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Using Risk Analysis to Classify Junk Bonds as Equity for Federal Income Tax Purposes

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INTRODUCTION

A continuing dilemma in tax law is where and how to draw the line distinguishing debt securities from equity securities. The basic rule, as articulated in section 163(a) of the Internal Revenue Code (the "Code"), appears simple: interest paid or accrued on indebtedness is allowed as a deductible business expense. Conversely, payments made to equity-holders (i.e., dividends) do not give rise to a deduction. The problem with these polar, distinct rules is that many of the financial instruments to which they apply are not distinct. These hybrid instruments lie on a continuum between traditional forms of debt and equity, and as a result, the polar rules provide little or no guidance.

Corporations have capitalized on the simplicity of the term "indebtedness" in section 163(a) by labeling as "debt" many financial instruments that only remotely resemble classic debt. This approach provides tremendous financial benefits because all payments that the corporation makes to the holders of these "debt" instruments are deductible, thus greatly reducing...
the corporation's income tax burden. However, because corporate share-
holders and management are not willing to sacrifice the advantages of
issuing securities containing equity features, they have crafted hybrid se-
curities which retain equity features, but which have the tax advantages of
debt.

This Note explores the problem of characterizing debt and equity for tax
purposes and concludes that the degree of investor risk should be used to
determine how to classify an instrument. Part I discusses the concept of
interest. Part II looks at the policies implicated in the debt-equity controversy
and suggests how these policies can support principled distinctions between
debt and equity. The techniques that the courts and the Internal Revenue
Service (the "IRS") currently use to deal with this problem are discussed
in Part III. Part III also sets forth the policies and goals that regulation in
this area should achieve. While existing techniques classify junk bonds as
indebtedness, Part IV of this Note proposes an alternative method of
distinguishing debt from equity which classifies junk bonds as equity. By
identifying the specific interest rate at which equity risks are involved, Part
IV also supplies a vital link in the formation of a partially-integrated
corporate tax system. Part V discusses how the technique proposed to
classify junk bonds can be applied to any security to determine whether its
nature is either debt or equity.

I. A PRELIMINARY INQUIRY INTO "INTEREST"

Another way to view the deductibility issue is to say that section 163(a)
allows deduction for interest payments but prohibits deductions for dividend

4. The flexibility and variety of a hybrid security offers advantages to both the corporation
and the investor. For example, a convertible bond is more attractive to investors than a
standard bond because investors value the ability to exchange their debt instrument for an
equity instrument in the future if such an exchange becomes financially beneficial. This type
of investment also saves investors the additional cost of acquiring the same opportunities
through the options market. Furthermore, many investors who are subject to restraints on
equity investments can obtain deferred equity financing in this manner. The primary advantage
to the corporation, of course, is that the investors value these equity features, which means
that they will demand a lower rate of return from the issuing corporation. Madison, The
Deductibility of Interest on Hybrid Securities, 39 Tax Law 465, 467 (1986). See generally R.
Brealey & S. Myers, Principles of Corporate Finance 521-35 (3d ed. 1988) (overview of
two hybrids: warrants and convertible securities).
5. High-yield, high-return bonds are commonly referred to as junk bonds. Junk bonds
can also be defined as those bonds that are below investment grade, or those rated below
"Baa" by Moody's rating service. See R. Brealey & S. Myers, supra note 4, at 307
6. An integrated tax system will grant relief (e.g., a deduction) to corporations for
dividend payments. A proper definition of a deductible interest expense is the first step in
granting corporate-level relief for dividend payments. After defining the maximum percentage
that an instrument can return and still be classified as debt, any excess percentage can be
treated as dividends (and granted the appropriate relief), notwithstanding the fact that the
excess return in question purports to be a payment on a debt instrument. See Daily Tax Rep.
(BNA) No. 25, at G-9 (Feb. 6, 1990) ("[E]limination of the distinction between debt and
equity is the single most important issue to be resolved by corporate tax integration."); see
also infra note 12 and accompanying text.
payments. However, these labels wither under further analysis, so that in the context of classifying debt and equity, interest is by itself an empty label. The United States Supreme Court has defined interest on indebtedness as "compensation for the use or forbearance of money." The problem with this definition is that it is of no help in distinguishing which types of "uses or forbearances" will qualify under section 163(a)'s deduction allowance. If the definition is taken at face value, then any time a corporation paid a dividend on a share of common stock, the corporation would be compensating the shareholder for the use of her money and would get to take a deduction. Simply defining "interest" begs the question of where to draw the line between debt and equity.

II. TAX POLICY AND THE DEBT-EQUITY DISTINCTION

A. The Policies Behind Interest Deductibility

The importance of properly classifying corporate financial instruments as either debt or equity cannot be understated in corporate tax law. Indeed, the problem of distinguishing debt from equity is in essence a question of defining corporate income. The Code is straightforward in providing that corporations are taxed on income net of deductible expenses. This provision is based on the judgment that corporations should not be taxed on funds that are used to service debt. However, this view of corporate income becomes inadequate when confronted with the myriad of complex financial instruments that are issued as "debt." Thus, a more refined policy must be developed that justifies the section 163 deduction and also distinguishes borderline securities.

The starting point is to accept the premise that a separate corporate income tax is appropriate. Indeed, there have been many proposals

8. Deputy v. du Pont, 308 U.S. 488, 498 (1940). Unless specified otherwise, this is the sense in which the term "interest" will be used throughout this Note. In the context of financial theory, the "interest rate" is the means for discounting future consequences into current transfer prices and is determined by individuals' time preference, productivity and uncertainty regarding the future. De Alessi, How Markets Alleviate Scarcity, in Rethinking Institutional Analysis & Development: Issues, Alternatives, & Choices 358-59 (1988).


advocating the elimination of the corporate income tax through integration. However, "[t]he political consensus . . . has always been] that separate taxation of corporate income is warranted," and the policy justifications behind charging a premium to corporations in the form of double taxation of corporate income will likely persevere. Again, it is important to note that the proposal suggested in Part IV of this Note will still be effective and fully functional under a partially integrated revision of the corporate income tax. Given a separate corporate income tax, the problem becomes one of defining exactly what portion of gross income should be taxed. One persuasive justification for not taxing funds that are used to pay interest on debt is "to prevent an increase in tax for a transaction that has caused no increase in anyone’s wealth or net income." The danger of taxing too great a portion of income (by disallowing deductions for legitimate payments on debt instruments) is that some of this tax will be based on gross income, thereby denying taxpayers their right to deduct "ordinary and necessary" business expenses. The danger of taxing too small a portion (allowing deductions for payments on equity instruments) is the erosion of the double-tax system.

12. Integration could be accomplished by any of several means, most likely allowing a corporate deduction for dividends paid, allowing shareholders a credit for their share of corporate taxes paid or by simply taxing shareholders on their share of the corporation's net income, similar to partnership taxation. For a discussion of the pros and cons of these ideas, see A.L.I., FEDERAL INCOME TAX PROJECT 49-53 (Reporter's Study Draft June 1, 1989); see also Taylor & Aidinoff, Approaches to Debt: Is Integration the Answer?, 67 TAXES 931, 933 (1989) ("[I]ntegration would answer [the overleveraging] problem by eliminating the tax burden on distributed earnings and thus the tax discrepancy between interest-bearing debt and equity.").


14. The benefits of limited liability have been used to justify the double taxation of corporate income. For a discussion of this and other justifications, see Comment, Hybrid Instruments and the Debt-Equity Distinction in Corporate Taxation, 52 U. Chi. L. Rev. 118, 125 n.33 (1985).

15. Sheppard, supra note 13, at 1147 ("We are not going to get integration any time soon.").

16. Under partial integration, a proposal, such as the one in this Note which identifies those "interest" payments that should properly be classified as dividends, essentially determines which payments should be fully deductible (those payments on true debt instruments) and which payments should be non-deductible and therefore subject to relief through a partially integrated tax system. A.L.I., supra note 12, at 87. A fully integrated tax system, of course, would make such a determination moot, since characterization of payments as dividends or interest would no longer be of any significance.

17 Gross income is generally defined as gross receipts less cost of goods sold. BLACK'S LAW DICTIONARY 632 (5th ed. 1979).


19. Under this view interest expense should be deductible even without the express assurance of I.R.C. § 163(a), because making such payments is necessitated in the ordinary course of a normal business. In this way, deductions for interest paid on true indebtedness and deductions for wages or rental expense are equally legitimate deductions under the "ordinary and necessary expenses" allowance of I.R.C. § 162(a) (1988).

20. The integrity of § 163 is vital to the corporate tax structure itself. If § 163 became
The focus of this analysis rests on *proper measurement of economic income*. When distinguishing debt from equity, the proper task is to determine whether permitting a section 163(a) deduction on a particular instrument will result in proper income measurement. Those financial instruments that economically are not debt should not be granted a section 163(a) deduction regardless of the form of the instrument, the form of payment or the purpose for which the funds are used. The key ingredient to classification, therefore, is to find the true nature of the instrument itself, because once determined, the resulting deductibility (or non-deductibility) under section 163(a) is a proper measurement of income.

**B. Using Tax Policy to Distinguish Between Debt and Equity**

The basic criteria for separating true debt instruments from true equity instruments are simple. Funds transferred with a reasonable expectation of repayment are debt.\(^{21}\) This type of a debtor-creditor relationship generally operates independently of the risk of success of the business.\(^{22}\) When a financial instrument's nature gives rise to such a relationship, the tax system's net income concept warrants deductibility. An equity-holder, on the other hand, participates "in the pot luck of the enterprise."\(^{23}\) An equity investor is "an adventurer in the corporate business,"\(^{24}\) experiencing the entrepreneurial risks that the business will profit.\(^{25}\) When the very essence of a financial instrument fits this description of equity, then not allowing a deduction for the corporate payment properly measures income. Payments on such equity instruments are not a cost of doing business, but rather a distribution of profits that must be included in a corporation's before-tax income.

Unfortunately, courts have been unsuccessful in applying this somewhat "spiritual" distinction,\(^{26}\) and the legislature has done little better.\(^{27}\) Furthermore, many scholars doubt that any practical application of these ideas is even possible,\(^{28}\) because of the lack of any quantifiable measure. However, these spiritual concepts can be brought to life through risk analysis which, in Part IV of this Note, transforms these policies into a workable tool which classifies financial instruments to properly measure economic income.

ineffective, all dividend payments would be deductible and there would no longer be a double-tax on corporate income.

\(^{21}\) Gilbert v. Commissioner, 248 F.2d 399, 402-03 (2d Cir. 1957).
\(^{22}\) Commissioner v. O.P.P Holding Corp., 76 F.2d 11, 12 (2d Cir. 1935).
\(^{23}\) Aqualane Shares, Inc. v. Commissioner, 269 F.2d 116, 119 (5th Cir. 1959).
\(^{24}\) O.P.P Holding Corp., 76 F.2d at 12.
\(^{25}\) Sherwood Memorial Gardens, Inc. v. Commissioner, 42 T.C. 211, 229 n.30 (1964).
\(^{26}\) See infra notes 59-63 and accompanying text.
\(^{27}\) See infra notes 41-58 and accompanying text.
\(^{28}\) See infra note 79 and accompanying text.
There are serious practical concerns to consider for corporate behavior when classifying debt and equity for tax purposes. A major concern in this area is neutrality of the tax laws. By allowing a deduction for interest paid on debt, section 163 "provides a strong incentive for debt rather than equity financing." Although allowing a deduction for legitimate debt payments is proper in measuring net income, improperly classifying true equity instruments as debt instruments provides an incentive for debt-financing far beyond that which could have been contemplated by the originators of the "net" income concept.

The bottom line effect of encouraging debt financing is the existence of a larger amount of debt outstanding and a smaller amount of equity. This is widely viewed as dangerous and unstable. The huge premiums paid in leveraged buyouts are also thought to be a result of these potential tax savings. Those concerned with these problems emphasize the need to bring neutrality to the system so that tax considerations alone do not drive corporate transactions, but are driven by their underlying economic value.

Some proposals addressing the interest deductibility issue are aimed directly at these effects, disallowing interest deductions for debt incurred to replace existing equity. Focusing on these practical effects, however, when fashioning a solution to the debt-equity problem, is misguided for two reasons.
reasons. First, these effects are merely symptoms of the real problem. Disallowing an interest deduction for a debt instrument (if it truly be a debt instrument) solely because it was used to finance a takeover distorts the real economic policies. Conversely, allowing a deduction for what is really an equity instrument just because the proceeds were used for other than a leveraged buyout is unsound because it takes a step towards eroding the existing two-tier corporate tax structure. The problem here is in identifying the securities themselves as debt or equity, and the mere symptoms—the uses of the proceeds from the instruments—are not the proper policy focus for a solution. A second flaw of the "practical approach" is the extreme difficulty of predicting and controlling corporate behavior. The prediction problem is particularly acute in the present context, because "the impact of taxation on corporate financial policy is very poorly understood." Therefore, attempting to draw a distinction between debt and equity based on policies of changing corporate behavior seems futile.

There certainly is a need for concern when corporate financial structure radically changes shape, as it has done recently. However, narrowly focusing these concerns has hindered efforts to resolve the debt-equity problem. Focusing on the basic goals of the corporate income tax—proper measurement of economic income—will, however, avoid these distractions. This will allow tax law to attack the heart of the problem—the determination of the essential character of a security as either debt or equity.

III. THE DEVELOPMENT OF CURRENT LAW

Although section 163(a) authorizes a deduction for interest, the section that takes center stage in the debt-equity controversy is section 385, entitled "Treatment of Certain Interests in Corporations as Stock or Indebtedness." Additionally, an overabundance of common law doctrine has developed surrounding these Code sections. Following is a discussion of the legislative and judicial attempts at solving the debt-equity dilemma—attempts that raise more questions than they answer.

37. See Perry & Taggart, The Growing Role of Junk Bonds in Corporate Finance, 1 J. Applied Corp. Fin. 37, 45 (1988) (concluding that junk bonds are a product of various economic forces—a symptom rather than a solution).
38. A. Auerbach, Tax Policy and Corporate Borrowing 31 (Sept. 1989) (prepared for the October, 1989 Federal Reserve Bank of Boston's conference Are the Distinctions Between Equity and Debt Disappearing?) (unpublished manuscript on file with the Indiana Law Journal); see also id. at 1 ("[C]hanges in tax incentives are not the primary cause of the shift towards debt.").
A. Statutory Regulation

Section 385 was enacted to clear up the vagueness in section 163(a)'s "interest or indebtedness" language. Unfortunately, however, section 385 did not respond directly to the debt-equity classification problem. Instead, it merely grants authority to the Treasury to prescribe regulations necessary to determine whether a type of security is debt or equity. Section 385(b) contains a set of factors that the Treasury may use in constructing its regulations. These factors essentially are agreed upon characteristics which traditionally have distinguished debt instruments (such as bonds) from equity instruments (such as common stock). Keeping these traditionally distinct instruments in mind as examples aids analysis of the section 385(b) factors.

Under the first factor, debt characterization will result from the existence of those features that are typical of a simple bond or loan. The second factor derives from the fact that the more subordinated a security is, the closer it resembles common stock, whose holders receive interim or liquidating payments only after all other claimants have been satisfied. The third factor attempts to identify those corporations that are inadequately capitalized and thus are subject to having their purported debt recharacterized as equity to comport with some minimal debt-to-equity ratio. The fourth factor looks directly to the future form of the security, taking into account the possibility that a firm with a convertible bond outstanding has in essence a potential share of common stock outstanding. The final factor scrutinizes corporations that are making distributions to debtholders in amounts contingent upon their status as stockholders, thus rendering the debt security a mere surrogate for common stock.

41. I.R.C. § 163(a).
42. I.R.C. § 385(a).
43. I.R.C. § 385(b). For a discussion of these factors, see infra notes 44-50 and accompanying text.
44. "[W]hether there is a written unconditional promise to pay on demand or on a specified date a sum certain in money in return for an adequate consideration in money or money's worth, and to pay a fixed rate of interest" I.R.C. § 385(b)(1).
45. "[W]hether there is subordination to or preference over any indebtedness of the corporation" I.R.C. § 385(b)(2).
46. "[T]he ratio of debt to equity of the corporation" I.R.C. § 385(b)(3).
47. The Treasury has attempted to characterize otherwise straight debt as equity when the debt-to-equity ratio of the corporation exceeded ten to one. Sheppard, supra note 13, at 1144-45.
48. "[W]hether there is convertibility into the stock of the corporation" I.R.C. § 385(b)(4).
49. See R. Brealey & S. Myers, supra note 4, at 528 (characterizing a convertible bond as a combination of a bond and a call option on the firm's stock).
50. "[T]he relationship between holdings of stock in the corporation and holdings of the interest in question." I.R.C. § 385(b)(5).
With these factors in mind, the Treasury asserted the authority granted it under section 385. In 1980 it proposed regulation section 1.385, which became effective on July 1, 1982. The regulation created a bright-line test that classified a hybrid security as debt if it was not issued in proportion to stock holdings, and if the fair market value of the debt features of the security exceeded fifty percent of the total value of the debt and equity features combined. Thus, if the value of a bond's debt features (e.g., fixed payments and principal repayment as described in section 385(b)(1)) were less than half of the total value of the security, then the security was classified as equity and no deduction was allowed for payments made pursuant to the instrument.

It did not take long for corporations to manipulate this rigid rule. Predictably, instruments were issued containing many equity features, but which had guaranteed payments of just greater than half the issue price. In 1983, in response to these corporate practices, the IRS took a stand by ruling that a particular kind of security, even though it was classified as debt under section 1.385, will nonetheless be taxed as an equity instrument. Because the section 1.385 regulations had now been effectively rejected by the IRS, they were soon after officially withdrawn.

No additional regulations have yet been issued under section 385. Furthermore, most lawmakers believe that section 385 is incapable of spawning workable regulations. Because of this impotence on the part of the legislators and administrators, courts have been virtually set free to fashion their own individual tests, which has led to the quandary described below.

B. Case Law

The approach that the courts have taken, both before the Treasury regulations were enacted and since their demise, is known as the "facts and
circumstances" test. Courts used this test to decide each case "on its own unique factual flavor." Understandably, this led to the development of an inordinate number of factors (at least thirty-eight) to be considered when deciding whether a particular security should be taxed as debt or equity.

One can imagine the lack of guidance a corporate planner or a district judge faces when called upon to make a decision in this area, when the cases at best offer tentative clues to the distinctions between deductibility and non-deductibility.

The current law dealing with the debt-equity problem needs to be changed for two reasons. First, as the above discussion demonstrates, there is no workable consensus as to what the law is. Second, current law, even when it is applied consistently, often produces results that are contrary to sound tax policy.

IV. A PROPOSED SOLUTION

There is no one clear answer to the multitude of difficulties surrounding the classification of financial instruments for tax purposes. The remaining portion of this Note, however, shows that risk analysis provides an analytically sound classification of financial instruments. This Note uses junk bonds as an example, but the analysis can be applied to any financial instrument. The general thesis for the remaining analysis is this: the degree of risk that an investor perceives necessarily indicates whether a security is in essence debt or equity.

59. Integral in the development of this approach was a rare Supreme Court decision in this area, John Kelley Co. v. Commissioner, 326 U.S. 521, 530 (1946) (There is no one characteristic which is determinative in this situation.). The IRS recently applied this approach in a technical advice memorandum, in which it concluded that "the preferred stock of Corp. X is properly classified for federal income tax purposes as equity because the characteristics of such stock, taken as a whole, more closely resemble those of an equity interest in a corporation rather than those of a debt instrument." Daily Tax Rep. (BNA) No. 166, at K-I (Aug. 27, 1990).


61. For a list of these factors, see Holzman, The Interest-Dividend Guidelines, 47 Taxes 4 (1969).

62. Factors named as important by the IRS include (1) the name given the instrument, (2) a fixed maturity date, (3) payment not dependent on earnings, (4) the right to seek court enforcement in the event of a default, (5) their capitalization, (6) identity of interests between shareholders and creditors, (7) the ability to obtain loans from outside lending institutions and (8) timely payment of all sums due by the borrower. Pusker, Debt-Equity Guidelines Subsequent to Withdrawal of Proposed Regulations, 67 Taxes 88, 90 (1989); see also Daily Tax Rep. (BNA) No. 166, at K-1 (Aug. 27, 1990) ("Although no single factor is determinative of the debt-equity issue, [the IRS recognizes that] courts give considerable weight to the intent and regulation of the parties involved.").

63. American Processing, 371 F.2d at 848 ("So large is [the number of cases] and disparate their facts, that for every parallel found, a qualification hides in the thicket.").

64. The one application that produces the wrong such result specifically dealt with in this Note is when current law is applied to junk bonds. See infra note 67 and accompanying text.
A. Risk Analysis

The rate of interest paid on a loan depends on how much risk the lender incurs. Whenever there is risk, the investor must be compensated with a higher premium. The amount of risk that is present in various types of investments can be illustrated by examining the returns of four security-types. Investment in a short-term Treasury bill (type (1)) is about the safest investment one can make. The average return on a Treasury bill will be less than that of a long-term government bond (type (2)), because the investor in such a bond must be compensated for the risk that interest rates will increase while the rate on the bond remains static. Investors will demand an even higher return for a corporate bond (type (3)) because unlike investment types (1) and (2), this instrument has an additional risk that the firm will not be able to meet its payment obligations (i.e., default risk). An investor in common stock (type (4)) has the greatest risk because she is now an owner instead of a creditor and has a direct share in the risks of the enterprise. There is, in effect, an “equity premium”—an increased return demanded when switching from an investment in the corporation’s debt to an investment in its common stock.

Tax law treats instruments in categories (1), (2) and (3) as debt, and section 163 allows a deduction for interest paid on those instruments. Traditional theory would insert junk bonds into category (3) of the above analysis—the same as a corporate bond, so that payments on junk obligations are therefore granted full deductibility. As a result, a corporation making eight-percent payments on a high-grade bond and also making sixteen-percent payments on a junk bond would have traditionally received a full deduction for both. After only the simple risk discussion set forth above, this result should already seem counter-intuitive. If a corporation must pay an extremely high rate of interest on a bond, investors are perceiving a greater amount of risk. As illustrated, the incremental risk that exceeds that of a corporate bond is a risk of the enterprise associated with an equity investment such as common stock. Regardless of the form of the investment, investors who receive such a high rate of interest are really receiving an “equity premium.”

66. This illustration is derived from R. Brealey & S. Myers, supra note 4, at 125-26.
67. Applying the factors delineated at supra note 62 shows that junk bonds will be classified as debt (e.g., junk bonds are labeled “debt” and have a fixed maturity date, the payments are not directly linked to earnings and there is normally no identity of interest with shareholders).
perceiving the security as debt. High risk in effect transforms a bond into an equitable instrument. Unfortunately, however, current law ignores these investor signals by blindly classifying junk bonds as debt, thereby granting deductions for payments that are essentially shareholder distributions, or "dividends."

Shareholders inject capital into a corporation and become subject to the everyday risks of the business, while lenders are "usually unwilling to bear a substantial risk of corporate failure." The true difference between a low-risk, low-return (high-grade) bond and a high-risk, high-yield (junk) bond embraces this same difference between shareholders and lenders because the degree of investor risk is the key factor separating true debt from true equity. If there is a high degree of risk, "any 'loan' to the corporation would necessarily be venture capital in reality, for a business loss by the corporation would be reflected in an inability to repay the 'loan.'" It follows from this analysis that when a corporation makes payments on a junk bond or other high-risk instrument, it is making a distribution to an investor who has supplied venture capital. Unlike repayment on a loan, such a distribution is not an ordinary cost of doing business. The concept of income "net of expenses" rejects allowing a deduction for payments that constitute a return on an investment that was risked upon the success of the venture. Therefore, so-called "interest payments" on junk bonds are not business expenses and should not be taxed as such; they are instead dividend payments that must suffer the burden of double-taxation.

**B. Applying Risk Analysis**

Lawmakers have certainly been cognizant of the key role that risk plays in making the debt-equity distinction. Concerns such as subordination to other indebtedness, the ratio of debt to equity in the corporation and other risk factors have influenced judicial classification of securities.

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69. See supra note 67 and accompanying text.
70. Slappey Drive Indus. Park v. United States, 561 F.2d 572, 581 (5th Cir. 1977).
72. Id. ("[T]he Congress decreed different treatment for the loss of funds advanced with reasonable expectations of repayment than it did for the loss of funds risked upon the success of a business venture."); see also supra notes 21-25 and accompanying text (discussing the policy reasons supporting the different treatment of debt and equity instruments).
73. I.R.C. § 385(b)(2) (1988). This factor measures risk because the chance increases that payment on the subordinated interest in question will be delinquent when other payment obligations are met first.
74. I.R.C. § 385(b)(3). A lower debt-to-equity ratio means that there is a greater amount of funds in the business (from the equity capital) to serve as a "cushion" for payment of fixed obligations, which reduces the likelihood of default on the obligations.
75. Other factors impacting on risk include (1) protection by adequate security, (2) history of payment of the interest, (3) the use of the advanced funds and (4) the expected source of the principal and interest payments. Plumb, supra note 3, at 503-35.
Moreover, a 1985 House of Representatives proposal in this area focused exclusively on risk factors. Even so, as demonstrated earlier, current law is unmanageable and theoretically unsound.

The reason that the current law is inappropriate, and the reason that those who have attempted a risk-analysis solution have eventually given up, is because of the difficulties of applying it to the securities currently in the marketplace. Two commentators recently have considered this task, only to conclude that all securities are risky to a certain degree, making it impossible to draw an objective line between "risky" and "not risky." However, although securities lie on a risk continuum, it does not follow that they cannot be separated in a principled manner. Rather, through the use of financial theory, risk can be quantified by examining the variability of the return of a security over time. The higher the variability, the more the return on a security fluctuates over time. The more a security fluctuates, the greater the uncertainty, or risk, associated with that security. Investors in such a security will demand a higher rate of return (e.g., a higher interest rate paid on their bond) as compensation for taking on a greater amount of uncertainty in their investment. This explains the difference in the returns demanded on equity securities, such as common stock, and the returns demanded on debt securities like high-grade corporate bonds. Equity has a higher variance than debt, so investors demand a greater rate of return for equity than they do for debt. Variability provides us with quantifiable distinctions between debt and equity.

76. H.R. 2476, 99th Cong., 1st Sess., 131 CONG. REC. H3180 (daily ed. May 14, 1985). This bill was a proposed amendment to I.R.C. § 279 dealing exclusively with acquisitions. The four factors involved were (1) subordination, (2) bond rating, (3) yield to maturity and (4) capitalization.

77. See supra notes 41-63 and accompanying text.

78. See supra note 64 and accompanying text.

79. Boyles, The Philosophy Underlying Section 385 Regulations: A Critical Evaluation, 17 TULSA L.J. 672, 677 (1982) (risk analysis "is virtually impossible to apply in a logical sense because any investment involves some risk of loss"); Comment, Hybrid Instruments and the Debt-Equity Distinction in Corporate Taxation, 52 U. Chi. L. Rev. 118, 122 (1985) ("the difference between the creditor and shareholder is one of degree only").

80. See Boyles, supra note 79, at 678 (admitting that "[i]t is possible to argue that the difference between a shareholder and a creditor lies in the nature and degree of risk assumed").

81. R. BREALEY & S. MYERS, supra note 4, at 129 (variance measures are natural indices of risk).

82. Such "fluctuations of return" are normally reflected in the market price of the security. For example, if Security A is valued at $100 in year 1, $200 in year 2, $20 in year 3 and $100 in year 4, its variability is greater than that of Security B, which was worth $100 in year 1, $105 in year 2, $95 in year 3 and $100 in year 4. For a discussion of how these prices are determined, see R. BREALEY & S. MYERS, supra note 4, at 47-49.

83. R. BREALEY & S. MYERS, supra note 4, at 127-30.

84. R. BREALEY & S. MYERS, supra note 4, at 131.
The behavior of a security in the marketplace will indicate whether it should be classified as debt or equity. Those securities with a low variability meet current policy definitions of debt. Since the law's goal is to tax as debt those funds advanced with the expectation of repayment regardless of the success of the business, the value of securities classified as debt must not fluctuate directly with the success of the business. Debt's variability will be lower because its value, instead of moving up and down with the daily hazards of business operations, will generally fluctuate only with changes in the general level of interest rates. On the other hand, securities with a high variability fit current policy definitions of equity. Equity holders are the adventurers in the corporate business, and the value of their investment will fluctuate daily according to perils of the economy which threaten the success of the venture.

C. Quantifying the Difference Between Debt and Equity

Given the relationship between the variability of a security and its riskiness, the remaining task is to determine the rates of return that correspond to debt variability, and the rates that correspond to equity variability. In other words, the key to making the debt-equity distinction is to identify the point at which investors begin demanding an increased rate of return due to equity-like variability, that is, the equity premium. To do this, variability must be quantified and empirically measured. This requires a brief statement of the underlying financial theory involved. The system-wide risk that concerns diversified investors is "market risk."" The sensitivity of an instrument's return to movements in the market is called its beta. The beta measures the amount that investors expect the price of their investment to change for each one-percent change in the market. The capital asset pricing model goes on to explain that in a competitive market, the expected risk premium varies

85. "Low" here should be taken as a level associated with traditional debt instruments, as opposed to the higher levels associated with traditional equity instruments, which will be termed as having a "high" variability.
86. To see why bond values change when the level of interest rates change, see R. Brealey & S. Myers, supra note 4, at 47-49.
87. In this way, investors (assuming a diversified portfolio) are being compensated for "market risk," which is the predominant source of uncertainty/variability for equity holders. R. Brealey & S. Myers, supra note 4, at 132-33.
88. See supra note 87
89. R. Brealey & S. Myers, supra note 4, at 134.
90. R. Brealey & S. Myers, supra note 4, at 134.
91. The risk premium here means the difference between the investment's expected return and the risk-free rate (e.g., the rate on short-term Treasury bills). This relates to the "equity
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in direct proportion to the beta. In simpler terms, the return on an investment depends on its variability—the higher the beta, the higher the return. The beta can thus be used to measure risk.

The question remains as to where to draw the line between debt-like betas and equity-like betas. The variability of long-term Treasury bonds and the variability of common stocks can be used as definitive benchmarks of debt and equity behavior, respectively. By comparing the behavior of these instruments with that of junk bonds, it becomes evident that junk bonds are equity, clearly separate from high-grade corporate bonds, which imitate Treasury bond behavior. High-grade bonds respond primarily to interest rates, as one would expect of traditional debt securities. In contrast, "[l]ike common stocks, junk bond values move up and down with the value of the issuing firm's assets." "Interest rates are a secondary factor" with junk bonds, the value of which corresponds largely to movements in stock prices and the performance of the economy.

This dichotomy has been empirically proven. A recent study suggests that a one-percent change in general interest rate levels had an impact on high-grade bond prices almost fifteen times that of the impact on low-grade bond prices. More importantly, this study revealed that the beta for low-grade bonds was .43, while high-grade bonds had a beta of only .22. The market risk for low-grade bonds was approximately twice that of their high-grade counterparts. Furthermore, that high-grade bonds had a beta of .22 shows that their sensitivity to the market is almost identical to the market

92. R. Brealey & S. Myers, supra note 4, at 137-39 (discussing the capital asset pricing model and the relationship between risk and return). The formula expressing this concept is "expected return = \( r_p + \beta (r_m - r_f) \)," where \( \beta \) is beta, \( r_m \) is the market risk premium and \( r_f \) is the risk-free rate. Id. at 138; cf. id. at 163-64 (discussing the arbitrage pricing theory, which assumes that each instrument's return depends on various independent factors, and concludes that an instrument's risk premium will depend on (1) the risk premium associated with each factor, and (2) the instrument's sensitivity to each factor).

93. Although, as shown infra notes 98-106 and accompanying text, the securities examined in this Note separated themselves neatly into distinct groups, facilitating the identification of definite beta values which correspond to equity-risks and definite beta values which correspond to debt-risks.

94. See R. Brealey & S. Myers, supra note 4, at 47-49.

95. Perry & Taggart, supra note 37, at 40.


98. B. Cornell & K. Green, supra note 96, at 9, 15.

99. B. Cornell & K. Green, supra note 96, at 15. The data for these figures was gathered for the period 1960-88. The beta was estimated by regressing the bond returns on the return on the Standard & Poor's 500 (i.e., the Standard & Poor's 500 stocks were used to represent the movement of the economy, and this movement was compared to the fluctuations of bond returns).
The sensitivity of long-term Treasury bonds (beta of .20), while the beta for low-grade bonds is nowhere near the other two.\textsuperscript{100} These results hardly present the risk-continuum problem pondered earlier.\textsuperscript{101} To the contrary, the results show that there is a distinct difference between the behavior of high-grade and low-grade bonds. High-grade bonds are debt. Like long-term Treasury bonds, their value fluctuates with interest rates and is relatively insensitive to general economic conditions.\textsuperscript{102} Conversely, low-grade bonds are equity. Their value is relatively insensitive to interest rate changes but experiences equity-like fluctuations. The bright line that is drawn between debt and equity here can also be quantitatively measured through securities' returns. Empirical results confirm that investors demand a risk premium in compensation for the higher beta.\textsuperscript{103} The return demanded for the low-grade bonds averaged three percent above the one-month Treasury bill return\textsuperscript{104} (the "federal rate").\textsuperscript{105} This three percent measures the premium over the (risk-free) federal rate that investors demand for holding securities that behave like equity. Securities that return less than the federal rate plus three percent should be granted a full deduction for federal income tax purposes. But once investors demand a return equal to the federal rate plus three percent, they are receiving an equity premium (in exchange for venture capital) and no deduction should be allowed.\textsuperscript{106}

\textbf{D Option Pricing Theory}

Financial theory is helpful in analyzing and understanding why junk bonds are more like equity than debt. When someone invests in a junk bond, she is in essence lending her money to the corporation (the borrower). This can also be viewed in terms of option pricing. Whenever a firm

\textsuperscript{100} B. Cornell & K. Green, \textit{supra} note 96, at 15.
\textsuperscript{101} See \textit{supra} notes 79-80 and accompanying text.
\textsuperscript{102} See \textit{supra} notes 98-100 and accompanying text.
\textsuperscript{103} B. Cornell & K. Green, \textit{supra} note 96, at 6; see also \textit{supra} notes 89-92 and accompanying text (predicting this result).
\textsuperscript{104} The yearly return for low-grade bonds was 8.04\%, while the return for one-month Treasury bills was 6.12\%. However, the reported return for the low-grade bonds was net of management and administrative costs of approximately 1\% per year. Thus, the risk premium demanded by investors is equal to 2.92\% (8.04\% minus 5.12\%), which represents the margin by which the gross return on the low-grade fund exceeded the short-term Treasury bill rate. B. Cornell & K. Green, \textit{supra} note 96, at 5, 15.
\textsuperscript{105} The one-month Treasury bill rate will be used and referred to as the federal rate because this rate can represent an economic index of the general level of interest rates.
\textsuperscript{106} This Note's proposal using the federal rate plus three percent can be compared to other proposals. The American Law Institute proposed to limit all interest deductions to the federal long-term rate plus two percent. A.L.I., \textit{supra} note 12, at 86. No reasons were given for selecting the two percent figure. Similarly, it is unknown how Rep. Pickle of Texas decided on a limit of 135\% of the federal long-term rate in H.R. 2476, 99th Cong., 1st Sess. 131 CONG. REC. H3180 (daily ed. May 14, 1985).
borrowed, it creates for itself an option because the firm is not irrevocably compelled to repay that debt. Instead, the firm has the option of defaulting on the debt and surrendering its assets to the debt-holder. Thus, the junk bond holder effectively acquires the company (really just her share of it) when she lends the money, and the company retains the option to buy the company back by paying off the debt. When deciding whether to exercise its option, the crucial determination for the borrower is whether the assets of the firm are worth more than the value of the debt. If, when the option expires (when the debt becomes due), the value of the firm's stock is worth less than the amount of the debt, the firm can refuse to exercise its option, leaving to the lenders the stock ownership.

This analysis shows how any lender could be viewed as a potential owner of the business. However, the possibility that a junk bond holder will end up owning the assets of the firm is much greater than with high-grade bonds. This is because for a firm making its option payments on junk bonds the price of exercising its option is extremely high (i.e., the firm has higher interest expense). Therefore, the chance that a stock's value will be below the exercise price is much greater than with a security demanding much lower option (interest) payments. Compounding this probability is the drop in asset value effected each time a huge cash outlay is required to pay interest on the junk bonds. In such cases it might be suspected that any junk bond holder effectively owns a share of the corporation.

In this way financial theory itself supports the empirical difference found in high-grade and low-grade bond values, and helps explain why junk bond values coincide with stock price fluctuations. By combining the empirical data with this financial theory it can be concluded that when a bond is returning less than three percent over the federal rate, there is a great enough probability of the firm exercising its option to pay off its debts that the option payments made can be considered deductible payments to a creditor. But when a bond is returning greater than three percent over the federal rate, there is a sufficient likelihood that the lender will retain ownership of the firm's assets so that the payments to such lenders are akin to a non-deductible distribution to investors with an equity interest.

107. R. Breailey & S. Myers, supra note 4, at 471-78. When the company decides to honor its debt obligations, it is "exercising its option." The exercise price is the amount that the borrower must pay the debt-holder in order to satisfy the payment or payments due.

108. The borrower in essence makes this determination every time it makes interest payments (e.g., by making the first interest payment, the firm exercises its option to advance to the second interest payment, and so on until it makes its final interest payment, which gives it the option of paying off the principal, thereby exercising its final option and acquiring the firm's assets). R. Breailey & S. Myers, supra note 4, at 565.

109. R. Breailey & S. Myers, supra note 4, at 481.

110. R. Breailey & S. Myers, supra note 4, at 482.

111. See supra notes 98-100 and accompanying text.

112. See supra notes 93-100 and accompanying text.
V. APPLICATION OF THE THREE-PERCENT TEST

The solution proposed above was developed through risk analysis and was verified empirically using junk bond data. In addition to junk bonds, the solution can apply to any security issued by a corporation. Questions may arise as to (1) how to apply this "federal rate plus three percent" test to complex instruments that can be broken down, and (2) varying the three-percent rate for different issuers. The remainder of this Note deals with these practical difficulties.

A. Bifurcation

A collateral issue that always arises when formulating a solution to the debt-equity problem concerns whether a security should be bifurcated. Bifurcation entails taxing a single security partly as debt and partly as equity. The alternative approach to bifurcation is the "all-or-nothing" method. This method identifies a security as either debt or equity, and then either allows or disallows any deduction.

Clearly, the all-or-nothing approach has commanded the support of judges and lawmakers. Most courts have refused to fragment instruments into part equity and part debt, and the Treasury has not incorporated bifurcation into its regulations although Congress authorized it to do so in 1989. But the all-or-nothing approach is not without its critics. One criticism is that the approach leads to tax inequities because a corporation that issues a combination of straight debt and straight equity will only be granted a deduction for the debt portion of the securities it issues, while a corporation that issues the economic equivalent of such a combination in one security (i.e., a "hybrid") may get a deduction for all payments on all of its securities. A second criticism relates to the incentive created by the inequity

113. For example, a hybrid security which pays 10% could be bifurcated by allowing an interest deduction for payments on the security of up to 4% (if the security is determined to be 40% debt and 60% equity).

114. Using the same example, the corporation would either be able to deduct the entire 10%, or else it would have to pay the entire 10% out of after-tax dollars.


117 Madison, supra note 4, at 495-500. This same argument can also be seen in criticisms of proposed I.R.C. § 386, H.R. 3299, 101st Cong., 1st Sess., 135 CONG. REC. H5812 (daily ed. Sept. 20, 1989), which applies to original issue discount and payment in kind debentures. See, e.g., Levin & Gallagher, Proposed Code Section 386 Treating OID and PIK Debentures as Preferred Stock, 45 TAX NOTES 87 (1989).
just described. The opportunity to gain deductibility while issuing a security with equity features is viewed as an unjustified tax expenditure that subsidizes complex financial instruments and distorts economic incentives.\textsuperscript{118}

When the security in question is economically equivalent to a combination of a debt security and an equity security, these criticisms are valid and the case for bifurcation prevails. Adhering to the analysis outlined earlier, disallowing an interest deduction for a clearly defined equity portion of an otherwise debt-like instrument yields the correct measurement of income for the instrument as a whole. Therefore, where it is clear that the market is identifying the debt features of a bond and valuing them separately, bifurcation is appropriate.\textsuperscript{119}

Bifurcation is not appropriate when classifying junk bonds. The empirical behavior of bond values\textsuperscript{120} reveals the problem with proposals that advocate bifurcating junk bonds.\textsuperscript{121} A straight interest-bearing bond will behave, as a whole, as either debt or equity. The return on a straight interest-bearing bond is a function of its risk, and not a function of debt and equity components which can be broken down and given separate tax treatment. Thus, no such bond should ever be bifurcated. Since junk bonds are essentially equity, bifurcating these bonds by granting a flat-rate deduction for some portion of interest paid on them would be analytically identical to giving a deduction for portions of dividend payments on common stock, on the basis that the shares contain some separate, less-risky, debt-like component. With respect to an instrument that returns in excess of the federal rate plus three percent, the full amount of the payment to investors is compensation for an equity risk assumed. There is no reason to bifurcate and allow a deduction for a part of the payment.

\textbf{B. Whether to Vary the Three-Percent Rate}

One criticism to the risk analysis solution proposed in this Note is that it is not fair to apply the same rate across the board. It is argued that since a blue-chip share of stock may bear less risk than a loan for a start-up venture, legitimate debt of some firms will be riskier than equity of other

\textsuperscript{118} Madison, \textit{ supra} note 4, at 500; \textit{see also supra} notes 29-36 and accompanying text.

\textsuperscript{119} For example, this situation would be most obvious where a corporation has two types of bonds outstanding, both paying a fixed rate of interest, but with the second one paying an additional amount equal to the dividends paid on the corporation's common stock. The valuation of the second type of bond can be readily broken down into a value for the fixed payments (which will be equal to the value of the first type of bond) and the value of the equity features (the additional amount which an investor would pay for the second type of bond).

\textsuperscript{120} \textit{See supra} notes 98-100 and accompanying text.

\textsuperscript{121} A proposal for a flat rate disallowance on deductible interest payments made on bonds would effectively bifurcate instruments such as junk bonds. For an example of such a proposal, see \textit{Joint Comm. on Tax'N, supra} note 30, at 104-05.
firms, rendering risk analysis impractical. The key to overcoming this criticism is to focus on what is reflected in the rate of return that a firm must pay in order to raise funds. When this rate reflects risk, all of the income measurement policies are implicated and so there is no inequity in treating risky firms differently than non-risky firms. Only when the rate of return on an instrument reflects factors other than risk may it be necessary to raise this "federal rate plus three percent" so that payments on securities of which the return equals or exceeds that amount may be deductible.

For example, one risk factor that will affect the return a firm must offer to raise funds is the debt-to-equity ratio of the firm. Another factor is simply the inherent risk of the firm’s business operations. When firms differ in these respects, taxing them differently not only is consistent with economic income measurement policies, but such a result also is entirely necessary in order to enforce those policies. A risky venture offers investors a chance for huge returns in exchange for a supply of funds, because of the feast or famine nature of its operations. Investors who supply such funds realize the nature of this arrangement and are voluntarily adventuring in the entrepreneurial risks, whether their funds are supplied in return for a note or a stock certificate. Just because a particular firm is presently unable to issue certain securities with a risk low enough to meet the definition of equity presented in this Note does not mean the definition should change. If one did adjust the definition for certain of these firms, one would be abandoning the distinction that section mandates. There is no injustice in letting "debt-labeled" securities issued by a risky venture compete with the "equity-labeled" securities of a stable firm when both are offering an equity premium in return for funds. Indeed, allowing a deduction for a risky venture’s debt securities when they offer an equity premium would

122. See, e.g., Boyles, supra note 79, at 677 n.62.
123. Higher interest rates signal venture capital which does not warrant an interest deduction. See supra notes 21-25 and accompanying text.
124. A discussion of possible factors other than risk factors that could affect the rate of return on a security is beyond the scope of this Note. One area of concern, though, could be the economic power of the issuer. A large blue-chip firm will have easier access to financial markets and more marketable securities than would a firm with less economic power, even though the actual risk of the issued securities may be no different. It is suggested that adjustments to the "federal rate plus three percent" standard could be made for such situations.
125. R. Kopcke & E. Rosengren, Regulation of Debt and Equity 21 (Sept. 1989) (Prepared for the October 1989 Federal Reserve Bank of Boston's conference Are the Distinctions Between Equity and Debt Disappearing?) (unpublished manuscript on file with the Indiana Law Journal) ("As leverage increases, so does the probability of default and the interest rate."). For an explanation of the debt-to-equity ratio as it relates to risk, see supra note 74 and accompanying text.
126. JOINT COMM. ON TAX'N, supra note 30, at 105; see also P Kupec, Microfoundations of Systematic Risk (1985) (unpublished manuscript on file with the Indiana Law Journal) (Systematic risk depends on the firm's production technology, scale of operations, its output and input prices and other risk characteristics.).
127 I.R.C. § 385.
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operate as an injustice to the stable firm issuing the same premium but being double-taxed on its distributions.

CONCLUSION

Even some investment bankers will admit that junk debt is really disguised equity. This Note shows that junk bonds are analytically equivalent to equity securities for federal income tax purposes. In essence it has provided a principled basis for a notion that many financial experts have long suspected to be true. The behavior of financiers, investors and the market itself lends implicit support to the theory that junk bonds are economically equivalent to equity. In the area of marketing junk bonds to investors, such support has recently become apparent. With investors becoming aware of the attendant risks, sweeteners like equity-kickers are increasingly required to sell junk bond deals.

This trend seriously undermines the arguments of those who contend that junk bonds cannot be equity because their holders do not share the same rights and privileges as equity holders. Further acknowledgement that junk bonds cross over the debt-equity threshold is found in the area of bankruptcy law. There, equity has long been considered a cushion to protect creditors from the risk of insolvency. Junk bonds are now, like equity, becoming part of that cushion, as courts are classifying debt issued in leveraged buyouts as capital contributions. In some instances the interests of junk bond holders are being further subordinated, even to the interests of common stock holders. In denying junk bond holders traditional creditor rights, society is recognizing that junk bond holders should be grouped with the other "adventurers in the corporate enterprise"—the equity holders. Tax regulation must make this same adjustment and begin to tax junk bonds as equity.

Furthermore, the data and conclusions herein have provided a necessary tool for constructing a partially integrated corporate tax system. Presently, integration proposals are shooting at a moving (and sometimes invisible) target because it is unclear which corporate payments (debt payments or equity payments, or both) will be subject to relief. This Note’s conclusion

128. Sheppard, supra note 13, at 1143.
131. Id. at 25-26.
132. Wall St. J., Sept. 27, 1989, at Cl, col. 6. The possibility that Revco shareholders might get control of the bankrupt company in front of junk bond holders means that "junkholders might lose out to equity holders in other bankruptcy cases." Id. at C2, col. 3.
that payments in excess of the federal rate plus three percent represent an equity premium provides the boundaries of deductibility for an integration proposal.

Bonds that offer a return greater than three percent above the federal rate are compensating investors for an equity risk. Other types of instruments with the same characteristics will behave in the same way and should also be taxed as equity. The principles of this Note can be further extended to other areas of the law. For example, in order to circumscribe regulations that restrict financial intermediaries from holding equity securities, such intermediaries will often hold risky debt in order to earn a competitive rate of return. This practice should be disallowed, as it has been established that the risks of junk bonds and the risks of equity securities will pose similar threats to the stability of the intermediary. No matter what the area of regulation, risk analysis provides sound support that high-risk instruments are in essence equity, and they should be treated as such.