

*Corporate Tax Avoidance and the Properties of Corporate Earnings*

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***Abstract** - This paper addresses the measurement differences between financial and tax reporting with an emphasis on the role each can have in gaining a better understanding of the other. The additional information provided by book-tax reporting differences can help tax administrators in determining compliance with the tax code, and assist investors in understanding the properties of reported corporate earnings. The paper also provides updated information on the magnitude and sources of book-tax reporting differences for U.S. corporations.*

## INTRODUCTION

Differences in the accounting rules for financial (book) and tax reporting purposes can lead to differences in the amount of income reported to shareholders and tax authorities. While book-tax reporting differences have existed since the beginning of the US tax code, they have recently been used to address both tax and non-tax issues. The U.S. Department of the Treasury White Paper (1999) identified large, and increasing, book-tax income differences as evidence supporting an increase in tax shelter activities. At the same time, accounting researchers have used estimates of book-tax differences to assess the properties of corporate earnings.

The purpose of this paper is to briefly review the sources of book-tax differences and provide an overview of the role book-tax differences play in informing both tax administrators and outside investors in the firm. Data on the trend in aggregate book-tax differences are also reported, along with some detail of the sources of the differences. The implications of the data for tax administration and accounting researchers are then discussed.

## BOOK - TAX DIFFERENCES

Book - tax differences in the amount of income reported by a corporation are caused by differences in the concepts and rules underlying each reporting system. Companies that issue publicly-traded equity or debt securities are required by the Securities and Exchange Commission (SEC) to file audited financial statements. The target audience of these statements are investors and others who need information to make decisions about the company, including whether to invest in the company's equity or debt. The financial statements of publicly-traded firms must follow Generally Accepted Accounting Principles (GAAP) which are governed by the SEC and include the pronouncements of the Financial Accounting Standards Board (FASB). A separate set of rules are followed for tax reporting. Tax accounting is used to administer the U.S. tax laws, with the IRS the primary audience for tax filings. In contrast to financial reporting, tax accounting rules generally leave far less, if any, discretion to the preparer over key issues of revenue or expense recognition.

Differences in the amount of income reported for tax and financial purposes can arise from two types of measurement differences in the accounting systems: temporary and permanent. Temporary differences occur when both tax and financial reporting recognize the same total amount of income or expense over different time periods or in different patterns. For example, since tax depreciation is usually more accelerated than depreciation for financial reporting purposes it will generate a larger tax deduction in the near term relative to the depreciation expense recorded for financial reporting purposes. Permanent differences occur when income or an expense is recognized under one system but never under the other. An

example is tax exempt interest on municipal bonds, which is included in book income but not in the determination of tax net income.<sup>1</sup>

## Book-Tax Differences and the Tax System

From a tax administration perspective, book income provides a separate measure of the income and expense items that can be compared to the values reported on the tax return.<sup>2</sup> Large differences can help the auditor focus her attention on particular transactions worthy of additional scrutiny. Mills (1998), for example, shows that proposed audit adjustments are positively related to the book-tax difference reported by the firm.

Recent attention to corporate tax shelters has highlighted the role shelters play in altering reporting patterns.<sup>3</sup> The goal of a tax shelter is to reduce taxable income, often by accelerating deductions or creating losses. A constraint on tax planning, however, is the effect that reductions in taxable income may have on reported profits: while a reduction in taxable income is viewed as desirable, reductions in book income reduce the reported profitability of the firm.<sup>4</sup> The ideal tax

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<sup>1</sup>Discussions of book-tax accounting differences can be found as far back as Smith and Butters (1949). Recent papers examining the source and magnitude of book-tax differences, and the use of financial reporting information to infer tax information, include Dworin (1983), Plesko (2000), Manzon and Plesko (2002), Hanlon (2003b), Knott and Rosenfeld (2003a, 2003b), and McGill and Outslay (2002, 2004).

<sup>2</sup>Under the Tax Reform Act of 1986, book income provided an explicit check on aggressive tax planning by entered into the determination of the alternative minimum tax. See Boynton et al (1992) for a discussion of the provision and its effects on financial reporting.

<sup>3</sup>The Joint Committee on Taxation (2003) report provides an in-depth analysis of Enron's tax avoidance strategies, including details of specific tax-motivated transactions.

<sup>4</sup>A separate set of transactions have been developed to increase book income without affecting taxable income. US Congress (2003) provides a detailed examination of four transactions used by Enron to increase the amount of earnings reported to shareholders.

shelter, therefore, reduces the amount of income reported to the fisc, without affecting the amount of income reported to shareholders, and creates a permanent rather than temporary difference (Weisbach, 2002).

### Book-Tax Differences and Financial Reporting

The separate set of rules for financial reporting should largely separate financial reporting decisions from tax strategies. US GAAP, however, requires firms to provide information about their current tax liabilities as well as differences in the amount of tax they pay because of temporary or permanent reporting differences. Under the Financial Accounting Standard Board's (1992) Statement of Financial Accounting Standards Number 109, corporations report a total amount of tax liability based upon current year financial reporting income, delineating the portion currently owed from that which is deferred due to differences in income and expense recognition. Deferred taxes, which can be either positive or negative, are recorded on the firm's balance sheet as either liabilities or assets. If the deferred portion is positive a deferred tax liability is created, representing the amount of taxes not paid on current financial statement income because temporary differences reduce taxable income below book income. This amount should be paid in the future when the temporary difference reverses. Since a permanent difference never reverses, it does not create a deferred tax asset or liability. Corporations account for permanent differences in a separate financial disclosure in the tax footnote of their financial statements.

Because information about the tax position of a firm is reported in its financial statements, estimates of taxable income, and the book-tax difference, can be made from publicly

available data.<sup>5</sup> Given a measure of income separate from that reported to shareholders, book-tax differences, and its components, have been used to address a number of accounting issues, such as the quality of accruals (Joos et al. 2002), tax shelters (Plesko, 2000b; Manzon and Plesko, 2002; Desai, 2003) the persistence of financial accounting earnings, (Hanlon, 2003a), earnings management (Phillips et al., 2003), and accounting conservatism (Watts, 2003).

### The Magnitude of Book-Tax Differences

The book-tax difference is calculated as the difference between pretax book income and tax net income. From tax returns, pretax book income is calculated from the schedule M-1 of the Form 1120 as the sum of line 1 (financial net income) and line 2 (federal income tax). Tax net income - which in contrast to financial net income is pretax - is defined as taxable income before net operating loss and special deductions (primarily the dividends received deduction), and reported on line 28 of the Form 1120.<sup>6</sup>

A report issued by the U.S. Treasury (1999) concerning corporate tax shelters and related testimony (Talisman, 2000) called attention to the increasing difference between book and tax net income during the 1990s. The Treasury results were later replicated with publicly available data (Plesko, 2000b; Manzon and Plesko, 2002; Desai, 2003), and extended with tabulated tax

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<sup>5</sup>The efficacy of these approaches has been the subject of debate. Direct comparisons of tax return information to tax liabilities reported to the government have been performed by Dworin (1985) and Plesko (2000a, 2003).

<sup>6</sup>The Schedule M-1 also reports an amount for tax net income, but it does not always correspond to the value reported on line 28. Boynton et al. (2003), Mills and Plesko (2003) and Boynton and Mills (2004) discuss problems associated with the current Schedule M-1.

return data (Mills et al., 2002; Plesko, 2002). The series of figures presented and discussed below provide updated information on trends in book-tax differences.

Figure 1 displays information for 1995 - 2001 on the magnitude of the aggregate book-tax difference, along with separate series for firms with net income (line 28 is positive) and without (line 28 is less than or equal to zero). The solid line, representing the book-tax difference for all corporations, shows the trend for increasing differences continued throughout the 1990s and peaked in 1999. Aggregate book-tax differences declined slightly in 2000, and, surprisingly, not only fell dramatically in 2001 but are estimated to be negative, indicating the amount of income reported to federal tax authorities exceeded the amount of income reported to shareholders.<sup>7</sup> The dashed and dotted lines show the book-tax difference conditional on the sign of the tax net income of the firm. While both series show a sharp decline in the book-tax difference for 2001, it is clear that the aggregate negative amount of book-tax differences is driven by loss firms. Although not shown in a separate figure, the patterns in Figure 1 remain if each series is scaled, with the book-tax difference peaking in 1999 at nearly 60 percent of tax net income.

INSERT FIGURE 1

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<sup>7</sup>Note that the amount of taxable income may be greater or smaller than the amount on line 28 since line 28 is further reduced by Net Operating Loss carry-forwards and Special Deductions. Offsetting this reduction, however, is the constraint that taxable income cannot be negative, so that a negative value for line 28 will be reported as zero taxable income.

To explore the sources of the changes in the book-tax difference Figure 2 removes the effects of depreciation differences, and separates the remaining difference into two components specifically delineated on the Schedule M-1. The first component represents revenue recognition differences, and is calculated as the amount of revenue recorded on the books during the year, but not included on the tax return, less the amount of revenue reported on the tax return not currently recorded on the books. It should be noted that in moving beyond Figure 1, the base for calculating the aggregate book-tax difference shifts from tax net income reported on line 28 to tax net income reported on the Schedule M-1. As Boynton et al (2003) and Boynton and Mills (2004) discuss, tax net income from the Schedule M-1 is not an appropriate reference point for aggregate book tax differences owing to inconsistent treatment of intercorporate dividends. However, revenue and expense line items within the Schedule M-1 are unaffected by this issue, and comparisons of revenue and expense differences can be made.

INSERT FIGURE 2

The aggregate result in Figure 2, which now excludes the effect of depreciation differences shows the same pattern as Figure 1, with book-tax differences reaching a peak in 1999 and falling dramatically thereafter. The decomposition of the total difference into its revenue and expense components yields some insight into the causes of the change. In every year before 2001, not only did the amount of revenue recognized for financial reporting purposes exceed that recorded for tax, but the amount of expense recognized for financial reporting purposes also exceeded that deducted for tax. Of the two, the amount of excess revenue recognized exceeded



the amount of excess expenses, leading to a positive book-tax income difference. From this data, it appears that the book-tax differences of the 1990s were primarily caused by excessive book revenue recognition as compared to tax reporting, a pattern particularly striking during 1998 - 2000. By contrast, in 2001, the amount of revenue reported for book purposes was slightly less than the amount recorded for tax. Further, the excess amount of book expenses dramatically increased, causing aggregate book-tax differences to be negative.

Figure 3 presents the same set of calculations as Figure 2, but is limited to firms with positive tax net income. Here, after removing the depreciation component, we observe the book-tax difference peaked one year later for this set of firms, in 2000. However, as in Figure 2, the book-tax difference is negative in 2001 with both revenue and expense differences causing the decline. A comparison of Figure 3 with Figure 4, which is limited to loss firms, shows that the large aggregate differences in book and taxable income appear to be primarily caused not just by the large increase in book-only expenses, but that the large increase in book-only expenses is attributable to firms reporting zero or negative tax net income.

INSERT FIGURES 3 AND 4

Unfortunately, the current M-1 provides a limited amount of detail in its reconciliation of book to tax net income, making specific analysis of the sources of the differences nearly impossible (Mills and Plesko, 2003). The IRS has proposed a significant expansion in the reconciliation schedule to address these deficiencies, beginning with tax year 2004. Boynton and Mills (2004) discuss the proposed form, the Schedule M-3, in a companion piece. Until the

reporting requirements change, it is only possible to speculate on the magnitude of specific factors affecting the difference and the potential effects certain types of transaction may have.

Tax shelters and stock options, both of which have received considerable attention, affect the book-tax difference the same way, by creating tax deductions without an equivalent charge against book income.<sup>8</sup> Both of these types of transactions appear in the data by decreasing the difference in reported expenses, and therefore increasing the book-tax difference. For example, if stock options were not deducted as compensation for tax purposes, the amount of excess book expense would increase, and a larger value would be subtracted from excess book revenue, reducing the book tax difference.

One particular accounting research question book-tax comparisons can be useful in examining is whether financial accounting has become more conservative over time. Reporting conservatism is characterized by the more timely recognition of expenses than revenues, and have the cumulative effect of understating the net assets of a firm (Watts, 2003). Examples of conservatism include the deferral of revenue or other gains until their collection and value is assured and the lower threshold for recognizing a liability. Watts (2003) argues that as the links between financial and tax reporting increase, conservatism will also increase as departures from conservatism will have unfavorable tax consequences.

If the conservatism hypothesis is correct, the increase in book-tax differences suggests that the link between tax and financial reporting may have declined, at least through tax year 2000, leading to less financial conservatism and a relative increase in the net asset value of firms.

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<sup>8</sup>The differential reporting of stock options and estimates of the magnitude are discussed in Hanlon and Shevlin (2002) and Jaquette et al. (2003).

Even absent knowledge of specific transactions, Figures 2 - 4 are informative in showing that a significant element in creating, and increasing, the book-tax difference during the 1990s was a (relatively) excessive amount of revenue recognized for financial reporting purposes. This conclusion is at least anecdotally supported by the US Senate's Permanent Subcommittee on Investigation's report on the role of financial institutions in designing transactions that created book-only revenue (US Congress, (2003).

While the result for 2001 suggests that financial and tax reporting became closer, and is reflective of increased conservatism, the available data is not sufficiently detailed to support, or reject, this conclusion. With respect to revenue recognition, 2001 appears to be more conservative for book than tax given the negative value shown in Figure 2. However, if the revenue differences in prior years, and in particular 1998 - 2000, were caused by revenue being improperly recognized early for financial reporting purposes, the reversal in 2001 may be caused by the tax rules requiring the revenue to be recognized at the appropriate, and later, time.

A similar uncertainty relates to the observed increase in book expenses relative to tax in 2001. If firms recognized liabilities, or wrote-down assets, sooner than allowed under tax rules, this may indicate financial accounting being conservative. Such a circumstance could arise if firms saw and incorporated bad economic news into their asset values in 2001, even though those events were not yet recognized for tax purposes because they will not materialize until a future period. However, if the increase in book expenses is due to the write-off of previously and improperly recognized revenue, it cannot be attributed to increasing conservatism.

## CONCLUSIONS

The growth in book-tax differences during the 1990s raised a number of questions about the behavior of corporations, both in how they approached tax planning, and as indicating changes in the pattern of financial reporting. With currently available data, the ability to parse out important sources of reporting differences is at a minimum difficult, and in some cases not possible. The implications of inadequate data go beyond affecting the ability of public policy and academic researchers to study the effects of taxation on the corporation, but may also hamper tax administration.

While current tax and financial reporting do not appear to provide adequate data, changes in reporting requirements give hope that data will be available in the future. The IRS has addressed this issue by making a specific proposal for increased reporting of the items that reconcile financial to taxable income. Such a change should not only benefit tax administration, but also allow researchers to better understand corporate responses to the tax code. Similar improvements could be made to publicly available information, and specific recommendations have already been made (Hanlon, 2003)

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Figure 1: Book-Tax Reporting Differences, 1995 - 2001

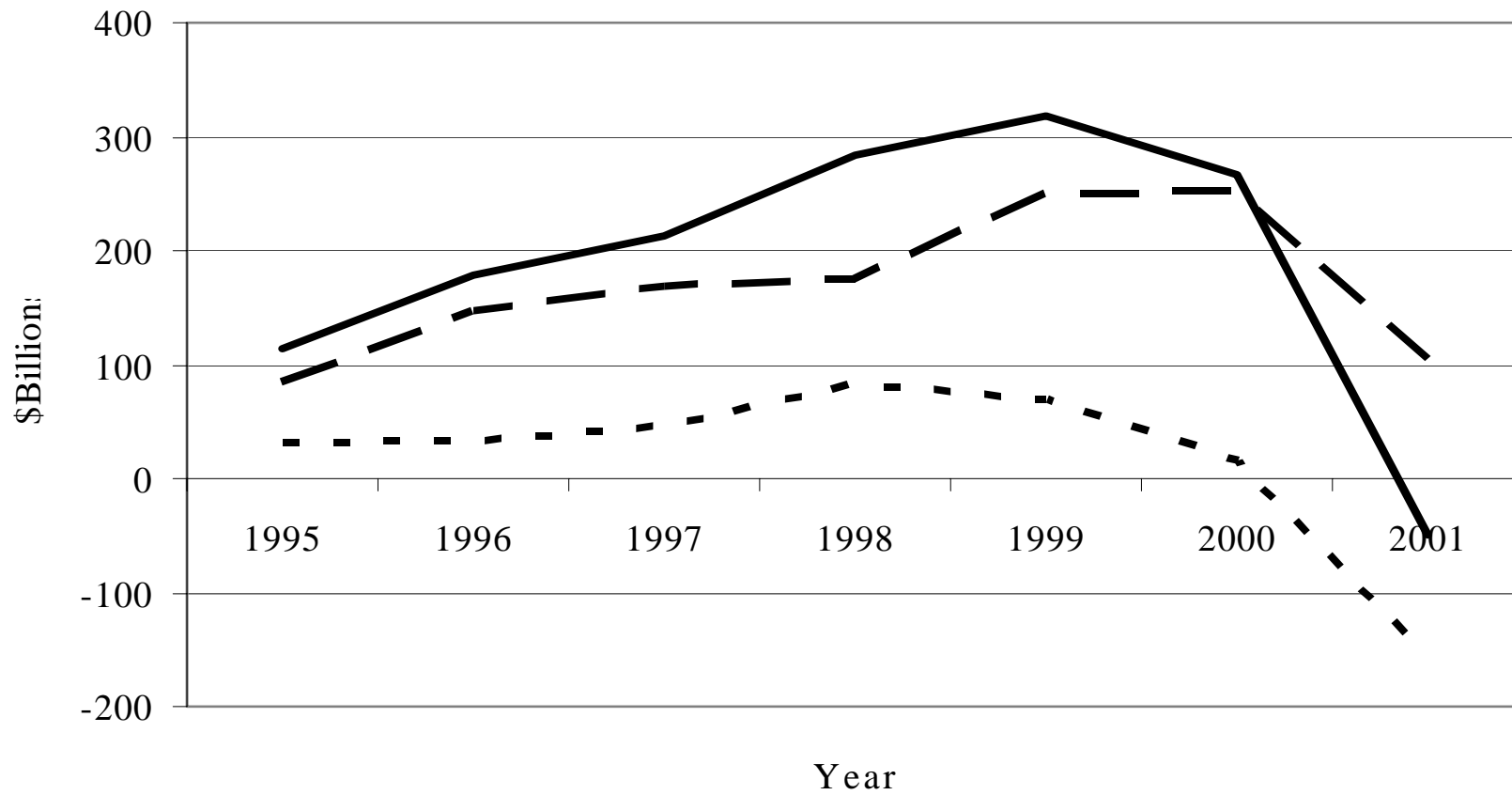


Figure 2: Non-Depreciation Book-Tax Differences

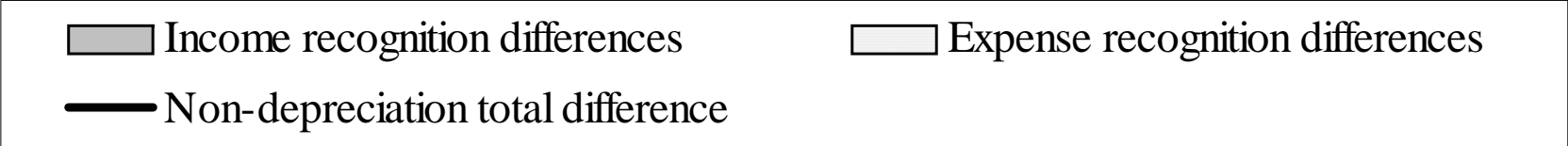
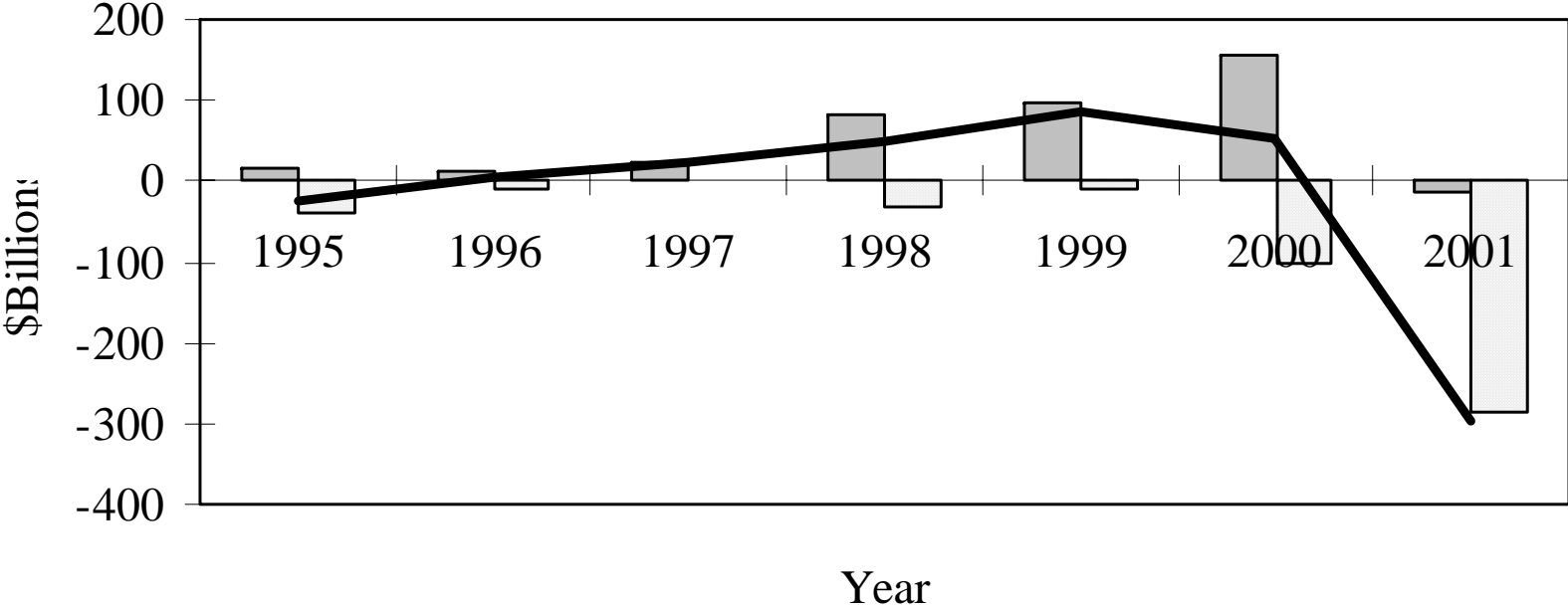
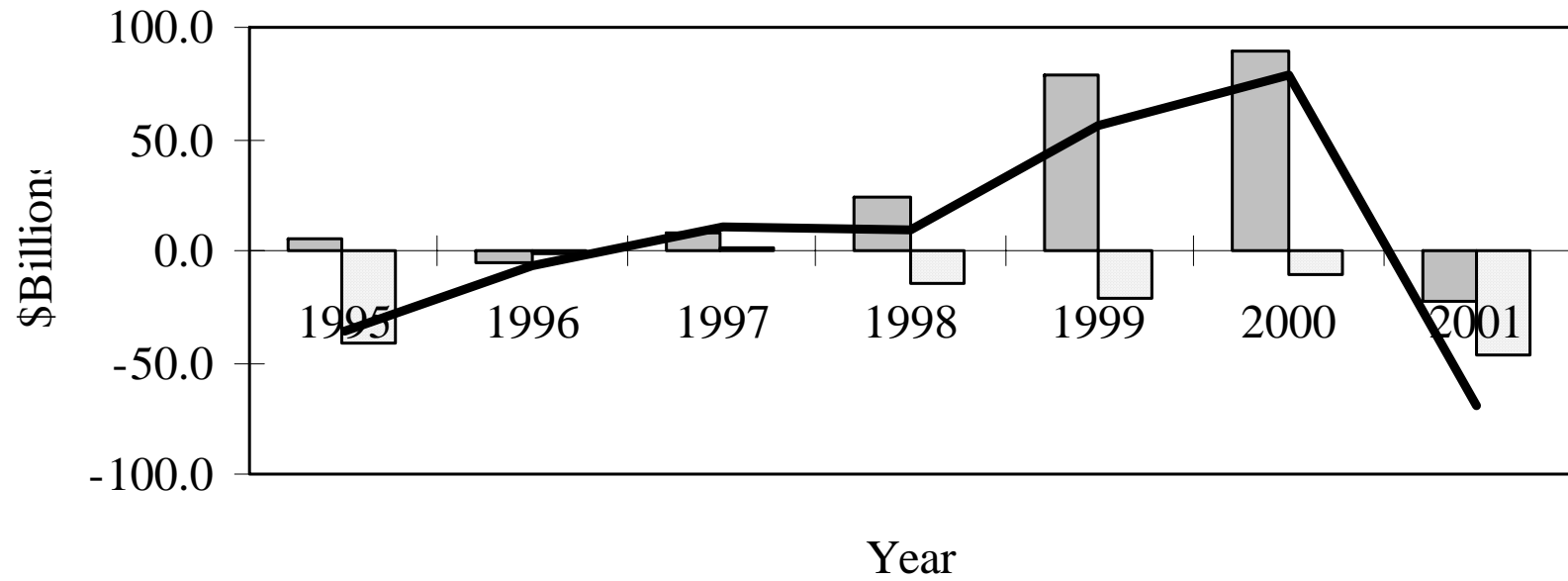


Figure 3: Non-Depreciation Book-Tax Differences:  
Firms with Net Income



Income recognition differences
  Expense recognition differences  
 Non-depreciation total difference

Figure 4: Non-Depreciation Book-Tax Differences:  
Firms with Non-Positive Net Income

