

Corporate Meltdowns and the Deduction of Credit-Risk Interest

By Calvin H. Johnson

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Corporate equity is like an option for big, high-volatility investments because shareholders get all the gains but shift some of the losses to creditors by defaulting on the debt. That asymmetry allows shareholders to improve their position by increasing the volatility of corporate assets. In doing so, however, they impose losses not just on creditors, but also on employees, suppliers, customers, and the economy at large. It would be far better not to induce high risk in the first place.

This proposal would disallow the deduction of credit-risk interest that covers the risk of default. Because the credit-risk interest is an assessment of how likely it is that the debt will not be paid, it tracks the protection against loss that gives equity its option-like character.

Risk is an equity-like feature of an instrument. Current law's attempt to distinguish debt from equity is a quagmire. Disallowing the extra credit-risk interest is a gradual, fair, and administrable way to separate debt features from equity.

This proposal is the first of a two-part series on the contribution of tax to corporate meltdowns. It is offered as part of the Shelf Project, a collaboration among tax professionals to develop proposals to raise revenue by defending the tax base. Shelf Project proposals raise revenue without a VAT or a rate increase in ways that would improve the fairness, efficiency, and rationality of the tax system. Shelf projects are intended to foreclose both 85 percent income tax rates and 60 percent federal sales taxes.

Shelf Project proposals follow the format of a congressional tax committee report in explaining current law, what is wrong with it, and how to fix it.

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Common stock in a corporation has a position like that of an option holder if the corporation invests in high-volatility assets. For high-risk assets, the shareholders gain on the up leg of the volatility but shift some of the loss on the down leg of volatility to the creditors defaulting on the debt. Shareholders bear losses only to the extent of corporate equity, and after equity is lost, they avoid the loss by defaulting on corporate debt.

The shifting of losses to debt holders means that management can improve the value held by shareholders by moving corporate assets from stable, low-risk assets into investments with high volatility. Indeed, the option-like feature of corporate stock means that moving to high-risk investments can improve shareholder value, even in cases in which the probability-discounted value of the corporate assets as a whole declines. Shareholders, moreover, need not take account of the losses suffered by outsiders — including employees, suppliers, and customers — when the down leg of volatility causes the corporation to fail, nor do they have to pay for bailout costs. American taxpayers have sometimes bailed out corporations at the nationwide cost of billions just to maintain economic stability. We tend to have an American system cynically described as “privatization of gains, and socialization of losses.”¹

The proposal would eliminate the deduction for the interest paid on debt in excess of the risk-free interest.² Credit-risk interest tracks the option-like feature of corporate equity, because it measures both the creditors' risk of default and also the protection against losses when assets are volatile.

Disallowing interest above risk-free interest would also go a long way toward solving the intractable problem of distinguishing debt from equity. Both debt and equity are capital available to the corporation. Debt, however, represents payments that must be made without regard to the

¹See, e.g., Michael Bloomberg, “Bloomberg Addresses Pending Financial Job Losses” (Sept. 15, 2008), available at <http://www.observer.com/2008/real-estate/bloomberg-addresses-pending-financial-job-losses>.

²See Joint Committee on Taxation, “Federal Income Tax Aspects of Corporate Financial Structures,” 104 (1989) (describing proposal to disallow interest above a specified rate).

success of corporate investments. Payments on equity depend on the success of the assets. Risk is a feature of equity, which is only paid contingent on corporate success. Distinguishing debt from equity has been a quagmire. Disallowing the credit-risk portion of debt, however, would be an administrable, gradual, incremental remedy, far more effective and fair than a cliff-effect rule that makes an instrument all debt or makes it fail in full.

Current Law

Section 163 allows a corporation to deduct interest on its indebtedness but does not allow deductions for dividends or redemptions of equity. The law, however, sometimes recharacterizes instruments called debt as, in fact, disguised equity. Debt must be payable without regard to business success:

Purported debts may be denied recognition if, as a matter of “substantial economic reality” the funds were not “advanced with reasonable expectations of repayment regardless of the success of the venture,” but, like risk capital, they “bear a substantial risk of the enterprise.” Since Congress has chosen to give different tax consequences to debt and to stock, it “would do violence to the congressional policy” to treat as debt a purported loan that “is so risky that it can properly be regarded as venture capital.”³

The law distinguishing debt from equity has, however, proven to be a mess. The leading article analyzing the distinction between debt and equity has 1,591 footnotes citing multiple cases — and none of those footnotes is wasted.⁴ In 1969 Congress authorized Treasury to issue regulations distinguishing debt and equity. Treasury issued final regulations in December 1980 (11 years after authorized), but the effective date was delayed several times, and the regulations project was finally abandoned in 1983.⁵ The regulations were too complicated. They also allowed instruments that were considered equity under the “quack like a duck” test to be considered debt for tax purposes. Since 1983 Treasury has not tried again to distinguish debt from equity under the 1969 congressional authorization.

Evaluation of a debt’s risk includes an examination of the corporation’s ratio of debt to equity. If the corporation is too thinly capitalized (has too

much debt), the debt is recharacterized as equity.⁶ Section 385, which authorized Treasury to write regulations to settle the distinction between debt and equity, lists the debt-equity ratio as a factor Treasury could consider. Debt-equity is a balance sheet test and generally accepted (nontax) accounting adopts a convention (or fallacy) that the assets are now worth their depreciated cost. In thin capitalization determinations, however, the courts generally try to figure out the value of the corporation’s assets, including intangibles like goodwill, to see if the debt has adequate collateral behind it.⁷ Calculating the fair market value of intangibles, which are not treated as assets by generally accepted accounting, is often very hard to do.

In any event, the debt-equity test is an all-or-nothing test: All debt is good until it fails. An all-or-nothing test encourages taxpayers to play chicken, pushing up against the line to maximize the interest deduction, without actually crossing the line and losing the deduction for all interest on all debt. In 1989 Congress amended section 385 to allow a single instrument to be treated as “in part stock and in part indebted.”⁸ This proposal, consistent with the amendment, would split a single instrument, treating the risk-free interest on debt as a deductible expense and treating the interest in excess of the risk-free rate that covers credit or default risk as a payment of equity.

Reasons for Change

Corporate equity is like an option in giving the equity holders the gain from an investment in volatile assets while protecting them from some of the loss from those assets. Shareholders get paid only after creditors are paid, but they get the gain from an investment position without creditors participating in the gain. For losses on a risky position, by contrast, the shareholder can lose equity, but after the equity is lost, it is the creditors who lose — by default on the debt — and not the shareholders. The equity position of giving shareholders all the gains but only some of the losses from a risky position means that the value of the shareholder position is enhanced by increasing the risk involved in shareholder assets.

⁶See, e.g., *John Kelley Co. v. Commissioner*, 326 U.S. 521, 526 (1946); *Dobkin v. Commissioner*, 15 T.C. 31 (1950), *aff’d per curiam*, 192 F.2d 392 (2d Cir. 1951).

⁷See *Kraft Foods Co. v. Commissioner*, 232 F.2d 118 (2d Cir. 1956); *Gooding Amusement Co. v. Commissioner*, 236 F.2d 159 (6th Cir. 1956). *But see* section 163(j) (denying interest paid to tax-exempt related entity when debt-equity ratio exceeds 1.5:1, looking only to adjusted basis of assets).

⁸Section 7208(a).

³William T. Plumb Jr., “Federal Income Tax Significance of Corporate Debt: A Critical Analysis and a Proposal,” 26 *Tax L. Rev.* 360, 503 (1971) (citations omitted).

⁴*Id.* at 640.

⁵T.D. 7747 (“final” regulations issued); T.D. 7920 (said “final” regulations withdrawn).

Consider, for example, a corporation with assets worth \$500 million and debt of \$400 million as shown in the following balance sheet:

Balance Sheet	
Assets	Liabilities
\$500 million	\$400 million
	Equity
	\$100 million

If the \$500 million in assets is invested in stable low-volatility investments, then, as shown by the balance sheet, the shareholder equity position is worth \$100 million.

An increase in risk that does not go beyond risk of loss of equity does not enhance equity value. Assume, for example, that the corporation has access to an investment worth \$600 million in 50 percent of the cases and \$400 million in 50 percent of the cases. The probability-discounted value of the shareholder equity would not change:

$$50\% * \$600m - \$400m + 50\% * (\$400m - \$400m) \\ = 50\% * \$200m + 0 = \$100m$$

Similarly, if the corporation invested in assets that had a lower expected (probability-discounted) value with losses possible that would only lose equity, it would be the shareholders who would suffer. Thus, if the new investment had an expected value of a 40 percent chance of \$600 million and a 60 percent chance of \$400 million, the asset would have a probability-discounted worth of only:

$$40\% * \$600m + 60\% * \$400m = \$240m + \$240m \\ = \$480m$$

which is a \$20 million loss of expected value of the corporation assets. Shareholders would suffer all the loss because equity would be worth:

$$40\% * (\$600m - \$400m) + 60\% * (\$400m - \\ \$400m) = 40\% * \$200m = \$80m$$

which is the same \$20 million reduction of equity that was suffered in the value of the assets.

If, however, an increase in the volatility of the corporate investments brings the losses beyond the range of corporate equity, the shareholders can benefit from increased volatility.

Assume, for example, the corporation shifts its investments to currency options or some other investment that has a 10 percent chance of being worth \$5 billion and 90 percent chance of being worth nothing. The assets have the same expected value of \$500 million before and after the shift because the value of the currency position is:

$$\$5b * 10\% + 0 * 90\% = \$500m$$

Shareholders, however, lose only their equity in the 90 percent of the cases in which the high-volatility investment fails. The shareholder equity-expected value is improved from \$100 million to \$460 million because:

$$10\% * (\$5b - \$400m) + 90\% * 0 = 10\% * \$4.6b = \\ \$460m$$

The improvement in the value of the equity position, by more than four times, arises because equity gets the gain but does not bear the full loss. In 90 percent of the cases in the hypothetical investment, creditors are wiped out and the corporation must be liquidated. The rational shareholder and management loyal to shareholder value will nonetheless shift to the risks that usually yield suicide for the firm, because the protection from loss shields their own position from most of the downside risk, and because the shift increases the value of equity from \$100 million to \$460 million.

Indeed, because of the option-like characteristics of their position, shareholders will rationally pursue investments that reduce the value of the corporation's assets. Assume now that the value of the up leg of the contemplated position is only a 10 percent chance of \$1.41 billion. As above, in 90 percent of the cases the option position is worthless. The shift to riskier investment reduces the expected value of the corporation's assets from \$500 million down to:

$$10\% * \$1.41b + 90\% * 0, \text{ or } \$141m$$

which is a drop in value to 28 percent of the value of the corporation's assets before the move. Still, the shareholders' equity position is improved by \$1 million by the shift because:

$$10\% * (\$1.41b - \$400m) + 90\% * 0 = \$101m$$

which is a modest improvement over the prior equity with a stable investment.

When creditors can identify that debt carries some risk of nonpayment or credit risk, they charge interest above the risk-free rate. Interest has two elements. The first is rent paid for the use of money for the term to convince the creditor to give up consumption and alternative investments on the absolute assumption that the amount lent will be repaid. The second element is the interest above the risk-free rate to cover the credit risk that the amount lent will not be returned. The option-like feature of corporate debt is tracked by the second element, or credit-risk extra interest, at least insofar as the creditors can identify the risks. The option value of corporate stock arises solely because the debt will not be paid on the down leg of a volatile investment.

Under current law, determining whether a debt instrument has too much risk requires the courts to

calculate the value of corporate assets, including intangible nonmarketable assets that the accountants consider to have too speculative a value to put on the balance sheet. Those calculations of value entail a great deal of speculation. Some deductions for credit-risk interest are tolerated under current law. The all-or-nothing rule of the debt-equity ratio test, for example, means that the IRS and courts have only the one draconian remedy of denying all interest, and they need to back off from applying that fatal remedy at the first sign of risk. Taxpayers play chicken with the rule, knowing that the law must allow them some risk and that the value of intangibles is speculation, even though expenses are supposed to be payable in any event without regard to the success of the enterprise. Sometimes taxpayers go too far in the game of chicken and lose everything. All recharacterizations, moreover, require the IRS to perceive the risk of default on audit, prove value, and be able to make the case that the risk is substantial. In practice, the IRS will make its case largely when the risks have ripened into real defaults, and a rule that is applied only to meltdowns that have occurred is applied too late to have an effect on corporate behavior as to the riskiness of assets or the amount of debt to undertake.

Tax law encourages the extra risk because debtors get to deduct credit-risk extra interest. Creditors have to pay tax on the extra interest above the risk-free rate, but the tax rates of creditors and debtors are asymmetrical. Taxpayers sort themselves into clienteles: Creditors are low-effective-rate taxpayers who can bear ordinary tax rates on interest at low effective rates, and debtors are a high-effective-rate clientele who get the most value out of interest deductions.⁹ Thus, as debt becomes riskier, tax adds more value on the deduction side than it includes in income on the income side. Tax therefore adds value to the extra risk and encourages riskier positions.

If the losses from riskier corporate investments were borne entirely by creditors, we might well just say that the creditors need to protect themselves. But the costs of corporate failure on the down leg of high-risk investments are borne not just by creditors, but by stakeholders who were not party to the debt contract. Corporate failure entails loss of employees' jobs and the customized value of their skills. Customer and supplier chains are disrupted, and the big failures are bailed out by the American taxpayer to avoid a more general economic melt-

down. The harm to external parties might well justify penalties on risk-enhancing positions beyond the proposals here. These proposals, however, are moderate in only disallowing the tax subsidy to the positions.

Explanation of the Proposal

The proposal would disallow interest on corporate debt paid in excess of the risk-free rate. The credit-risk interest is a measure of the option-like feature of equity, because the extra interest is the current estimate of the chance of default on the debt and creditor loss. Deduction of the extra interest is an incentive to go into high-risk debt, even though creditors pay tax (at lesser effective tax rates) on the extra interest received.

Denying a deduction for the credit-risk interest is also an administrable, incremental way to separate debt from equity. Dividends and payout on stock are a distribution of corporate profits, not an expense that should be deducted to calculate the profits. Risk is a stock-like feature, even on instruments designated as debt. From the baseline that risk is an equity feature, the deduction of credit-risk interest is a subsidy inappropriate for a risk-coverage payment. Disallowing the credit risk takes away the tax subsidy of as much as 35 percent, that is, the tax rate times the credit-risk interest.

Targeting credit-risk interest is a gradual remedy for disguised stock: If the risk is low, as perceived by the parties in the negotiation of the interest rate, the deduction lost will be low as well. As the risk grows, as reflected in the negotiated credit risk, the deduction is more valuable and the loss of the deduction will be larger. The gradual constraint on the equity-like credit-risk interest should be a fairer and more effective remedy than the cliff that occurs when an instrument is treated as all interest-deductible debt or all no-deduction stock.

Disallowing credit-risk interest also relies on market perceptions of risk, and market perceptions are likely to be more accurate than tests, such as the debt-equity ratio or capital adequacy, that rely on the balance sheet. Balance sheet tests of risk, such as thin capitalization and capital adequacy,¹⁰ require an evaluation of the value of all assets, including intangibles that are not on the traditional balance sheet. Traditional balance sheet tests do not take account of volatility of the corporate assets, although evaluation of risk of default should. Creditors, however, have an incentive to protect themselves, and they seem to be able to do a better

⁹Calvin H. Johnson, "Tax Shelter Gain: The Mismatch of Debt and Supply Side Depreciation," 61 *Tex. L. Rev.* 1013, 1039-1047 (1983); Myron Scholes et al., *Taxes and Business Strategy: A Planning Approach* 130 (3d ed. 2005) (discussing tax clienteles).

¹⁰For an interesting, recent discussion of capital requirements on reducing risk in light of the subprime mortgage meltdown, see Samuel G. Hanson et al., "A Macroprudential Approach to Financial Regulation," 25 *J. Econ. Persp.* 3 (2011).

job than is done by GAAP balance sheets or by government administration of capital adequacy.

Denying the deduction for the credit-risk portion of debt would reduce the pressure on the debt-equity line, but it would not solve all problems. For example, current law denies debt character to any part of an instrument payable in stock by reason of the issuer's decision,¹¹ and that rule should continue. Recharacterization in full would mean that none of the payments on the instrument are deductible interest. But if credit-risk interest is made nondeductible, the disallowance will be larger for risky debt closer to the line.

The proposal would require and allow the corporation to use the long-term applicable federal interest rate (AFR) to calculate deductible interest. Federal borrowing is by definition zero-risk debt because the government can print money to repay its debts.¹² Corporate AAA ratings have some risk to them above federal bonds, and the failure of the credit ratings in the recent subprime mortgage collapse make it wise not to rely on private credit ratings to assess zero risk. Use of the long-term AFR will give the corporation a slightly higher interest rate than would arise if short-term and midterm debt were carved out of its debt, because long-term debt tends to have high interest to account for inflation and possible tax increases.

Under the proposal, interest in excess of the AFR would be classified as dividends on preferred stock. The credit-interest debt would be eligible for the 15 percent rate on capital gain allowed to dividends by section 1(h)(11). Credit-risk interest received by corporations would qualify for the dividends received deduction.¹³ Dividends paid to overseas parties would be subject to 30 percent withholding.¹⁴ Disallowing an interest deduction without treating the credit-risk interest as equity would increase the penalty on the credit risk, and fully recharacterizing the credit-risk interest as equity on

both sides would reduce the penalty on high-risk debt. Some penalty on risk is justified because of the external harms of corporate failure. It is difficult, however, to estimate the externalities of risky debt so as to calibrate the appropriate penalty. This proposal accordingly adopts a fair non-penal approach to recharacterization, albeit an approach that would increase the total tax on risky debt.

Calculation of the interest deduction would require the company to know its debt outstanding in any period. The debtor and creditor would, however, be required to exchange information returns at the end of the year, with a copy sent to the IRS, and the reports would need to be consistent. Prima facie, the creditor's report would be presumed to be binding on both.

The proposal would have no effect on bank deposits backed by a federal guarantee, because depositors neither demand nor get a higher interest rate, even when the bank gets into speculative high-volatility investments. Guaranteed deposits rely on the federal guarantee rather than credit-risk levels of income.

The proposal should raise revenue roughly estimated at between \$3.5 billion and \$20 billion per year.¹⁵ Official revenue estimates that Congress would rely on are made by the Joint Committee on Taxation, but rough estimates help assess the impact of a proposal, even with a broad range of possible outcomes.

A prior Shelf Project proposal recommended that the corporate tax be replaced with a 20-basis-point quarterly tax on market valuation of publicly traded corporations.¹⁶ The current proposal is made only on the assumption that the recommendation for the replacement of corporation tax is not adopted.

¹¹Section 163(l).

¹²Simply printing money to repay its debt will increase inflation unless taxes withdraw the money from the economy at an adequate rate. But the creditor is always better off on receipt of newly printed money, even if it causes inflation. The creditor will own such a trivial part of all dollars even after payment that the combination of payment and inflating dollars will leave the creditor better off than with nonpayment.

¹³Section 243.

¹⁴Section 1442.

¹⁵For 2007, corporations claimed \$2.065 trillion in interest deductions (IRS *Statistics of Income*, "2007 Complete Corporate Returns," Table 2). Long-term AFRs were 4.98 percent (Rev. Rul. 2007-57, 2007-2 C.B. 531, *Doc 2007-19362*, 2007 TNT 163-3). Prime rates were 8 percent, and triple AAA bonds were at 5.5 percent (Federal Reserve Statistical Release, "Annual for 2007," available at <http://www.federalreserve.gov/releases/h15/data.htm>). Maximum tax rates were 35 percent:

\$2 trillion * 35% * (8% - 5%) = \$21 billion and \$2 trillion * 35% * (5.5% - 5%) = \$3.5 billion.

¹⁶Johnson, "Replace the Corporate Tax With a Market Capitalization Tax," *Tax Notes*, Dec. 10, 2007, p. 1082, *Doc 2007-26347*, 2007 TNT 238-36.