105** | **2,084** |

Note: Totals may not be the sum of the detailed numbers due to rounding.

Source: GAO calculations based on IRS Statistics of Income data.

## Many AMT Payers Did Not Owe Any Regular Tax

Table III.8 shows the percentage of AMT payers that also paid regular tax and the percentage that reported no regular tax liability. The percentages, which were consistent across time, show that about half of AMT payers owed regular tax as well as AMT. However, a significant percentage of AMT payers had no regular tax liability at the time they paid AMT.

**Table III.8: Percentage of Corporations Paying AMT by Regular Tax Status**

| Regular tax status | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Paid positive regular tax | 56 | 57 | 52 | 58 | 59 | 56 |
| Paid no regular tax | 44 | 43 | 48 | 42 | 41 | 44 |

Source: GAO calculations based on IRS Statistics of Income data.

Table III.9 examines the relationship between regular tax status and AMT payment in more detail. The table groups AMT taxpayers into four categories. The first category includes those taxpayers that had positive taxable income and paid some regular tax. The second category covers those taxpayers with positive net income but no regular tax; these

taxpayers had credits that could have eliminated all regular tax or sufficient NOL deductions to eliminate all taxable income. The third category is for those taxpayers with a current year regular tax loss. A small number of AMT payers paid regular tax but did not fall into one of the other categories.

The table shows that the majority of AMT payers had positive taxable income and also owed regular tax. Fewer AMT payers had positive taxable income and owed no regular tax. A large percentage of AMT payers owed no regular tax due to net operating loss deduction carryforwards. A smaller but significant percentage of AMT payers had a current year regular tax loss but had positive AMTI leading to an AMT liability.

**Table III.9: Percentage of AMT Payers by Regular Tax Status and Net Income Status**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Positive regular tax, positive net income | 56 | 57 | 52 | 58 | 59 | 56 |
| Zero regular tax, positive net income | 30 | 29 | 31 | 27 | 27 | 33 |
| Zero regular tax, negative net income | 14 | 14 | 17 | 15 | 14 | 11 |
| Positive regular tax, negative net income | 0 | 0 | 1 | 1 | 1 | 1 |

Source: GAO calculations based on IRS Statistics of Income data.

Table III.10 shows the share of AMT liability that is raised from each of the groups shown in table III.9.

**Table III.10: Percentage of AMT Liability by Regular Tax Status and Net Income Status**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Positive regular tax, positive net income | 54 | 46 | 55 | 68 | 60 | 56 |
| Zero regular tax, positive net income | 28 | 35 | 31 | 18 | 25 | 34 |
| Zero regular tax, negative net income | 16 | 18 | 14 | 13 | 15 | 10 |
| Positive regular tax, negative net income | 1 | 0 | 0 | 0 | 0 | 0 |

Source: GAO calculations based on IRS Statistics of Income data.

## Most AMT Payers Had Positive Book Income

The legislative history of AMT indicates that Congress was concerned that confidence in the tax system could be undermined if corporations that

reported significant income on their books paid no tax. Table III.11 shows that most AMT payers had positive book income, as might be expected because of the large percentage of AMT returns that included the book income and ACE adjustments. However, a significant percentage of AMT payers had negative book income.

**Table III.11: Percentage of AMT-Paying Corporations by Book Income Status**

| Book income status | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Positive book income | 88 | 86 | 87 | 82 | 83 | 85 |
| Zero or negative book income | 12 | 14 | 13 | 18 | 17 | 15 |

Source: GAO calculations based on IRS Statistics of Income data.

To determine whether AMT significantly reduced the number of taxpayers that reported positive income and paid no tax, we calculated the percentage of taxpayers with positive book income that paid AMT and had no regular tax liability. Table II.12 shows the tax status of those corporations that reported positive book income. Most taxpayers with positive amounts of book income paid regular tax. AMT had a very small effect on the overall percentage.

**Table III.12: Percentage of Taxpayers With Positive Book Income by Tax Status**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Paid regular tax only | 70 | 70 | 71 | 69 | 68 | 67 |
| Paid regular tax and AMT | 1 | 1 | 1 | 2 | 2 | 1 |
| Paid AMT only | 0 | 1 | 1 | 1 | 1 | 1 |
| Paid no tax | 28 | 28 | 27 | 29 | 30 | 31 |

Source: GAO calculations based on IRS Statistics of Income data.

However, AMT raised a significant amount of revenue from firms that reported book income and did not pay regular tax. Table III.13 shows the percentage of total AMT liability paid by corporations according to their regular tax and book income situation. Corporations with positive book income and no regular tax liability paid a significant portion of AMT.

**Table III.13: Percentage of AMT Liability by Regular Tax and Book Income Status**

| AMT payers: regular tax and book income status | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Also paid regular tax, positive book income | 54 | 45 | 52 | 56 | 52 | 45 |
| Also paid regular tax, negative book income | 2 | 2 | 3 | 13 | 8 | 11 |
| Paid AMT only, positive book income | 41 | 47 | 39 | 23 | 28 | 36 |
| Paid AMT only, negative book income | 4 | 6 | 6 | 8 | 12 | 8 |

Source: GAO calculations based on IRS Statistics of Income data.

## Why Did Companies With Positive Book Income Not Pay AMT?

To determine why AMT had not forced all corporations with positive book income to pay some tax, we analyzed the information that was available for these corporations from their regular tax returns. The IRS database that we used had little AMT information for non-AMT payers. In particular, small taxpayers who qualify for the exemption are not required to file a Form 4626, so IRS does not have AMT information for these taxpayers. Without a 4626, we could not completely identify the reasons why firms would not be paying AMT. However, we were able to characterize these firms by their regular tax returns.

- About 98 percent of the corporations with positive book income and no tax payment were relatively small, having less than $10 million in assets.
- About 85 percent had less than $40,000 in net income. Thus, it is likely that they would qualify for the AMT exemption.
- Most firms with $1 billion or more in assets were regulated investment companies (RIC) and real estate investment trusts (REIT), which are technically subject to AMT but are exempt from the book income and ACE adjustments. (See table III.14.)

**Table III.14: Characteristics of Corporations With Positive Book Income Paying No Regular Tax or AMT**

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|
| Percentage of corporations with less than $40,000 in net income | 85.9 | 84.9 | 85.3 | 86.3 | 86.5 | 86.7 |
| Percentage of corporations with less than $10 million in assets | 98.3 | 98.1 | 97.9 | 98.0 | 97.7 | 97.5 |
| Percentage of corporations with $1 billion or more in assets that are RICs or REITs | 85.6 | 96.6 | 96.7 | 97.2 | 96.3 | 97.8 |

Source: GAO calculations based on IRS Statistics of Income data.

# Has AMT Affected Corporate Investment?

Studies and comments by economists on the potential effect of AMT on investment have considered two ways in which AMT might affect investment. First, by increasing the average tax rate, AMT could reduce cash flow, discouraging investment. Second, AMT could change the marginal tax rate, which is the additional tax owed from an additional dollar of income. If AMT changed the incentives to invest, this in turn could lead to changes in investment. The material that follows summarizes the results and ideas of the various studies and comments.

## Effects of AMT on Cash Flow and Investment

Corporations can finance investment through internal funds (retained earnings or profits) or external funds, such as debt or new stock issues. If a corporation must pay significantly higher costs for borrowed funds or newly issued stock than the opportunity cost of retained earnings, investment could be sensitive to the current profitability or cash-flow position of the firm.[1] In circumstances where securities markets do not have the same information as managers in evaluating the potential investments of the firm, firms that must borrow from the markets may have to pay a premium for funds. If such premiums had to be paid, potential investments that could be profitable if the firm had sufficient cash flow might not be profitable, and investment could be curtailed or delayed until sufficient cash flow was available.

A number of recent studies have found significant effects of cash flow on investment, and some authors have concluded that some corporations find external funds significantly more expensive than internal funds. These studies have concluded that this is more likely to be the case for smaller firms, firms that pay relatively small amounts of dividends, firms without access to the corporate bond market, and firms that cannot use working capital to smooth investment spending over time.[2]

It is not clear how many AMT payers meet these conditions. No study has directly tested the extent to which such cash-flow constraints affect

[1]Opportunity cost in this circumstance is the amount that could be earned in the most profitable alternative investment. For example, the corporation could invest its retained earnings in government bonds and earn a relatively safe return.

[2]Recent studies include R. Glenn Hubbard, Anil K. Kashyap, and Toni M. Whited, Internal Finance and Firm Investment, National Bureau of Economic Research Working Paper 4392, June 1993; Toni M. Whited, "Debt, Liquidity Constraints, and Corporate Investment: Evidence from Panel Data," The Journal of Finance, XLVII:4 (1992); Stephen D. Oliner and Glenn D. Rudebusch, "Sources of the Financing Hierarchy for Business Investment," The Review of Economics and Statistics, 1992; Steven M. Fazzari and Bruce C. Petersen, "Working Capital and Fixed Investment: New Evidence on Financing Constraints," Rand Journal of Economics, 24:3 (Autumn 1993); and Steven D. Oliver and Glenn D. Rudebusch, Is There a Broad Credit Channel for Monetary Policy?, Board of Governors of the Federal Reserve System Working Paper 146, January 1994.

corporations that paid AMT.[3] The tax return data we used were limited in their ability to directly test many of these factors. However, the data did show that most AMT is paid by relatively large corporations. To the extent that investment by large corporations is less dependent on current cash flow than is the case for small corporations, the effect of the AMT on investment would be limited. In addition, as AMT credits are reclaimed in the future, cash flow would increase at that time, possibly increasing investment.

## Taxes Affect Investment Incentives

Several studies have analyzed the effects of AMT on incentives to invest. These studies have attempted to measure the extent to which AMT changes incentives to invest. While AMT increases the average tax rate paid by corporations, it may increase or decrease the marginal tax rate on new investment.

A common approach to analyzing the effects of taxes on investment has been to calculate the extent that taxes increase the before-tax profit rate or pretax rate of return needed to generate a given after-tax profit or return on investment. Under these analyses, business income taxes have been found to effectively raise the price of investments. If investments cost more than they otherwise would, only those that earn relatively high profits over time will be worthwhile. One advantage to this type of analysis is that it can include all the features of the tax code that may affect the after-tax return to an investment.

Researchers have studied how several business income tax provisions may affect incentives to invest. In particular, the incentives to invest can be affected through the tax rate, depreciation provisions, the deductibility or nondeductibility of interest payments and dividends, whether inflation is accounted for, loss provisions, and credits for certain types of investment. First, the lower the statutory business tax rate is, the lower is the cost of capital investments, and the greater is the incentive to invest. Second, the more accelerated the depreciation method and shorter the useful lives of business assets are, the lower is the cost of investment. For example, an immediate deduction of all investment spending (expensing) reduces the tax cost on investment to zero. Third, inflation can reduce the value of deductions that are based on historical cost. Indexing provisions would

[3]Prakken discussed the potential effects of AMT on investment via cash flow. He concluded that AMT is more likely to have a significant effect on investment through its effect on the cost of capital. See Joel L. Prakken, "Investment, Economic Growth and the Corporate Alternative Minimum Tax," in Tax Policy for Economic Growth in the 1990s, American Council for Capital Formation Center for Policy Research.

lower the cost of capital in times of inflation. Fourth, the deductibility or nondeductibility of sources of finance and the tax rates that apply to those sources in the individual income tax can affect the cost of investment. Fifth, the deductibility of prior-year losses from taxable income and whether such loss carryforwards earn interest to preserve their present value can affect the cost of capital. Finally, if tax credits are allowed for certain types of investment, the cost of those investments falls.

As shown in table IV.1, relative to the regular tax, AMT has a lower rate, a generally slower depreciation schedule, and additional limitations on credits and losses. Since the lower tax rate by itself would lower the cost of investment but the other two features would raise the cost of investment, it is not immediately clear whether the cost of investment would rise or fall. An evaluation of the effects of AMT must include all these features.

**Table IV.1: Major Tax Code Features Affecting Investment in Regular Tax and AMT**

| Item | Regular tax | AMT |
|---|---|---|
| Tax rate | 35 percent | 20 percent |
| Depreciation schedule | Accelerated relative to economic depreciation (with low to moderate inflation) | Slower method than regular tax depreciation, longer useful lives |
| Use of credits | Several credits can be used to reduce tax, subject to limits | Most credits cannot be used |
| Treatment of losses | Carryforward can reduce taxable income to zero | Can reduce AMTI by at most 90 percent |

Source: Internal Revenue Code.

## Studies of AMT and Incentives to Invest

The studies we reviewed found that relative to the regular tax, investment incentives can be increased or reduced by AMT, depending on several factors. In general, these studies focused on investment incentives for small projects that would not by themselves affect whether the corporation would be subject to the regular tax or AMT.

For firms permanently paying AMT, the incentives to invest were found to be greater under AMT than the regular tax for investments financed by equity. In this case, the value of the lower tax rate more than offset slower depreciation deductions, so the effective tax rate was lower.

On the other hand, investment incentives can be lower under AMT relative to the regular tax for debt-financed investments.[4] Since interest is deductible under both AMT and the regular tax, the higher rate under the regular tax is a relative advantage because a dollar of interest payments will reduce taxes by a greater amount if the tax rate is higher. Since the regular tax code favors debt-financed over equity-financed investment at the corporate level because interest payments are deductible and dividends are not, AMT may reduce this distortion.

For investments financed with a mixture of debt and equity, the effective rate under AMT can be higher or lower depending on the amount of debt used. For an investment with the average mix of approximately one-third debt, effective rates are higher under the regular tax than under AMT.[5]

The results cited above hold for firms that are either permanently paying only the regular tax or paying AMT. However, the effect of AMT on investment incentives is further complicated if firms switch back and forth from AMT status to regular tax status. In this case, the cost of capital will depend on the timing of investment relative to the time during which AMT is paid and the length of time the firm pays AMT and recovers its credits, as well as the source of financing for the investment. Investment incentives will depend on the timing of investment because of the differences in the depreciation rules and the tax rates between the two systems. If depreciation deductions are taken when the firm is paying the regular tax, and income from the investment is received when the firm is paying AMT, the cost of investment is relatively low. If depreciation deductions are taken when the firm is paying AMT and income is taxed at the higher regular tax rate, the cost of investment is higher.[6]

A recent study also showed that AMT may change the incentives to invest in the United States or abroad. Since the AMT tax rate is lower than the regular tax rate, firms operating abroad may find that AMT status presents an opportunity to bring profits back to the United States and pay tax at a

[4]Prakken computed changes in the cost of capital from AMT using a leverage ratio of 62 percent as a base case. He also showed how changes in the cost of capital are dependent on the amount of debt used in financing investment. See Joel Prakken, "Investment, Economic Growth and the Corporate Alternative Minimum Tax."

[5]A mix of one-third debt was described as typical by Gravelle and by Bernheim. See Jane G. Gravelle, The Economic Effects of Taxing Capital Income (Cambridge, MA: The MIT Press, 1994), chapter 7; and B. Douglas Bernheim, "Incentive Effects of the Corporate Alternative Minimum Tax," in Lawrence H. Summers, ed., Tax Policy and the Economy, National Bureau of Economic Research (Cambridge, MA: The MIT Press, 1989).

[6]Andrew Lyon, "Investment Incentives Under the Alternative Minimum Tax," National Tax Journal, XLIII:4 (1990), pp. 451–65. The article is also summarized in Gravelle (1994), pp. 170-71.

temporarily lower tax rate. If these additional profits are reinvested here, domestic investment may rise. On the other hand, the depreciation schedule under AMT is closer to that for foreign investment under the regular tax, narrowing the differential that exists under the regular tax. AMT may thus reduce the relative disincentive to invest abroad, encouraging more investment abroad than otherwise.[7]

The literature does not cover the effect of AMT on investment when an investment is large enough to potentially change the tax status of the firm from the regular tax to AMT or from a current net operating loss position to AMT. Some studies have examined investment incentives when corporations can be either in a net operating loss carryforward position or paying the regular tax. In this case, the size of net operating loss outstanding has an effect on incentives; a firm with a relatively small NOL carryforward is penalized for investment because of the loss of the time value of money on the loss. However, a large NOL carryforward could indicate that the firm will effectively be tax-exempt for the foreseeable future and investment may be encouraged. It is not clear at this time how AMT might change these incentives.[8]

## How Sensitive Is Investment to the Price or Cost of Capital?

The effect of AMT on investment is further complicated by the lack of consensus on the size of the effect on investment of changes in the incentive to invest. Analysts have widely differing views on how responsive investment is to changes in tax rules. Some studies have concluded that investment is very responsive to changes in tax incentives, while others have found small effects. The difficulty stems from a lack of consensus on the nontax determinants of investment; without a clear model of the other determinants of investment, it is difficult to isolate the effects of taxes, holding other factors fixed.

In particular, it has been difficult for investment models to isolate the effects of output and price. If output is the major determinant of investment as firms add capacity when output is growing, then investment may be relatively insensitive to the price of capital goods. If investment is

[7]Andrew Lyon and Gerald Silverstein, The Alternative Minimum Tax and the Behavior of Multinational Corporations, National Bureau of Economic Research Working Paper 4783, June 1994.

[8]See Rosanne Altshuler, "Asymmetric Taxation and Investment Incentives," Proceedings of the Annual Conference of the National Tax Association, 1988, and Alan J. Auerbach, "The Dynamic Effects of Tax Law Asymmetries," Review of Economic Studies, LIII (1986).

sensitive to the price of capital goods, then taxes, including AMT, may have an important effect on investment by changing the effective price.[9]

[9]For a survey of recent literature on investment, see Robert S. Chirinko, "Business Fixed Investment Spending: Modeling Strategies, Empirical Results, and Policy Implications," Journal of Economic Literature, XXXI (1993), pp. 1875-1911. Chirinko concluded that the effect of prices on investment is small. For an opposite view, see Martin Feldstein and Joosung Jun, "The Effects of Tax Rules on Nonresidential Fixed Investment: Some Preliminary Evidence from the 1980s," in Martin Feldstein, ed., The Effects of Taxation on Capital Accumulation (University of Chicago Press, 1987).

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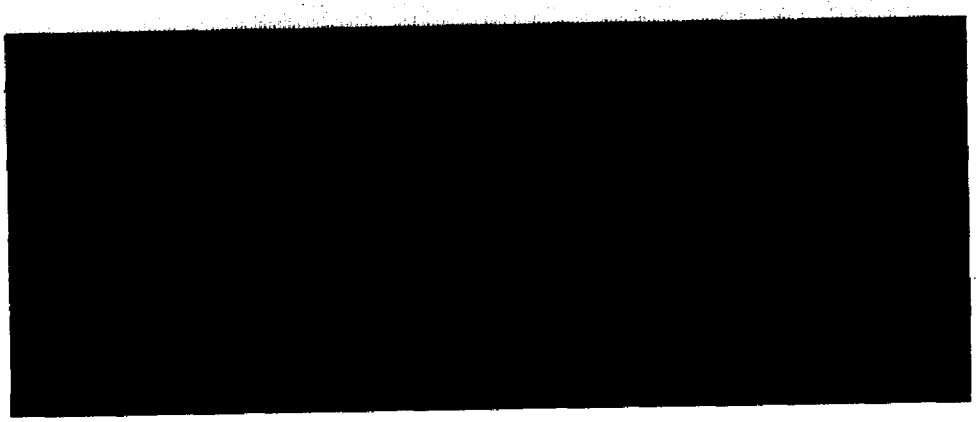
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