ANALYZING THE PROFIT-TAX RELATIONSHIP

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Readers of published income statements must be puzzled often by the relationships they observe between Federal income taxes and pretax accounting income. This paper attempts to shed some light on the problems of analyzing the profit-tax relationship by first outlining the current features of our tax law which, when coupled with accepted financial reporting practices, can produce unusually low effective tax percentages. Secondly, the paper discusses the relevant tax-reporting provisions contained in the most recent authoritative pronouncement of the Accounting Principles Board: Accounting Principles Board Opinion Number 11, *Accounting for Income Taxes.* Finally, the results of a study of the profit-tax relationship-based upon an analysis of 100 corporate annual reports are related.

The Tax Law

Tax law contains a number of features which, when combined with current financial reporting practices, can produce low effective rates of tax on pretax accounting income. These include: taxation of more than $25,000 of income at the "normal-tax" rate of only 22%; taxation of portions of pretax accounting income at the 30% capital gains rate (28% for 1970 and 25% before the Tax Reform Act of 1969); partial or complete exemption of some income from taxation; and other special tax-reducing features (statutory depletion, investment credits, etc.).

Income Taxed at the "Normal" Rate

The first $25,000 of a corporation's taxable profit is taxed at 22%, the "normal" rate. Taxable profit over $25,000 is taxed at 48%—the 22% normal rate plus the 26% "surtax." However, income statements in some corporate annual reports consolidate a number of separate corporate entities. If these separate legal entities file individual returns, then more than $25,000 of the pretax accounting income reported in the consolidated income statement may be taxed at the 22% normal rate. To illustrate, Exhibit 1 indicates an effective tax rate of 41.5% on $100,000 of taxable profit. If this $100,000 was divided equally among four separate corporations consolidated for external reporting but each filing its own tax return, the effective tax rate (excluding the tax surcharge) could be as low as 22%. Any division of profit other than equality would produce a higher effective tax rate.

Exhibit 1. Taxable Profit and Effective Tax Rates

Taxable profit	Effective tax rate
$ 25,000	22.0%
50,000	35.0
100,000	41.5
300,000	45.8
500,000	46.7
700,000	47.1
1,000,000	47.4
2,000,000	47.7

Since the first $25,000 of taxable profit is not subject to the 26% surtax, this amount is sometimes referred to as the "surtax exemption." If corporations are members of a controlled group, the election to take a surtax exemption for each corporation has carried with it an additional tax of 6% on the first $25,000 of taxable profit. Under the Tax Reform Act of 1969, the multiple surtax exemptions available to members of a controlled group will be phased out over a six-year period. (For a discussion of the new regulations concerning members of controlled groups, see [6, Section 401].) Thus, for the calendar year 1972, the original surtax exemption has been reduced to $12,500, with further reductions until the end of 1974.

Capital Gains Tax

If capital gains are included in pretax accounting income, they will cause the tax percentage to be lower than normal. For example, assume that XYZ Corporation has pretax accounting income of $100,000, which includes a $30,000 capital gain. The impact of the capital gains provision is revealed below:

	Assuming all income is taxable at ordinary rates	Subjecting capital gain of $30,000 to capital gain tax of 30%
Pretax accounting income	$100,000	$100,000
Tax	$ 41,500	$ 36,100
Tax percentage	41.5	36.1

If the capital gain is material in amount, it may be excluded from pretax accounting income. The associated tax effect will be deducted directly from the *separately stated* capital gain and therefore not influence the profit-tax relationship [2].

Partial and Complete Exemptions

Certain items included in pretax accounting income are either wholly or partially tax exempt. For example, interest earned on state or municipal obligations is wholly exempt from taxation. Such interest is, however, included in pretax *accounting* income. If the nontaxable income is material in amount, it may produce a low effective tax percentage.

Other items often included in pretax accounting income but partially or wholly exempt from taxation include equity in undistributed profits of unconsolidated subsidiaries, which is not considered income under current tax law, and dividends received. In general, 85% of such dividends received are not subject to taxation. This "dividends received deduction" will be raised to 100% over a six-year period for members of a controlled group [6, Section 401].

Other Tax-Reducing Provisions

For most of a 12-year period beginning with the Revenue Act of 1962 taxpayers could reduce their tax payments through the purchase of certain qualified assets. (The investment credit was suspended from October 10, 1966 to March 9, 1967; it was terminated as part of the *Tax Reform Act of 1969* until March 31, 1971 [6].) An investment tax credit amounted to as much as 7% of the cost of qualified assets. The investment tax credits earned in a given year are typically used, in whole or in part, to reduce the income tax provision (expense) for the year. This treatment explains a large part of the low effective tax rates in many published income statements.

Two principal accounting alternatives have been followed by companies reporting investment credit benefits: flow through and service-life [1]. Under "flow through" the *total* investment credit earned in a given year is allowed to increase earnings—usually by reducing the tax provisions. Under "service-life" the investment credit is amortized over the service-life of the property giving rise to the credit. Even during periods when the investment credit has been repealed, "service-life" companies are still amortizing the benefits of investment credits earned earlier.

Another tax-reducing feature is the depletion allowance granted companies which exploit natural resources. The best known is the oil depletion allowance which is now 22.0% of the income from the property. This allowance was 27.5% prior to its reduction as part of the *Tax Reform Act of 1969* [6, Section 501]. Depletion allowances frequently result in a larger depletion deduction in the income tax return than in the corporation's published income re-

port. Since for financial reporting purposes the depletion deduction is based upon the cost of the property, rather than upon the income from the property, taxable profit may be less than book income. This will produce a lower than normal relationship between income taxes and pretax accounting income.

Other special features affecting the profit-tax relationship are the inclusion of foreign subsidiary profits in consolidated reports which may not be subject to U.S. income taxes, the effects of operating loss carryovers, and the use by some regulated industries of flow-through tax accounting for depreciation "timing" differences.

Accounting Principles Board Opinion Number 11

The current official position of the AICPA on income tax accounting and reporting is presented in the Accounting Principles Board Opinion Number 11, *Accounting for Income Taxes* (referred to hereafter as APB No. 11). Much of the opinion deals with determination of the income tax accrual when the profit reported in the tax return (taxable profit) differs from the profit reported in the published income statement (pretax accounting income). Such profit differentials can be classified as either "timing" or "permanent" differences. Some specialized tax matters are also covered in Opinions 23 and 24 which are not discussed here [4, 5].

Timing Differences

A profit "timing" difference exists whenever an item of income or expense is recognized in an accounting period in the tax return different from that on the books, i.e., in the computation of pretax accounting income. Timing differences arise commonly from: (1) straight-line depreciation on the books and accelerated depreciation on the tax return; (2) capitalization and amortization of research expenditures on the books and current expensing of research expenditures on the tax return; and (3) the accrual method of accounting for installment sales on the books and the installment method of accounting for installment sales on the tax return.

In each situation above the total amount of income or expense recorded in computing taxable profit and pretax accounting income is the same over the long run. Only the *pattern* of income or expense recognition over time is different in the tax return versus the book income statement.

Where "timing" differences exist, APB No. 11 recommends that the tax accrual be based upon the pretax accounting income rather than taxable profit. To illustrate, assume that the ABC Company uses straight-line depreciation on the books and accelerated depreciation in the tax return. Its operating results for 19X1 are:

ABC Company

19X1

Pretax accounting income	$100,000
Taxable profit	60,000
Timing difference	$ 40,000

Assuming a straight 48% tax rate, a tax expense of $48,000 would be recorded using the procedure proposed in APB No. 11. If it were not used, a tax expense of $28,800 would be recorded. This latter alternative is referred to as "flow-through" tax accounting. The procedure recommended in APB No. 11, where the tax provision is based upon pretax accounting income, is commonly referred to as "interperiod income tax allocation."

Permanent Differences

A permanent difference between taxable profit and pretax accounting income may result from a variety of specific tax-law provisions and financial accounting practices. Permanent differences result because some items included in the computation of pretax accounting income will *never* be included in the determination of taxable profit. Examples include tax exempt interest income and part or all of corporate dividends received. Other permanent differences result from tax depletion deductions based upon income from properties subject to depletion—as discussed earlier.

The computation of the tax accrual when a permanent difference exists between taxable profit and pretax accounting income can be illustrated by assuming that the ABC Company profit-difference in 19X1 results from the inclusion of tax exempt interest in the computation of pretax accounting income:

ABC Company

19X1

Pretax accounting income	$100,000
Taxable profit	60,000
Permanent difference	$ 40,000

The journal entry to record taxes would be tax expense, $28,800, and taxes payable, $28,800. No tax provision is required for the $40,000 because it re-

presents a permanent difference between taxable profit and pretax accounting income. Since only $60,000 of the $100,000 of pretax accounting income is subject to tax, the tax accrual is only $28,800 (.48 x $60,000).

If we assumed that the profit differential of $40,000 were made up of a $20,000 timing difference and a $20,000 permanent difference, the entry to record taxes would be tax expense, $38,400, taxes payable, $28,800, and deferred tax liability, $9,600.

Profit Differences and Tax Percentages

The existence of a substantial "permanent" profit difference can create a significant variation in the customary relationship between income tax expense and pretax accounting income. In the case of ABC Company in 19X1, the "permanent" difference of $40,000 results in a tax amounting to only 28.8% of pretax accounting income.

Where the same profit difference of $40,000 results from a timing difference, the customary relationship between the tax expense and pretax accounting income is maintained. Note that the tax is 48% of pretax accounting income in the case of the $40,000 *timing* difference in 19X1.

Disclosure Requirements

Where there are significant permanent differences between taxable profit (as reported in the tax return) and pretax accounting income (as reported in the published income statement), the Accounting Principles Board, in APB No. 11, recommends that "the nature of significant differences between pretax accounting income and taxable income be disclosed [3, p. 179]." It further recommended disclosure of "reasons for significant variations in the customary relationships between income tax expense and pretax accounting income, if they are not otherwise apparent from the financial statements or from the nature of the entity's business [3, p. 179]."

The incidence of significant variations in the customary relationship between income tax expense and pretax accounting income, based upon a survey of recent annual reports, is discussed in the next section of this paper. Compliance with the disclosure requirements contained in APB No. 11 is also reviewed.

The Profit-Tax Relationship — Some Survey Results

The relationship between pretax accounting income and income tax expense was examined for a sample of 100 companies. This sample was drawn randomly from the annual reports of over 1,500 companies listed on the New York Stock Exchange. In each case the annual report for the fiscal year ending between July 1, 1972 and June 30, 1973 was used. For each company the income tax was expressed as a percentage of pretax accounting income. In addition, where the tax was materially different from 48%, the financial statements, related notes, and nature of the business were examined in order to attempt to explain the unusual tax percentage.

Forty-eight percent was selected as a benchmark for the "customary" tax expense relationship because it represents a reasonable approximation of the effective tax rate which most companies would have incurred if there were no *permanent* differences between taxable profit and pretax accounting income. Ten percent of this standard rate was considered a significant variation; therefore, the reports of companies with effective rates of less than 43 or greater than 53% were subjected to additional analysis. Ten percent was selected as the standard for measuring a "significant" variation because the writers believe it to be representative of the *materiality* standard employed by independent auditors.

The Tax Percentages

Exhibit 2 summarizes the profit-tax relationships found in the 100 companies studied. Forty-nine of the annual reports revealed a "significant" variation in the "profit-tax relationship"; four companies had a tax percentage over 53%; and 45 fell below 43%. The mean tax percentage for the sample was 43.1% and the range was from a low of 9.9% (a company with almost 70% of its income in the form of tax-exempt deposits in maritime operations) to a high of 64.8% (no explanation given).

Exhibit 2. Profit-Tax Relationship in 100 Companies

Income tax as a % of pretax accounting income	Number of companies
53% and over	4
48% to 52.9%	17
43% to 47.9%	34
38% to 42.9%	26
less than 38%	19
Total companies	100

Disclosure with Material Tax Variations

APB No. 11 calls for disclosure of the reasons for "significant variations in the customary relationships between income tax expense and pretax accounting income [7]." A review of the financial statements, notes, and other relevant information revealed that none of the four corporations with the highest rates gave any reason for the significant variation. Of the 45 corporations below 43%, all but one gave at least a partial explanation of the difference, mentioning the use of the investment credit or stating that no taxes had been provided on the earnings of unconsolidated subsidiaries. Thirty-one of the 45 corporations listed at least an investment credit figure, and in 18 cases the figures given were enough to adjust the rate to at least 43%. In the eight cases where the investment credit was the only reason given for the difference and a figure was provided, the adjustment was not enough to raise the tax rate to 43%.

Explicit reference was made to the profit-tax relationship, and an effort was made to provide an explanation of the variation from the standard tax-percentage in only five of the 49 reports. In each of the five cases the information was presented in a note to the financial statements. Because of our interest in the disclosure surrounding unusual profit-tax relationships these notes are included in Exhibit 3.

Exhibit 3.

S.S. KRESGE 1972 – Tax percentage: 42.7%

Over-all effective income tax rate dropped to 42.7% in 1972; the 1971 overall effective income tax rate was 46.4. The 1972 reduction was attributable to lower effective tax rates applicable to foreign operations and the investment credits earned from our K mart expansion program and furnishings in the Kresge International Headquarters.

Canadian tax rates were decreased by 2.9% to 47.3 in 1972. Only a small portion of the increasing Australian profits was taxed because of a tax loss carryforward.

The investment credit applied to qualified additions made during all of 1972 amounted to $3.8 million, compared to $1.7 million in 1971 when the investment credit was effective only part of the year.

McDONNELL DOUGLAS 1972 – Tax percentage: 41.8%

As no income taxes were payable for 1971 or 1972, the provisions for United States and foreign income taxes for these years were entirely for taxes expected to become payable in future years (deferred income taxes). The provisions were at effective tax rates less than the corporation income tax rate because of items which create permanent differences between taxable income and reported income and because of investment credits, as shown below:

Permanent differences:	
Net earnings of MDFC	$ 9,141,526
DISC tax-exempt income	10,956,207
Non-deductible amortization	(2,817,617)
Other–net	574,600
	$17,863,716
Reduction in provision:	
Corporation income tax rate applied to above total	$ 8,574,584
Investment credits	3,394,323
	$11,968,907

DILLINGHAM 1972 – Tax percentage: 9.9%

The Merchant Marine Act of 1936, amended in October, 1970 permits the Company to deposit earnings of certain maritime operations in statutory funds free of Federal taxes unless such deposits are withdrawn for general purposes or unless covered operations are terminated. Tax benefits are reflected in the accounts in the year deposits are made. During 1972 deposits were made resulting in tax benefits of approximately $2,977,000. For 1971 the comparable credit was $1,750,000. These deposits are primarily responsible for the variation in the customary relationship between income tax expense and pre-tax income.

DOW CHEMICAL COMPANY 1972 – Tax percentage: 39.2%

Effective consolidated tax rates for the years 1972 and 1971 were 39.2% and 36.4%, respectively. Principal reasons for variation between the consolidated effective rate and the United States corporate statutory rate include taxation of foreign income at a variety of tax rates, investment tax credits and foreign investment allowances, depletion allowances and capital gains or losses.

SWIFT & COMPANY 1972 – Tax percentage: 41.3%

Income taxes for each year reflect the effects of the following major tax credits and other items, in millions of dollars:

Investment tax credits	$1.7
Effects of deduction from the oil and gas operations	1.8
Effects of temporary moratorium on taxation of mining income in Canada	.9
Effects of lower income tax rates on gains from sales of real estate and investments	.1
Net reduction in income taxes	$4.5

Ideally, disclosure should be sufficient to allow the analyst to reconcile the "actual" and the "customary" tax relationship. As a minimum, this requires information on the "permanent" differences between pretax accounting income and taxable profit.

Conclusion

The results of the study of annual reports indicate that in the majority of cases reviewed, disclosure standards outlined in APB No. 11 are being followed. However, in over 25% of the cases where there was a significant variation in the tax percentage (at least 13 out of 49), disclosure was not adequate. There is thus some room for improvement in the application of the APB No. 11 disclosure standard. Moreover, it may be necessary to amplify the disclosure standard. The strength of these conclusions is affected of course by the limited sample size employed in the study.

Currently, APB No. 11 requires only that the *nature* of significant differences between pretax accounting income and taxable profit be disclosed. There is no requirement for disclosure of specific *dollar differences*. Yet, this is clearly the information which is necessary in order to properly analyze the profit-tax relationship. For example, an explicit reconciliation of actual and standard tax-percentage is currently impossible where tax depletion is a factor. If the excess of tax over book depletion were provided, this particular problem would be resolved. Where corporate dividends or tax-exempt interest is significant, in terms of the reconciliation process, their dollar amount, if material, should be disclosed. With these types of changes, the analyst's ability to adequately analyze the profit-tax relationship will be greatly enhanced.

REFERENCES

1. APB Opinion No. 2 and No. 4, both titled *Accounting for the Investment Credit*.

2. APB Opinion No. 9, *Reporting the Results of Operations*.

3. APB Opinion No. 11, *Accounting for Income Taxes*.

4. APB Opinion No. 23, *Accounting for Income Taxes - Special Areas*.

5. APB Opinion No. 24, *Accounting for Income Taxes - Investments in Common Stock Accounted for by Equity Method*.

6. *Tax Reform Act of 1969*.

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