CORPORATE RESTRUCTURING: TAX INCENTIVES AND OPTIONS FOR CORPORATE TAX REFORM

Alan J. Auerbach*

I. INTRODUCTION

Aggregate statistics readily indicate why so many observers of financial markets in the United States are concerned about the balance between debt and equity in the American corporate financial structure. In most years before 1984, net equity issues by United States nonfinancial corporations have exceeded zero. Since 1984, however, net equity issues have been negative. Net equity retirements averaged approximately $80 billion annually during the period 1984-87 and $131 billion in 1988.1

There are many ways of calculating debt-equity ratios, however, and not every measure provides such a sharp picture of recent events. The change in the value of corporate equity over any period equals net equity issues plus changes in the value of existing equity. Because of the strong performance of the stock market during the 1980s, the ratio of the stock of debt to the stock of equity, measured at market value, began rising only in 1987, the year of the stock market crash.

There is little consensus about how debt-equity ratios should be measured to evaluate recent events. The continuing strength of corporate borrowing, combined with the historically unusual magnitude of equity redemptions, has led to many theories seeking to explain the new behavior and has evoked calls for tax reform by those attributing the borrowing to flaws in the tax system.

Congressional hearings in early 1989 drew comments linking the corporate tax system to the net increase in debt.2 The 1989 draft of the American Law Institute’s Reporter’s Distribution Proposals advanced the suggestion that a corporate dividends-paid deduction, coupled with a corporate minimum tax on

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distributions, would correct the system’s imbalance between debt and equity.\(^3\) Much of the 1989 corporate tax legislation attacked deductions for interest on high-yield debt.\(^4\)

This Article considers the theory and evidence that would relate tax factors to the recent borrowing surge. It concludes that changes in tax incentives are not the primary cause of the recent shift toward debt and that the social costs of increased borrowing may have been overstated. It then reviews a variety of alternative tax reform proposals that have been made over the years to reduce the disparities in the tax treatment of debt and equity. Given the tenuous link between the tax environment and recent borrowing as well as the uncertainty about the social costs of such borrowing, the current wave of corporate restructuring should not be the primary justification for corporate tax reform. There may be a benefit, however, to proposals that would correct the historic corporate tax imbalance between debt and equity. Because of the risk that most of the reform proposals either would provide significant windfalls at great tax revenue cost or would introduce new distortions to financial behavior, the benefits of reform should be clearly established before a new system is adopted.

II. TAXES AND LEVERAGE

The United States has a “classical” corporate income tax that treats corporations and their shareholders as separate entities. The result is a “double taxation” of corporate equity income: firms pay the corporate tax and the shareholders are taxed on dividends and capital gains. With interest classified as a deductible expense, cash flow that is used to meet corporate interest payments is taxed only once, to the recipient. The distinction of the tax treatment of the corporation from that of an unincorporated business, such as a partnership, is therefore in the treatment of equity. Thus, many reform proposals have been aimed at changing the tax treatment of equity earnings.

Perhaps the easiest way to express the corporate imbalance between debt and equity is in terms of the after-tax return that an investor receives per dollar of corporate source income. If a corporation earns $100, taxed at the 34% corporate rate, there is $66 after tax to be passed on to the stockholder who, if taxed at 28%, would have $47.52. The after-tax return on equity can be expressed as 

\[(1-t_c)(1-t_e),\]

where \(t_c\) is the corporate tax rate and \(t_e\) is the investor’s tax rate on equity earnings. In contrast, a corporation that earns $100 and pays it out as interest is entitled to a $100 deduction, so that a bondholder taxed at 28% would have $72 left after tax. The after-tax return on debt can be expressed as 

\[(1-t_b),\]

where \(t_b\) is the investor’s tax rate on interest income.

Because of this imbalance in after-tax return ($47.52 versus $72), debt is


\(^4\) Omnibus Budget Reconciliation Act of 1989, Pub. L. No. 101-239, 103 Stat. 2102 [hereinafter OBRA], amending or adding Code sections 163(e) (OBRA, § 7202); 163(j) (OBRA, § 7210); 172(b)(1)(M) (OBRA, § 7211); 351 (OBRA, § 7203); 385(a) (OBRA, § 7208); 6043, 6652(l) (OBRA, § 7208).

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clearly the security of choice for an investor facing equal tax rates on debt and equity income \( (t_b = t_e) \). Yet, even after the events of recent years, equity remains the dominant form of holding corporate wealth in the United States, and many theories have attempted to explain why.\(^5\)

A. Taxpayer Clienteles

There are two other key features of the income tax. The first being, progressivity in the marginal rate structure, including a tax advantage for equity at the individual level that is afforded by the deferral of tax on unrealized gain. The second being, at least prior to the Tax Reform Act of 1986 (1986 Act),\(^6\) favorable rates of tax on capital gains. These aspects of the tax system cause high-bracket investors to have a tax preference for equity relative to low-bracket investors. If the personal income tax advantage of equity is high enough, it may also cause high-bracket investors to have an absolute tax preference for equity: their tax rate on equity income, \( t_e \), may be far enough below their tax rate on interest income, \( t_b \), to outweigh the extra burden of the corporate tax. This sorting of investors by tax rates has been discussed in many contexts in the economic literature, and is often described as the "Miller equilibrium."\(^7\) From the perspective of absolute tax preference, the 1986 Act seems a likely suspect as the source of the recent growth in corporate indebtedness. As of 1986, the top individual federal tax rate on interest income, \( t_b \), was 50\%, while the top corporate tax rate was 46\%. Thus, the smart investor who held low yield stocks and died before realizing capital gains (paying no tax on such gain) might actually have achieved a lighter total tax burden by holding equity, even with the corporate tax. Due to the 1986 Act, this result is no longer possible. The corporate rate, 34\%, now exceeds the highest marginal tax rate on interest income, 33\%. Moreover, the maximum tax rate on capital gains has risen from 20\% to 33\%, pushing attainment of the "Miller equilibrium" even farther from feasibility. The argument can be stated simply: before 1986 there were investors with an absolute tax preference for equity; now there are none. Hence, debt has been encouraged.

B. Diversification and the "Marginal" Investor

A problem with the argument that the 1986 Act encouraged debt is that it presumes equity is held only by those with an absolute tax preference for it. Yet, even zero-bracket investors such as pension funds hold considerable equity in their portfolios. For example, at the end of 1987, private pension funds in the United States held $486.8 billion in corporate equities (including mutual


\(^7\)See Miller, supra note 5, at 267-68.
funds) and only $356.2 billion in credit market debt. There is clearly an element of diversification involved in investor decisions between debt and equity. This makes every investor a "marginal" investor in the sense that the overall demand for debt versus equity is affected by the tax treatment of each investor currently buying both securities.

Once recognized, the impact of the 1986 Act becomes far less clear. For some equity investors, such as pension funds, the corporate tax rate is the only tax rate that matters. Hence, the reduction in this tax rate has made equity more attractive. The highest income investors, who enjoy a reduction in their marginal tax rate from 50% to 28%, also suffer an increase from 20% to 28% in the rate of capital gains tax. Therefore, such taxpayers are almost certainly given a greater incentive to hold debt. Middle income individuals, now in the 33% bracket, experience a much lower reduction in their marginal tax rates (which previously had been well below 50%). It is not clear for them whether the 1986 Act exerted a strong push toward either equity or debt. Thus, whether the 1986 Act encouraged or discouraged borrowing depends on how the demands of each investor group has changed. Looking simply at the changes in average marginal tax rates on returns to debt and equity, the calculation suggests the 1986 Act actually favored equity.

In one sense, if one wishes to demonstrate that corporate borrowing is tax-driven, this complication is fortunate. The real break in behavior appears to have occurred in 1984, well before any prudent investor would have viewed a tax reform such as the one that occurred in 1986 as a likely event. A more likely culprit, however, is the Economic Recovery Tax Act of 1981, which lowered individual tax rates without lowering the corporate tax rate. The fact that borrowing did not explode immediately after 1981 could very well be attributable to the very serious recession that immediately followed.

C. Tax Losses and the Marginal Corporate Tax Rate

Not all changes in the marginal corporate tax rate occur through legislation. Firms that incur net operating losses have a current marginal tax rate of zero (the tax due on an additional dollar of income) unless they can offset these losses against income in the previous three years to obtain a tax refund. Otherwise, they must carry the losses forward until sufficient income is earned to be offset by the losses, or until the losses expire after fifteen years.

Firms that carry losses forward may ultimately use them to shelter gains. The present value of such tax benefits, however, is well below their face value, due to their potential expiration and the fact that they carry over without interest. It is estimated that the present value of a dollar of tax losses carried forward by a

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9For further discussion, see Auerbach, The Tax Reform Act of 1986 and the Cost of Capital, 1 J. Econ. Persp. 73, 75-79 (1987).
representative corporation in the early 1980s was between forty and fifty cents. 11 Since additional interest deductions simply add to the tax loss carryforward for a firm not currently paying taxes, the value of these deductions for such a firm may be less than half that indicated by the statutory corporate rate: a dollar of deductions may be worth only seventeen cents or less, rather than thirty-four cents. Indeed, some reduction in the value of future deductions applies to all firms except those firms certain never to incur tax losses. Since interest deductions on new borrowing are taken in the future, this potential diminution in value is particularly relevant.

This unintended correction for the asymmetry of the tax system provides an additional rationale for the coexistence of debt and equity. During the early 1980s, for example, when the statutory corporate tax rate was 46%, the estimated average tax rate for interest deductions was approximately 32%. The 1986 Act’s reduction of the effective corporate tax rate by nearly a third could reestablish an absolute tax preference for equity among high bracket investors, even without the capital gains preference.

The changing frequency of tax losses over time should also influence borrowing trends because firms with tax losses have a weaker tax incentive to borrow. There is some evidence from panel and cross-section studies that firm indebtedness does respond as predicted to higher tax losses. 12 Yet, the aggregate pattern of tax losses in recent years does not offer any reason for borrowing to have increased. Table 1, provides a breakdown of nonfinancial firms by tax status for the period 1969-88, based on a sample of firms taken from the COMPUSTAT Industrial and Industrial Research Files. The sample includes all firms for which a tax loss carryforward (zero or otherwise) was reported. 13 As indicated in Table 1, the fraction of firms reporting tax losses has risen sharply during the 1980s, falling only slightly in 1988 from its peak in 1987. One might argue that increased borrowing has led to the rise in tax losses. If correct, then a reduction in the

12Auerbach, Real Determinants of Corporate Leverage, in CORPORATE CAPITAL STRUCTURES IN THE UNITED STATES 301, 306-07 (B. Friedman ed. 1985).
13The nonreporting rate varies over time and is correlated with the fraction of firms reporting tax losses in the same year. This suggests that an unreported value may indicate the presence of a tax loss carryforward that is not of "material significance" from an accounting standpoint.

It should also be noted that the "accounting" tax-loss carryforwards reported on COMPUSTAT differ in some cases from the true tax loss carryforwards. However, there is no machine-readable source of the correct measures. Even if one is willing to examine the financial statements of individual firms, the problem of missing data is much more severe for the true tax loss carryforward measure, leading to a substantial under reporting in the aggregate. See Auerbach & Poterba, Tax-Loss Carryforwards and Corporate Tax Incentives, in THE EFFECTS OF TAXATION ON CAPITAL ACCUMULATION 305 (M. Feldstein ed. 1987). The fractions reported in Table 1 follow the same pattern through 1982 as those given by Altshuler & Auerbach based on actual corporate tax returns but, even if missing values are included, also appear to under represent the fraction of firms actually having tax loss carryforwards. See Altshuler & Auerbach, supra note 11, at 71 Table 1. To evaluate the pattern of tax losses over time rather than their general level, however, the accounting measure seems adequate. The same general pattern was found for samples of firms drawn only from the Industrial File (i.e., those that had not disappeared before 1988) and those with complete data for the entire period 1969-1988.

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Table 1

Tax Loss Carryforwards in the United States*
Percentage of Firms Reporting:

<table>
<thead>
<tr>
<th>Year</th>
<th>TLCF = 0</th>
<th>TLCF &gt; 0</th>
<th>TLCF data missing</th>
</tr>
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<tr>
<td>1969</td>
<td>95.5%</td>
<td>3.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>1970</td>
<td>96.7%</td>
<td>2.6%</td>
<td>0.7%</td>
</tr>
<tr>
<td>1971</td>
<td>95.5%</td>
<td>3.6%</td>
<td>0.3%</td>
</tr>
<tr>
<td>1972</td>
<td>96.0%</td>
<td>3.7%</td>
<td>1.0%</td>
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<tr>
<td>1973</td>
<td>95.8%</td>
<td>3.2%</td>
<td>1.0%</td>
</tr>
<tr>
<td>1974</td>
<td>94.7%</td>
<td>3.9%</td>
<td>1.5%</td>
</tr>
<tr>
<td>1975</td>
<td>95.9%</td>
<td>3.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td>1976</td>
<td>94.4%</td>
<td>4.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>1977</td>
<td>93.8%</td>
<td>4.3%</td>
<td>1.9%</td>
</tr>
<tr>
<td>1978</td>
<td>93.3%</td>
<td>5.1%</td>
<td>1.6%</td>
</tr>
<tr>
<td>1979</td>
<td>91.6%</td>
<td>5.3%</td>
<td>3.1%</td>
</tr>
<tr>
<td>1980</td>
<td>91.0%</td>
<td>5.6%</td>
<td>3.3%</td>
</tr>
<tr>
<td>1981</td>
<td>91.6%</td>
<td>6.0%</td>
<td>2.4%</td>
</tr>
<tr>
<td>1982</td>
<td>89.7%</td>
<td>6.4%</td>
<td>3.9%</td>
</tr>
<tr>
<td>1983</td>
<td>88.2%</td>
<td>7.4%</td>
<td>4.4%</td>
</tr>
<tr>
<td>1984</td>
<td>86.7%</td>
<td>8.4%</td>
<td>4.9%</td>
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<td>1985</td>
<td>83.9%</td>
<td>11.1%</td>
<td>5.0%</td>
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<td>1986</td>
<td>82.2%</td>
<td>11.8%</td>
<td>6.0%</td>
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<tr>
<td>1987</td>
<td>81.5%</td>
<td>11.9%</td>
<td>6.6%</td>
</tr>
<tr>
<td>1988</td>
<td>83.8%</td>
<td>10.5%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

*Sample includes all firms on COMPUSTAT Industrial and Industrial Research Files having data on debt and equity values. Percentages are weighted by firm values (debt plus equity).

availability of tax loss carryforwards could not have been a causal factor itself. If tax losses have played a role at all, the asymmetry of the tax system may have mitigated the urge to borrow.

D. Taxes and the Cost of Equity Capital

The recent increase in equity retirements raises an important and controversial issue regarding the impact of taxation on corporate financial policy. A particularly puzzling aspect of corporate behavior over the years has been to pay dividends subject to ordinary income taxes over an apparently tax-preferred form of distribution, such as a repurchase of the corporation's own shares. The "dividend puzzle" means that companies make distributions in the form of dividends rather than by repurchasing shares. Because share repurchases usually are treated as...
sales of capital assets by the selling shareholders, there have been two traditional advantages to these transactions. First, capital gains were taxed at a lower rate. This advantage disappeared (perhaps temporarily) with the 1986 Act. The second advantage, the ability to subtract the basis of redeemed shares in computing gain, remains. Since redemptions are economically equivalent to dividends in other respects, it is difficult to rationalize the choice of dividends over repurchases by firms.\(^\text{14}\)

Given that dividends exist, there remains some controversy over the extent to which they influence the cost of equity capital. The traditional approach estimates the effective tax rate on equity earnings as a weighted average of tax rates on dividends and capital gains based on payout ratios. The newer view regards this analysis as inappropriate to the extent that marginal equity funds are generated internally. The corporation's retention of earnings relieves shareholders of the need to pay dividend taxes, thus lowering the cost of equity capital and making the effective capital gains tax rate the correct measure of the individual tax burden on all returns to equity. Therefore, the dividend tax rate is irrelevant in computing the cost of funds.\(^\text{15}\) A corollary of this view is that corporate distributions taxed in excess of the effective capital gains tax rate are unavoidable. Hence, the tax is capitalized into the values of corporate shares. In this context, the notion of "effective capital gains tax rate" takes into account the deferral advantage and possibility of tax avoidance at death that taxpayers who hold capital gain property enjoy.

While there is still a dispute over whether this "new" view or the traditional view is correct regarding the effect of dividends on the cost of equity capital,\(^\text{16}\) neither provides an explanation for the existence of dividends. The two theories differ with respect to whether new equity funds come from a reduction in current distributions or from an increase in the sale of new shares. Neither theory offers a prediction of the form of distributions, nor would either be disturbed by firms' structuring distributions to reduce the shareholder tax. Thus, the explosion of share redemptions in recent years tells us little about which theory is "correct." Corporations' recent discovery of share repurchases, however, has different implications for the cost of capital under the two hypotheses. For the traditional view that prescribes a weighted-average approach to measuring the tax rate on equity, there would be a reduction in the marginal equity tax burden. Under the

\(^{14}\) Theories attempting to explain the existence of distributions have been based on such elements as the need for managers to signal the value of their firms to investors. These theories, however, do not explain why distributions take the form of dividends. For one attempt in this direction, see D. Bernheim, Dividends versus Share Repurchases as Signals of Profitability (1988) (mimeograph, Northwestern University, Finance Dep't).


\(^{16}\) See Auerbach, Taxation, Corporate Financial Policy and the Cost of Capital, 21 J. Econ. Lit. 905 (1983); Poterba & Summers, The Economic Effects of Dividend Taxation, in Recent Advances in Corporate Finance 227 (E. Altman & M. Subrahmanyam eds. 1983).
alternative view—that taxes on distributions do not exert a marginal effect—increased use of redemptions would simply raise share prices. 17

Have corporations really learned to avoid the dividend tax? If so, one would expect them to have replaced dividends with share repurchases. Evidence of this is not immediately apparent, at least in the aggregate. The increase in net share redemptions has come about through an increase in gross retirements rather than a decrease in gross new issues. The fraction of distributions accounted for by these redemptions has certainly risen in recent years. There has been no decline in dividends, however, and a significant fraction of the redemptions have been associated with takeovers rather than self-tenders.

Table 2 presents changes in the sources and uses of funds in the United States nonfinancial corporate sector from 1980 through 1987. Given the cash-flow identity of each firm and hence the corporate sector as a whole, the increase in net redemptions must have been associated with an increase in profits (net of taxes and interest payments), a decrease in dividends, an increase in borrowing, a decrease in funds available for investment, or some combination of these events (all measured relative to trend). Dividends have grown quite smoothly over the period, while there has been no obvious trend in investment. Thus, there clearly is a sharp correlation between borrowing and redemptions.

Have share repurchases slowed the growth of dividends? To obtain a more precise estimate of the extent to which firms may have used repurchases to substitute for dividends, it is appropriate to use a typical economic model of aggregate dividend policy. 18 Dividends are estimated over the sample period 1947-1983 (1983 being the last year before the explosion in share repurchases), and the growth rate during that period is used to predict dividends for the years 1984-88 (the period of the explosion in repurchases). As shown in Table 3, the model over predicts aggregate dividends for 1984-88, indicating that firms have replaced them with repurchases.

In the standard economic model, the estimated equation is:

\[
d \log (DIV) = 0.14 + 0.03 \log (Y) + 0.06 \log (y_{t-1}) + 0.09 \log (T) + 0.43 \log (T_{t-1}) - 0.15 \log (DIV_{t-1})
\]

\[
(1.62) \quad (1.20) \quad (2.36) \quad (0.26) \quad (1.37) \quad (-2.41)
\]

\[R^2 = 0.243\]

Durbin-Watson statistic = 1.95

(t-statistics are in parentheses)

17 The tax reduction would also be likely to raise share prices under the traditional approach since distributions from existing assets would be taxed at a lower rate and investment would be encouraged by the lower marginal tax rate. This increase in value, however, would be similar to that associated with any uniform income tax reduction.

18 See Poterba, Tax Policy and Corporate Saving, in 2 Brookings Papers on Economic Activity 455, 480 (W. Brainard & G. Perry eds. 1987). The equation is essentially the one estimated by Table 5, Column 2, however, the coefficients are somewhat different, owing to differences in sample periods and data definitions. Id. at 480.
DIV and Y are nonfinancial corporate dividends and earnings (as given in Table 2) divided by the GNP deflator, and T is one minus the tax rate on dividends.\textsuperscript{19}

Table 2
Disposition of Earnings and Sources of Funds
U.S. Nonfinancial Corporation
(Billions of Dollars)

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
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</thead>
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<tr>
<td>1980</td>
<td>89.8</td>
<td>61.0</td>
<td>8.2</td>
<td>20.6</td>
<td>21.1</td>
<td>57.8</td>
<td>99.5</td>
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<tr>
<td>1981</td>
<td>108.3</td>
<td>67.6</td>
<td>33.0</td>
<td>7.7</td>
<td>21.5</td>
<td>102.1</td>
<td>131.3</td>
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<tr>
<td>1982</td>
<td>92.9</td>
<td>72.0</td>
<td>22.5</td>
<td>1.6</td>
<td>28.9</td>
<td>43.4</td>
<td>70.7</td>
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<tr>
<td>1983</td>
<td>135.5</td>
<td>78.0</td>
<td>16.5</td>
<td>41.0</td>
<td>40.0</td>
<td>54.4</td>
<td>135.4</td>
</tr>
<tr>
<td>1984</td>
<td>178.9</td>
<td>81.0</td>
<td>92.5</td>
<td>5.4</td>
<td>18.0</td>
<td>170.3</td>
<td>193.7</td>
</tr>
<tr>
<td>1985</td>
<td>185.3</td>
<td>84.0</td>
<td>106.5</td>
<td>-5.2</td>
<td>25.0</td>
<td>132.4</td>
<td>152.2</td>
</tr>
<tr>
<td>1986</td>
<td>184.8</td>
<td>89.9</td>
<td>118.6</td>
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<td>37.8</td>
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<td>187.9</td>
</tr>
<tr>
<td>1987</td>
<td>173.6</td>
<td>95.5</td>
<td>112.0</td>
<td>-33.9</td>
<td>35.5</td>
<td>136.8</td>
<td>138.4</td>
</tr>
<tr>
<td>1988</td>
<td>181.6</td>
<td>103.3</td>
<td></td>
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</tr>
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Earnings are worldwide, after-tax, including the capital consumption and inventory valuation adjustments (to correct for mismeasurement of depreciation and cost of goods sold).

Data from 1988 come from unpublished Board of Governors of the Federal Reserve data.


Redemptions include retirement of shares of acquired firms.

Dynamic simulations based on equation (1), beginning in 1984, yield the predicted dividends given in Table 3. The results suggest that even though dividends have grown during the last five years, they would have grown more quickly had previous dividend patterns been followed. In 1987, for example, dividends were $15.9 billion less than predicted. If one attributes this change entirely to the substitution of share repurchases for dividends, then approximately

\textsuperscript{19}Id. at 462-63 (Table 2), 471 (Table 3).
30% of the $52.6 billion in share repurchases that occurred in 1987 replaced dividends. Thus, while substitution of repurchases for dividends may have been significant, it is not the major explanation for the rise in the level of share repurchases.

Moreover, an even greater amount of equity than was repurchased by firms themselves disappeared through cash-financed takeovers. The total value of shares redeemed through both channels equaled $112 billion in 1987. One can therefore explain only a small percentage of total equity retirements as having occurred in lieu of concurrent dividends. While it is not clear what fraction of acquisitions were associated with additional borrowing, a significant fraction of the total equity retired through acquisitions, $35.6 billion, came through leveraged buyouts, which have had initial debt value ratios (debt-to-debt + equity) close to one, that is, virtually no equity.

Thus, the pattern of net equity retirements appears to be much more one of borrowing to finance takeovers and, to a lesser extent, to repurchase shares,

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Predicted</th>
</tr>
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<tbody>
<tr>
<td>1984</td>
<td>81.0</td>
<td>84.7</td>
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<tr>
<td>1985</td>
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<td>1986</td>
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<td>111.4</td>
</tr>
<tr>
<td>1988</td>
<td>103.3</td>
<td>123.0</td>
</tr>
</tbody>
</table>

*Estimated using a dynamic simulation based on the equation in the text.

See Bagwell & Shoven, Cash Distributions to Shareholders, 3 J. Econ. Persp., 129, 131 (1989).

There is additional evidence from data on individual firms suggesting that the high level share redemptions in recent years has not been primarily a phenomenon of dividend replacement. A sample with complete data for the period 1969-88 was used for the investigation. This sample accounted for over half the dividends of all nonfinancial corporations during the 1980s, and so should be fairly representative.

Before the period 1984-88, repurchases were small in aggregate size and did appear to be used in place of dividends. For the period 1979-83, only 30% of the firms in the sample (weighted by firm value) repurchased at least 5% of their equity in at least one of the five years. For the repurchasing subset of firms, however, total purchases exceeded total dividends in each of the five years. During the next five year period, 1984-88, repurchasing became much more widespread, with only 21% failing to repurchase at least 5% of shares in at least one year. For this group, however, dividends exceeded repurchases in every year of the period.

rather than a change in the form of equity distributions. It is therefore unclear whether the mix of prospective distributions and the associated taxes thereon has changed. If firms continue to rely on dividends for distributions, then little has changed. All this must be said with a fair degree of uncertainty, however, because the factors driving firms to pay dividends are poorly understood.

E. *Takeovers and Leverage*

The preceding empirical evidence suggests that much of the recent shift from equity to debt in the United States corporate sector has been associated with takeover activity, including leveraged buyouts. Indeed, to avoid being taken over, managers of potential targets have felt compelled to borrow as a defensive measure. Much of the borrowing not directly associated with acquisitions also can be attributable to the increase in takeover activity.

Many observers have viewed the tax advantages of borrowing as an incentive to engage in takeovers. This argument has its problems. Foremost among them is that firms can gain the tax advantages of borrowing by purchasing their own shares rather than the shares of another company.

The 1986 Act contained various provisions aimed at curtailing some of the other tax benefits associated with corporate takeovers. It is possible these changes have contributed to an increase in firms borrowing to repurchase their own shares, including leveraged buyouts, as a substitute for more traditional debt-financed acquisitions of one corporation by another. The 1986 Act changes do not explain why debt-financed equity retirements as a whole should have increased in the past couple of years.

F. *Debt, New Equity, and Old Equity*

Much of the discussion of debt versus equity has ignored the different choices facing new or expanding companies and those with a sufficient base of existing equity. All the evidence suggests that the rise in corporate indebtedness has come about through increased borrowing by existing companies. It is important, therefore, that any analysis of the subject apply to the replacement of existing equity with debt, rather than borrowing, in lieu of issuing new equity.

This distinction is essentially the one made above between the "new" and "traditional" views of the burden of dividend taxation and, more generally, any tax on cash distributions. While newly-issued debt is subject to a single tax (that of the bondholders), newly-issued equity is subject to two levels of taxation: one on corporate income and the other on distributions. Firms that borrow to replace equity avoid the double taxation of future equity income. Some tax, however, must be paid currently by shareholders when the equity funds are distributed, whether in the form of share redemptions or dividends. It is not of obvious relevance whether current distributions of equity take the form of re-

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purchases since they could have done so in the future had the equity not been redeemed. Thus, the recent ascendancy of share repurchases and their favorable tax treatment cannot in itself explain why firms would wish to substitute debt for existing equity (before the 1986 Act, “favorable” meant capital gains rates and the basis offset; after the 1986 Act, only the basis offset). The substitution might be explained if the tax preference for repurchases were perceived to be temporary, as if corporate managers anticipated a crackdown on repurchasing activity. Absent that impetus, which does not appear to exist, borrowing to increase the ability to repurchase might be viewed as a way to achieve a permanent reduction in the rate of tax on distributions.

The corporate-shareholder group, having a lower marginal rate, has a greater incentive to finance investment with retained earnings rather than by issuing new shares. For the same reason, this group has a greater incentive to use borrowed funds (instead of issuing new equity) to finance investment than to replace existing equity with debt. The significant factor in both examples is the avoidance of current distributions, and thus, the avoidance of the shareholder tax on distributions. Both examples are derived from a system that favors the use or retention of existing equity. That the system favors use of existing equity is of particular relevance in evaluating corporate tax reform proposals, which differ markedly in their recognition of it.

G. Summary

The recent increase in borrowing by nonfinancial corporations is difficult to attribute to the Tax Reform Act of 1986. While the overall tax incentives to hold debt for some equity investors increased, the incentives for other significant equity investors to purchase debt declined. The growth of corporate equity retirements is also related to the increase in borrowing, but the tax advantage of redemption over dividends cannot, in itself, explain the shift toward debt. Another potentially important tax factor, the reduction in the value of interest deductions associated with limitations on the deductibility of net operating losses, points in the opposite direction.

If recent tax changes have not induced the change in borrowing, however, the underlying imbalances present in the corporate tax may have contributed to it. In this sense, the borrowing could be tax-related even if it is not tax-induced, and the need to reduce the system’s remaining imbalance between debt and existing equity may have increased even if the imbalance itself did not.

This distinction requires an understanding of the nontax factors affecting borrowing. If there is even a small tax advantage to borrowing in order to retire equity, there must be other, nontax costs preventing equity from disappearing entirely. These costs might include increased bankruptcy risk, distorted choice of investments, and potentially, an inefficiently short planning horizon. If these

24 There is not a consensus that forcing a decline in horizons and, more generally, putting managers "under the gun" would reduce efficiency. Some, for example, see this as a major benefit of additional borrowing. The Effects of LBOs and Corporate Debt on the Economy: Hearings on the Subject of Tax Policy Aspects of Mergers and Acquisitions Before the House Comm. on Ways and Means, 101st Cong., 1st Sess. 408 (1989) (testimony of M. Jensen).

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nontax costs have not declined, an increase in borrowing would represent an increase in the overall costs of financial distortions. On the other hand, a reduction in any of these costs, as through increasing efficiency in financial markets or a more competitive market for corporate control, could have led firms to take greater advantage of whatever tax advantage to borrowing already existed. In this case, the total social costs of tax-driven borrowing would not necessarily have increased. While more of the distortionary borrowing activity would occur, the financial innovations would have made the activity itself less distortionary. In the extreme case, where all nontax distinctions between debt and equity ceased to exist, firms would have to replace all equity with debt to the extent of any tax advantage available. The nontax distortion of financial behavior, however, would be entirely absent.\footnote{These changes and their welfare implications are discussed in more detail in Auerbach, Debt, Equity, and the Taxation of Corporate Cash Flows, 1989 Brookings Institution Conference on Taxes and Corporate Restructuring (manuscript in process of publication, Brookings Institute 1990); Bernanke & Campbell, Is There a Corporate Debt Crisis?, in 1 Brookings Papers on Economic Activity 83, 88-90 (W. Brainard & G. Perry eds. 1988).}

Tax reform may be important even if recent tax changes are not at fault in the recent expansion of corporate debt. The case for reform is weakened, however, if the borrowing has resulted from real, as opposed to perceived, nontax reductions in the distinction between debt and equity.

III. THE BENEFITS OF REFORMING THE CORPORATE TAX

Arguments favoring reform of the corporate tax take two forms. Some are based on welfare arguments concerning the economic distortions of increased corporate borrowing. Others stress the revenue loss to the government if tax-advantaged debt supplants equity. Evaluating the significance of the economic distortions of borrowing is beyond the scope of this paper, but, as indicated above, increased borrowing may be due in part to a reduction in nontax distortions. In addition, the importance of the tax revenue-loss argument may well have been overstated.

First, if debt is tax-favored and firms use more of it, the ensuing revenue losses will be associated with reductions in the marginal corporate tax burden and the corporate cost of capital in the United States. Reducing the marginal tax burden on new corporate investment neither would necessarily increase social welfare nor would it be a destructive policy. Many analysts have viewed with envy the high debt-equity ratios in Japan. These analysts interpret such ratios as a partial explanation for the lower cost of capital in Japan.\footnote{See, e.g., G. Hatsopoulos, High Cost of Capital: Handicap of American Industry 29-34 (1983).}

Second, the estimated losses of revenue from increased debt may be overestimated. There are several factors contributing to these overestimates. Some observers simply ignore the taxes paid by recipients of interest payments on newly created debt. A more subtle point is that replacements of equity with debt
cause a speeding-up of the payment of capital gains taxes on retired shares. In addition, although it is customary to apply average marginal tax rates on existing interest receipts to estimate the taxes paid on additional interest, there is little justification for such an assumption.

For purposes of illustration, consider a model in which each firm issues risky equity and riskless debt, with the underlying before-tax returns to the firm unaffected by its financial structure. Investors choose portfolios of debt and equity based on both tax preferences and the motive for diversification. This means that all investors will hold some equity, including those with a strong tax preference for debt; in order to bear some risk and achieve the risk premium that comes with doing so. Now, suppose each firm replaces a fixed fraction of its equity with debt, repurchasing the shares from its shareholders. The mean cash flow passing to owners of equity will decline and the variance of this cash flow will be unaffected. Thus, the value of equity will fall and the riskiness of its rate of return will increase. Who will hold the additional debt? Consider the following logic.

If existing equity owners use the sale proceeds to buy new debt, they will essentially undo the changes in the financial structure generated by the firms. In following the standard in the Modigliani-Miller approach, investors will hold the same claims to each firm as before, but the claims will be packaged in different ways. Absent taxes, this rearrangement would restore the initial equilibrium and no further adjustments would occur. In the presence of taxes, however, a new equilibrium will result.

The shift in each firm’s financial structure toward more risky equity will make equity investment more attractive to low bracket taxpayers with a relative tax preference for debt. Low bracket taxpayers may now assume a given amount of risk while committing less wealth to the asset, equity, they would prefer to avoid for tax reasons. Hence, one would expect to observe further shifts toward equity by lower bracket taxpayers, with more of the debt being purchased by higher-bracket taxpayers. The resulting distribution of purchasers of the new debt will therefore have a higher average marginal tax rate than the distribution of initial equity-owners. Note that this argument neither is based on any assumption about the initial distribution of equity ownership or the level of risk aversion of any class of investors nor does the argument depend in any way on the identity of investors directly purchasing the newly issued bonds.

Given the different distributions of debt and equity holdings, this weighing scheme leads to a higher estimate of the average marginal tax rate on new interest receipts.

27 See Jensen, Kaplan & Stiglin, The Effects of LBOs on Tax Revenues of the U.S. Treasury, 42 TAX NOTES 727 (Feb. 6, 1989). These authors also include tax revenues coming from increased operating efficiency in their calculations, but these do not derive directly from the transaction replacing equity with debt.

28 The following arguments may be demonstrated rigorously using the model presented in Auerbach & King, assuming that each investor is at an interior portfolio optimum both before and after the change in financial policy. See Auerbach & King, supra note 5, at 596-97.

An estimate of this difference is provided in Table 4, which shows the average marginal tax rates on interest receipts (existing and additional) based on ownership of debt and equity. Moreover, it should be kept in mind that not all additional interest deductions will be taken at the 34% maximum corporate tax rate. Given the current incidence of tax losses among firms, deductions may be at the effective rate of about 21% or 22%. Table 4 shows the average marginal tax rate on additional interest income may be about 15%. Thus, the net gap between effective corporate and bondholder tax rates could well be as little as six percentage points, rather than

Table 4
Marginal Tax Rates on Interest Receipts Based on Ownership Patterns of Debt and Equity

<table>
<thead>
<tr>
<th>Marginal Tax Rate</th>
<th>Percentage of Equity</th>
<th>Percentage of Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>21.7% (Debt)</td>
<td>54.2%</td>
</tr>
<tr>
<td></td>
<td>25.3% (Equity)</td>
<td></td>
</tr>
<tr>
<td>Tax Exempt Organizations</td>
<td>0.0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Foreigners</td>
<td>0.0%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Banks and Thrifts</td>
<td>14.9%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Insurance Companies</td>
<td>20.0%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Private and Public Pension Funds</td>
<td>0.0%</td>
<td>22.6%</td>
</tr>
<tr>
<td>Brokers and Dealers</td>
<td>34.0%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Average Marginal Tax Rate: 15.0% 11.2%


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the twenty-three-point gap between the statutory 34% corporate rate and the 11% average marginal tax rate on existing interest income.

IV. PROPOSALS TO REFORM THE TAXATION OF CORPORATE CASH FLOWS

There are two broad classes of proposals aimed at dealing with imbalances between debt and equity. One attempts to restrict particular forms of borrowing associated with perceived abuses and "loopholes." The other aims at a more general rationalization of the tax treatment of debt and equity. Despite continuing popularity, specific "loophole-closing" interest limitations are difficult to justify as an appropriate policy tool, except in cases where better suited approaches are politically impractical or otherwise not possible. From a theoretical perspective, there are few situations where one would wish to control specific types of borrowing, especially by using the tax system as the control mechanism, rather than regulating directly the objectionable activities with which the borrowing may at times be associated. Moreover, borrowing restrictions may be difficult to enforce. The discussion that follows focuses on proposals to bring the general treatment of debt and equity into balance. The proposals are summarized in Table 5.

Traditionally, analysts concerned with the imbalance have considered integrating the corporate and individual income taxes, by converting the corporate tax into a withholding mechanism for the individual income tax. Full integration has never been adopted in any tax system, but partial integration schemes to alleviate double taxation of dividends have been implemented in several countries. Beyond full and partial integration schemes, two alternative proposals have received considerable attention in recent years, the first being the corporate "cash flow" tax, and the second being the limited dividend relief proposals by the Reporter for the American Law Institute's Subchapter C project (Reporter's Distribution Proposals). Each of these proposals has a particular advantage over integration schemes because they limit windfalls to owners of existing equity. Each proposal, however, introduces new problems. This section of the

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30 Auerbach, supra note 25. The analysis of this section draws heavily from this article, which discusses the various reform proposals in greater detail.
<table>
<thead>
<tr>
<th>Proposals</th>
<th>Features</th>
<th>Advantages</th>
<th>Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Integration</td>
<td>1. Investors taxed on a flow-through basis, like partners in a partnership. 2. All corporate income taxed at rate of the individuals.</td>
<td>1. Eliminates importance of the debt-equity distinction.</td>
<td>1. Loss of tax revenue. 2. Technical problems. 3. Produces windfalls for owners of 4. Windfalls provide little incentive to reinvest. 5. Does not tax foreign or tax-exempt shareholders unless complex withholding system is used.</td>
</tr>
<tr>
<td>Dividend Relief</td>
<td>1. Full or partial deduction for dividends paid. 2. Imputation on system that works like the federal withholding system.</td>
<td>1. Lowers tax rate on distributed earnings. 2. Those paying no taxes would receive no credit under the imputation system. 3. Firms have no tax incentives to repurchase their own shares.</td>
<td>1. Loss of tax revenue. 2. Provides little change in the incentive to reinvest. 3. Does not affect the effective tax rate on equity financed investment when retained earnings is the source of funds.</td>
</tr>
<tr>
<td>Proposals</td>
<td>Features</td>
<td>Advantages</td>
<td>Problems</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Reporter’s Distributions</td>
<td>1. Allows a deduction for dividends paid on new equity.</td>
<td>1. Avoids windfalls to owners of existing equity.</td>
<td>1. Proposal recoups windfalls implicitly, with complexity, and requires permanent distinction of old and new equity.</td>
</tr>
<tr>
<td></td>
<td>2. Imposes a tax on non-dividend distributions.</td>
<td>2. Alleviates the double taxation of new equity capital.</td>
<td>2. There would be opposition to tightening the rules on non-dividend distributions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Avoids encouraging non-dividend distributions.</td>
<td>3. Companies anticipating implementation would increase non-dividend distributions and reduce equity issues.</td>
</tr>
<tr>
<td>Windfall Tax Approach</td>
<td>1. Allows deduction for dividends paid.</td>
<td>1. Avoids giving windfalls to existing equity.</td>
<td>4. The proposal must be implemented on a permanent basis (i.e., no repeal).</td>
</tr>
<tr>
<td></td>
<td>2. Imposes a tax windfall at the corporate rate on</td>
<td>2. It is not necessary to</td>
<td>5. Transition rules may be viewed as unfair.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Tax on windfalls may be viewed as unfair.</td>
</tr>
</tbody>
</table>
the present value determine whether 
deductions received by 
dividends paid from 
old or new equity. 
3. Corporation's 
accumulated earnings and 
profits at the transition 
date would serve as an 
appropriate tax base for 
the windfall tax.

<table>
<thead>
<tr>
<th>Cash-Flow Corporate Tax</th>
<th>Cash-Flow Corporate Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. R - base system:</td>
<td>1. Cash flow tax is</td>
</tr>
<tr>
<td>Eliminates interest</td>
<td>nondistortionary because</td>
</tr>
<tr>
<td>deductions, would not tax</td>
<td>return on earnings would</td>
</tr>
<tr>
<td>corporate interest income,</td>
<td>not be taxed.</td>
</tr>
<tr>
<td>and profits of financial</td>
<td>2. Avoids giving</td>
</tr>
<tr>
<td>intermediaries would be</td>
<td>windfalls to existing</td>
</tr>
<tr>
<td>tax-exempt.</td>
<td>equity.</td>
</tr>
<tr>
<td>2. R + F - base system:</td>
<td>3. Does not discriminate</td>
</tr>
<tr>
<td>Allows interest</td>
<td>against new equity capital</td>
</tr>
<tr>
<td>deductions, would tax</td>
<td>because there would be</td>
</tr>
<tr>
<td>interest income, adds</td>
<td>no marginal impact of the</td>
</tr>
<tr>
<td>borrowing to tax base,</td>
<td>corporate tax.</td>
</tr>
<tr>
<td>and deducts lending from</td>
<td>4. May broaden tax base,</td>
</tr>
<tr>
<td>tax base.</td>
<td>raise tax revenues, or</td>
</tr>
<tr>
<td></td>
<td>reduce corporate tax rate</td>
</tr>
<tr>
<td></td>
<td>without loss of tax</td>
</tr>
<tr>
<td></td>
<td>revenues.</td>
</tr>
</tbody>
</table>

1. Raises corporate tax burden on debt-financed investment.
2. Presents transitional problems; firms anticipating a cash flow system have a strong incentive to delay investment.
3. Favors equity over debt.
4. Extends benefits of equity relief to foreign equity owners.
Article reviews and compares the effects of corporate tax integration and the two newer approaches to corporate tax reform.

A. Full Integration

Under full integration, investors would be taxed on a flow-through basis, like partners in a partnership. This move from a two-tiered tax on equity returns to a single, shareholder-level tax on equity income would eliminate the importance of the debt-equity distinction. All corporate source income would be taxed at the individual's tax rate. (See Full Integration, Table 5.)

Much of the opposition to full integration has been of a technical nature, but there are other difficulties as well. Because it would subject all equity income to a single tax at the individual's tax rate, there is little question that an integrated tax system would produce windfalls for the owners of existing equity; reducing the prospective tax burden on existing equity would increase stock values. More disturbing, however, is the prospect that windfalls accruing to old equity would bring along little positive contribution to the incentive to invest.

As already discussed, there is an argument that the prospective tax due on distributions from existing equity is capitalized into the value of shares, and thus, does not influence the marginal cost of capital for reinvested funds. If this theory is true, it would mean a current effective tax rate of 34% on reinvested equity funds, plus the effective rate of capital gains tax on accumulated earnings; compared to the 28% or 33% tax rate that most investors would face under an integrated tax system. Put simply, the corporate-shareholder group would receive a small cut in the marginal tax rate on corporate earnings and a large windfall from the elimination of the tax on distributions (equal to the present value of the capitalized tax that would otherwise be due). “Distributions” for this purpose would include distributions from all net assets, and thus would be equal to returns on existing capital, plus economic rents, less interest payments on preexisting debt.

Because taxation would only be at the investor level, an integrated tax system would not tax foreign and tax-exempt shareholders on their corporate-source income. Rather, it treats equity income the way interest income is now treated. This result would increase the relative incentives for foreigners and tax-exempt persons to hold equity.

B. Dividend Relief

Dividend relief is much more easily implemented than full integration because it requires the measurement of only dividends, rather than of all earnings. Given the traditional view that serious problems of corporate double taxation applies primarily to earnings distributed as dividends, dividend relief has been seen as an acceptable solution to the distortions of the corporate tax. (See Dividend Relief, Table 5.)

37 See, e.g., TREASURY I, supra note 32, at 118-19 (proposed a 50% dividends paid deduction).
There are two basic approaches to dividend relief, differing with respect to whether the corporation or the shareholder receives the tax rebate. Relief at the corporate level comes in the form of a full or partial deduction for dividends paid, often expressed in terms of a lower tax rate on distributed earnings, or a "split-rate" tax system. In practice, split-rate systems have typically allowed only a partial deduction for dividends. For example, in Germany the split-rate system in the 1980s had rates of 56% on retained earnings and 36% on distributions. In Japan, the rates are currently 42% on retained earnings and 32% on distributions.

The shareholder-level alternative to the split-rate system is known as the "imputation" system. In calculating income, shareholders add to the dividends they actually receive, additional imputed income equal to some or all of the tax the corporation is assumed to have paid on distributed earnings. The shareholders are given a tax credit for the imputed tax in calculating their own tax due. The imputation system is like the federal tax withholding system, under which employees include wages and salary in their taxable income, and also claim a credit against tax liability for taxes withheld by their employers. For example, in the United Kingdom the imputation system allows a credit at the basic individual tax rate, so that most taxable investors neither owe additional tax nor receive a refund for excess taxes withheld.

As with the split-rate system, any degree of dividend relief is possible under an imputation system by adjustments to the fraction of corporate taxes imputed. In general, the two systems are equivalent in the case of taxable dividend recipients. The main difference is the treatment of foreign and tax-exempt shareholders. Because the imputation system allows a credit for corporate taxes only against a shareholder's tax liability, those paying no taxes would receive no credit. Hence, one may view an imputation system as being equivalent to a split-rate system plus a withholding tax at the normal corporate tax rate on dividends distributed to low or zero-bracket shareholders.

Like full integration, dividend relief suffers from the major drawback that at the very least it is provided for all dividends paid to taxable investors, including dividends from existing equity for which there may be very little change in the incentive to reinvest funds. Since the relief focuses on dividends (and, as discussed next, firms have the incentive to make dividends the main form of distributions), either proposal is equivalent to lowering the shareholder-level tax on distributions. To the extent that the marginal source of equity funds is retained earnings, the de facto shareholder-level tax relief would not change the effective tax rate on equity-financed investments at all. For example, if the rate of imputation equaled the shareholder's tax rate, there would be no additional tax due on the payment of dividends. This approach would not only lower the tax

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38THE TAXATION OF INCOME FROM CAPITAL (M. King & D. Fullerton eds. 1984) (study comparing the United States, the United Kingdom, Sweden, and West Germany).

39TAX BUREAU, JAPANESE MINISTRY OF FINANCE, AN OUTLINE OF JAPANESE TAXES (1988).

40THE TAXATION OF INCOME FROM CAPITAL, supra note 38, at 38-42 (discussing the imputation system in the United Kingdom).
burden on future distributions, it would also raise the implicit cost to the shareholder of the firm’s retention of funds because no dividend taxes would be avoided. Given the revenue cost of dividend relief, the lack of marginal impact is a serious drawback.

An additional effect of both dividend relief and full integration would be that, with dividends relieved of double taxation, firms would have no tax incentives to repurchase shares instead. It should be stressed again, however, that the removal of the incentive to repurchase shares rather than pay dividends should have little effect on the incentive to replace existing equity with debt.

C. Reporter’s Distribution Proposals

In 1982, the American Law Institute (ALI) published a volume considering the reform of the United States corporate income tax that included proposals by the project’s reporter, Professor William D. Andrews of Harvard Law School. The proposal provided for dividend relief in a manner that would avoid the windfalls common to the schemes discussed above. The Reporter’s Distribution Proposals are fairly elaborate in detail, and have gone through several draft versions. The most recent was published in June 1989. (See Reporter’s Distribution Proposals, Table 5.)

To understand the Reporter’s plan and its effects, it is useful to consider first a much simpler modification that shares many of its important characteristics. (See Windfall Tax Approach, Table 5.) The basic problem the Reporter’s plan seeks to attack is that dividend relief is a windfall for existing equity, that is, funds already within corporate solution. A direct and attractive attack on the windfall would be to allow a dividends-paid deduction while imposing a tax at the corporate rate on the present value of deductions received by dividends paid from existing equity. It would not be necessary to trace the source of dividends paid to determine whether they were out of old equity. Dividends are normally taxable to recipients to the extent that they are paid out of accumulated earnings and profits, so the amount of these earnings and profits at the transition date would serve as an appropriate tax base. The incentive effects would be the same as under a dividends-paid deduction alone, but the revenue effects would be quite different. Even if the windfall tax were made payable over several years, its revenue could, for many years, exceed that lost from the dividends paid deduction; though not in the long run.

\[ \text{Under current law, a dollar retained would cost a taxpayer in the 28\% bracket 72 cents. If dividends yielded 10\% before corporate taxes, there would be $1.066 available for distribution after corporate taxes, and 76.752 cents ($1.066 \times (1 - .28)) after dividend taxes, representing a 6.6\% rate of return on the net cost of 72 cents. Under an imputation system at the 28\% rate, the initial out-of-pocket cost of a dollar retained would be the full dollar, and the after-tax distribution a year later would be $1.066, with the same 6.6\% rate of return being earned.} \]

\[ \text{Up-to-date revenue estimates for full and partial integration schemes are hard to obtain. The 1984 Treasury proposal for a 50\% dividends-paid deduction for corporations and individuals, however, estimated a total revenue cost of$31 billion for fiscal year 1990 (the last year for which projections were provided). See TREASURY I, supra note 32, at 248.} \]

\[ \text{See A.L.I. 1982, supra note 35.} \]

\[ \text{A.L.I. 1989, supra note 3.} \]
The idea of taxing windfalls is not new. Proposals to recoup windfalls through explicit taxes, however, have commonly been opposed to as being retroactive and unfair, even when they may only partially offset windfall gains delivered implicitly at the same time. The Reporter’s approach achieves a tax on windfalls but does so implicitly, in effect making payment of the windfall tax like a toll charge assessed on companies and their shareholders whether dividends or non-dividend distributions are made on existing equity.

Despite its many incarnations and sophisticated analysis, the Reporter’s plan has retained its basic thrust and purpose of providing dividend relief limited to newly contributed equity. It has two major components. The first would provide limited dividend relief along the lines of the dividends-paid deduction. The second would restrict the ability of firms to make tax-favored nondividend distributions of funds not qualifying for dividend relief.

The Reporter’s plan would distinguish between “old” and “new” equity. Shares issued after its enactment would be classified “new” and qualify for special treatment under the plan’s first component; a deduction for dividends paid. The allowable deduction would be calculated by multiplying the value of funds raised from the sale of new shares by some reasonable rate of return. For example, if the plan became effective on January 1, 1990, and the allowable rate of deduction were 5%, a firm issuing a million dollars of equity after this date would be entitled to deduct up to $50,000 of dividends annually thereafter. If the firm subsequently issued more equity, its maximum deduction for dividends would increase.

Like other forms of dividend relief discussed previously, this part of the Reporter’s plan would alleviate the double taxation facing newly contributed equity capital. For such equity, the plan would be essentially identical to a dividends-paid deduction. This first component of the Reporter’s Distribution Proposals, which would provide dividend relief for newly-contributed equity, is neither problematic nor controversial. It simply does for a certain class of shares what standard dividend relief would do for all. It is the second provision, however, that aims to curtail nondividend distributions, and has caused controversy. The tax on nondividend distributions would apply to shares repurchased by a corporation itself, as well as, shares redeemed by another via a cash acquisition. This rule is intended to offset the tax advantage such distributions enjoy. It is attributable to the basis offset shareholders have in computing capital gain, and before 1987 (and perhaps after 1990), the lower rate at which capital gains were

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45 This was the case, for example, for an element of the President’s Tax Proposals of May 1985, which would have recouped from corporations the tax reduction due to the corporate rate cut on that component of taxable income arising from previous accelerated depreciation deductions. That scheme would have raised considerable revenue. See Office of the President of the United States, The President’s Tax Proposals to the Congress for Fairness, Growth, and Simplicity 192-96 (1985).

taxed. 47 Thus, a corporate-level minimum tax on nondividend distributions at the tax rate of most high-income individual investors (28%) would be creditable against individual tax liability on the distributions. In either case, low bracket investors would actually face a higher tax burden on nondividend distributions than on ordinary dividends. The burdens on dividend and nondividend distributions would be roughly equal for high-bracket investors.

Why is the tax on alternative distributions seen as necessary by its supporters and why is it opposed by others? The relevant question here is what is the appropriate benchmark. The Reporter's plan takes the view that dividends are the normal form of distribution and that taxes on such distributions are also normal. From this perspective, the recent reduction in taxes, through increased nondividend distributions, represents an unintended windfall to which shareholders are not entitled. Further, if firms see the nondividend option as unlikely to continue indefinitely into the future, the opportunity to convert old equity into new equity, and qualifying for the Reporter's dividend deduction, will spur further nondividend distributions unless the tax on alternative distributions is also instituted. Others, taking the current situation as the normal state of affairs, would view tightening of the rules on nondividend distributions as unfair.

Because the first of the Reporter's Proposals would reduce taxes and the second would increase them, it is natural that the two parts are viewed with different degrees of enthusiasm by those who would be affected by the plan. Together, the provisions may be seen as providing dividend relief for new equity while eliminating all windfalls from existing equity relative to the full taxation of all distributions.

The analysis of the Reporter's plan to this point has been based on a permanent, unannounced enactment of the plan. In a world of uncertain and temporary tax policy, however, a change in the tax on distributions could do more than change the value of taxes capitalized in equity values. Unlike a direct windfall tax, the proposed toll charge, consisting of taxes on dividend and nondividend distributions from existing equity, would be paid only in the event of distributions. Given a constant tax system, this distinction that makes the analogy to the windfall tax useful, would be irrelevant. But given the option to delay distributions, the possibility of distorted behavior is very real under the Reporter's Distribution Proposals.

For example, if investors expected the tax on alternative distributions to be temporary, the incentive to delay share repurchases and cash-financed takeovers could be significant. In fact, if a phase-in to full dividend deductibility for old and new equity alike was anticipated, even current dividends would be discouraged. Only a convincing, permanent adoption of the Reporter's plan would avoid these incentives. Consistency of this policy over

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47Under the original 1982 Reporter's Proposals, this tax would have been a corporate excise tax on distributions. The excise tax would have been in addition to the individual income tax burden, because the 1982 Reporter's plan did not propose a shareholder credit for the excise tax collected at the corporate level. See A.L.I. 1982, supra note 35, at 436-38.
time would require the system to maintain a permanent distinction between old and new equity.

Likewise, in anticipation that the Reporter’s plan would be enacted, it would increase nondividend distributions and reduce equity issues. Even if the enactment came entirely as a surprise, there would still be the inevitable question of fairness in transition. For example, treating a company that made a large equity issue a day before the provision of relief for new equity took effect.

D. Cash-Flow Corporate Tax

Direct taxes on individual consumption or cash flow have enjoyed considerable intellectual support in recent years. Such a tax base would identify a household’s consumption indirectly, using the identity that income is exhausted by saving, taxes, and consumption, and would allow a deduction for saving from the income tax base. Although corporations do not consume, a cash-flow tax base for the corporation has its attractions. Similar to the individual consumption tax, it would not alter the net return to saving. (See Cash-Flow Corporate Tax, Table 5.)

The literature has noted the attractiveness of a corporate cash-flow tax as part of a tax system that includes a progressive personal income tax based on consumption. The corporate cash-flow tax, however, has more recently been proposed as a free-standing reform of the corporate tax. There are two basic approaches to corporate cash-flow taxation. The 1978 Meade Committee report referred to them as the “R(base)” versus the “R(base) + F(iscal)” tax bases.

The “R-base” and the “R + F-base” differ with respect to their treatment of borrowing and interest payments. The R-base would eliminate interest deductions and not tax the corporation’s interest income. The R + F-base would preserve interest deductions and tax interest income, and also would add borrowing to, and deduct lending from, the tax base. Perhaps the most significant difference between the two approaches would be their treatment of financial intermediaries, whose profits (interest receipts less interest payments) would be tax exempt under the R-base. For nonfinancial corporations, the approaches would have similar effects, although the timing of tax payments by firms could be quite different.

To convert the present corporate income tax to a cash-flow tax, depreciation deductions would be replaced with an immediate deduction for all new investment and, under the R + F-base, include all net borrowing in the tax base. The resulting tax base would be the firm’s receipts (all cash in) less expenditures. This net

Given the previous discussion of the effects of taxes on distributions, one can see immediately the cash-flow tax is nondistortionary. Although it affects the value of the corporation, the investment of retained earnings would be a deduction event, and so the system would impose no additional tax on the return to retained and reinvested earnings. Moreover, unlike other taxes on distributions, such as the dividend tax, the cash-flow tax would not discriminate against newly-contributed equity because it is a tax on distributions net of new equity issues. The reason new equity would not face a net tax (in present value terms) on its distributions is that the investment of the new equity would result in an immediate deduction. Thus, a move to the R+F-base would be equivalent to replacing the current corporate tax with a tax on all distributions from existing equity. In terms of marginal incentives, this outcome would be equivalent to the abolition of the corporate tax.

A similar analysis applies for the R-base, which has been discussed more frequently as a possible tax reform. By eliminating the deduction for interest payments instead of taxing net borrowing, the R-base would add net payments to holders of existing debt (interest payments less net borrowing) to the distributions already taxed under the R+F-base. Again, there would be no marginal impact of the corporate tax.

In comparing the impact of the cash-flow tax to the approaches previously considered, one may identify three significant differences:

1. Unique among the proposals, the cash-flow tax would raise the corporate tax burden on debt-financed investment;
2. Unique among the proposals, the cash-flow tax would cause the tax system as a whole to favor equity over debt;
3. Like the Reporter’s Distribution Proposals and the Windfall Tax Approach, but unlike the other schemes, the cash-flow tax would avoid giving a windfall to existing equity.

Under the current income tax, the effective corporate tax rate on equity-financed investments is close to the statutory tax rate of 34%. But nominal interest is fully deductible. The result is that the effective corporate tax rate on debt-financed investments is negative: marginal debt-financed investments would generate negative corporate tax liabilities, since more than the real cost of funds would be deductible. Hence, a move to the cash-flow tax will, by setting both effective tax rates to zero, raise the tax burden on debt and lower the burden on equity. Thus, the cash-flow corporate tax would raise the corporate tax burden on debt-financed investment as stated in the first proposition list above.

The second proposition listed above, unique among the proposals, is that the

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52 Auerbach, supra note 9, at 75.
53 "Nominal" interest is "real" interest plus an inflation factor. "Real" interest is the interest rate with purchasing power held even. For example, if a bank charges 10% interest on a loan, and inflation is 6%, the real interest rate is 4% and the nominal interest rate is 10%.

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cash-flow tax would cause the tax system as a whole to favor equity over debt. While the corporate-level marginal tax rates on debt and equity would be the same under a corporate cash-flow tax, the overall tax rates would not be, since even under current law, capital gain is favored relative to ordinary interest income. The individual tax advantage of equity, combined with neutral corporate treatment of debt and equity, would tip the system's balance toward equity. Depending on the contribution of the dividend tax to the effective individual equity tax rate, this gap could be considerable. The treatment of equity under a cash-flow tax would be more favorable than under a dividend relief scheme because the cash-flow system would not tax retained earnings. The treatment of debt would be less favorable than under a dividend-relief scheme because the cash-flow tax would eliminate the negative corporate-level tax on debt-financed investments.54

Finally, like the Reporter's Distribution Proposals, the cash-flow tax would avoid windfalls. Whereas a deduction for all dividends paid would eliminate the corporate level tax on all distributed income, including the corporation's pure economic rents and the returns to its existing capital, the cash-flow tax would not do so. If, during the transition to a cash-flow tax, the tax treatment of preexisting assets and liabilities was preserved by maintaining depreciation allowances for existing assets, allowing existing inventories to be deducted when used, and (under an R-base) continuing the interest deductions of existing debt, then the cash-flow tax would not alter the tax treatment of distributions from existing equity at all. It would be equivalent to the abolition of the corporate income tax for projects with normal returns financed by new equity, and would avoid the windfall that would result from deduction of distributions with respect to old equity. Like the Reporter's Distribution Proposals, its only effect would be at the margin. Unlike the Reporter's plan, however, the cash-flow tax would raise the effective marginal tax rate on debt-financed projects and would reduce the tax burden on all equity-financed projects, including those financed by existing equity.

The corporate cash-flow tax would, like the Reporter's plan, present serious transition problems. Even with preservation of the tax treatment of existing assets and debt, firms would have a strong incentive to wait to invest if the adoption of a cash-flow tax were anticipated because the cash-flow system's immediate

54In favoring corporate equity over debt, the corporate cash-flow tax might also favor corporate equity over noncorporate investment, which is currently taxed once, to the income recipient, like corporate debt. The answer would depend on how the tax reform would affect noncorporate business, an issue typically ignored in recent policy discussions.

If the noncorporate sector were covered by the new provisions (immediate write-off of assets plus the elimination of interest deductions), then all business borrowing would be equally discouraged relative to equity, and the current relative treatment of corporate and noncorporate equity would be maintained. If, however, there were no change in the treatment of noncorporate equity and debt, this would make noncorporate equity potentially less attractive than corporate equity, leading to a divergence in the financial incentives at corporate and noncorporate levels.

This issue would clearly require more thought were the corporate cash-flow tax to be considered as a serious policy option.

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write-off of investment would be received only for new investment. In general, attempts to limit windfalls by distinguishing new from old activity may be subject to similar problems.

Recent estimates for the United States have found a switch to corporate cash-flow taxation would broaden the corporate tax base, either by raising revenue or permitting reduction in the corporate tax rate without revenue loss. For the period 1981-83, Aaron and Galper estimated that a tax rate of only 33%, rather than the then-prevailing rate of 46%, would have been necessary were a cash-flow corporate tax base adopted.\(^{55}\) Gordon and Slemrod estimated that a switch to corporate cash-flow taxation would have increased tax revenues from nonfinancial corporations by $20.8 billion in 1983.\(^{56}\) For two reasons, however, these results likely overstate the positive revenue impact of cash-flow taxation today.

First, both estimates are based on the pre-1986 tax Code period when depreciation allowances were accelerated and the investment tax credit applied, giving qualifying depreciable assets a credit-and-deduction stream with a present value greater than immediate expensing of the asset cost. Thus, the immediate write-off of assets provided by cash-flow taxation would have produced a smaller tax reduction than available under the pre-1986 tax rules.

Second, both of the reported estimates are for the long run and do not properly account for transition-period revenue losses. Based on information provided by Gordon and Slemrod,\(^{57}\) it appears that maintaining depreciation allowances on existing corporate assets and interest deductions on the existing stock of corporate debt would have reduced the revenue gain of a switch to cash-flow taxation from the initial estimate of $20.8 billion to just under $7 billion.\(^{58}\) Starting from the post-1986 tax system, with its reduced investment incentives, the same transition policy would likely reduce marginal tax rates overall and lose revenue. A revenue loss could be avoided if less generous transition provisions were introduced or the corporate tax rate were increased.

The corporate cash-flow tax, like the Reporter’s Distribution plan, provides its equity incentives through tax reductions at the corporate level. Therefore, unlike an imputation system, it would extend the benefits of equity relief to foreign equity owners. But just as a withholding tax could be used to convert the split-rate system into an imputation system, the cash-flow tax could be coupled with a withholding tax on equity distributions to foreigners and non-taxable entities. Such a withholding tax was included in the corporate cash-flow tax considered by Aaron and Galper in the study that suggested a revenue gain would result if the cash-flow tax were adopted in the pre-1986 period.\(^{59}\)


\(^{56}\) Gordon & Slemrod, Do We Collect Any Revenue from Taxing Capital Income?, in 2 Tax Policy and the Economy 89, 106 (L. Summers ed. 1988).

\(^{57}\) Id. at 106.


The most significant problem confronting whether and how to reform the tax treatment of corporate debt and equity is understanding the impact of taxation on corporate financial policy. There is little evidence to support the view that changes in the tax environment have spurred the borrowing boom of the past few years. While the tax advantages of debt have increased for some equity holders, they have decreased for others. The increased incidence of tax losses has contributed further to a decline in the value of interest deductions overall.

The rise in equity retirements appears to be associated with conversions of equity into debt much more than with a reduction in dividends. The economists' "dividend puzzle" remains largely intact. But the ability to redeem equity without incurring the tax cost of dividends does little to explain why net equity retirements have increased, especially when favorable tax treatment also would have been available to future distributions from the retired equity.

Given this uncertainty, we should tread carefully toward significant changes in corporate taxation. Rationalizing the treatment of debt and equity is a sufficiently desirable objective that legislation to accomplish it should be considered, even if recent changes in corporate financial policy are not tax-driven. Nonetheless, available alternatives do have their drawbacks, offering either revenue-losing windfalls or new complications and distortions. These costs must be measured against the costs of maintaining the current system, regardless of how difficult they are to estimate.