Summary & Conclusions
Junk bonds have attracted public attention because of the rapid growth in their use. Because of their association with mergers and takeovers, and because some observers have felt that the Federal Reserve System is using the margin requirements of Regulation G to restrict their use.

In spite of their recent notoriety, however, low-rated bonds do have a legitimate role in the marketplace and in the financial structure of firms that make use of them. Many of the performance characteristics of junk bonds are well-understood by those who participate in the market. However, since many low-rated bonds are so new, their future performance cannot be accurately predicted, so there is need for caution in their use.

At this point, it is too difficult to determine whether or not the growing use of low-rated bonds in debt-based financing is harmful to our economy. The optimal capital structure of the non-financial corporation depends on so many variables that simple rules about capitalization that have served reasonably well to date may no longer be valid.

In the absence of a serious downturn in the performance of junk bonds, however, it is reasonable to assume that the use of these instruments will increase and that the subsequent growth in debt-based financing will cause a further shift in the quality of corporate debt.

Junk Bonds and Public Policy
by Jerome S. Fons

Over the past few years, the financial public has developed a fascination with the growth in the market for so-called junk bonds. In this Economic Commentary we would like to shed some light on the role of these instruments by providing a working definition of the term "junk bonds," by discussing their place in the financial world, and by examining a few of the issues surrounding concern over the growth of corporate debt.

The public's interest in junk bonds was recently fueled by the controversy surrounding the Federal Reserve Board's reinterpretation of Regulation G, by which the debt securities of a shell corporation, constructed solely as a thinly capitalized vehicle to facilitate a takeover of the stock of another firm, would now be subject to existing margin requirements.

The Federal Reserve Board requires that loans collateralized by margin stock, used to purchase and carry securities, not exceed 30 percent of the market value of the securities. Many have interpreted the Board's recent decision as a step to limit the use of low-grade debt instruments. The Federal Reserve Board of Governors has countered this charge, however, by stating that the intent was only to clarify the enforcement of existing regulations.

The phrase "junk bonds" was first coined to describe outstanding bonds issued by so-called "fallen angels." These were firms with initially strong financial histories that were facing severe financial problems and suffering from poor credit ratings. Today, the term "junk bonds" is applied to all speculative-grade debt, regardless of the issuing firm's financial condition.

Speculative-grade bonds are issues with ratings below BBB (from Standard & Poor's) or Baa3 (from Moody's). Over the past few years, these ratings have frequently been assigned to the debt of new firms that do not have an established performance record. Previously, these firms may have been denied access to capital markets because of the market's distaste for speculative-grade debt. The emergence of markets for these bonds has provided a viable financing alternative for small or new firms that traditionally had to rely on commercial bank loans.

Since the average investor has neither the access to information nor the expertise necessary to accurately evaluate an issuing firm, the bond-rating agencies provide an important service. Ideally, the assigned rating gives the investor a single measure of the default probability of the issued bond. However, the value of the assigned rating may decline as financial conditions change with the passage of time. It has been observed, for example, that knowledgeable investors often incorporate new information about the issuing firm into the price of the bond well before its rating is actually adjusted by companies such as Moody's and Standard & Poor's.

Since much emphasis is placed on ratings, however, business and financial economists have closely examined the factors that determine the rating, as well as the subsequent performance of the bonds.

By and large, agencies that rate bonds admit that there is no precise formula for determining which a bond receives, although studies have shown that certain patterns can be established between the different ratings and various aspects of the rated firms.

Factors that appear to figure prominently in the rating process include accounting ratios, including debt to equity; measures of past performance, including variability of earnings; and many so-called qualitative factors, such as the evaluator's disposition towards management and the general outlook for a particular industry.

Although they may vary from issue to issue, the chosen provisions under which bonds are issued (such as call terms, dividend restrictions, or subordination) seek to enhance an issuer's attractiveness by providing protection against abuses that could endanger the bondholder. Management, for example, may be restricted from entering into a merger that might dilute the bondholder's claim, or from using the proceeds from a bond sale to pay off shareholders in a liquidation move.

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Companies usually pay to have their bonds rated. This indicates that being rated is generally beneficial, although some companies choose not to undergo the process. Their bonds, being non-rated, are usually considered speculative grade.

A high bond rating may be important to the issuing firm because it can reduce financing costs due to the lower yield required by bondholders. One reason a lower yield is required is because there are many more potential holders of high-rated securities—since federally chartered banks and others with fiduciary responsibilities are prohibited from holding speculative-grade instruments. The expected gains from obtaining a rating are weighed against the cost of the rating process. In general, the more potential holders there are, the greater the benefits of obtaining a rating.

Low-Rated Bond Characteristics

Low-rated (or junk) bonds are commonly described as speculative because the financial characteristics of the issuers of these bonds make them risky. Defaults are not quite as simple, however.

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Bonds issued to facilitate (or to pre-empt) downgrades. In the case of Edward Altman and Scott Nammacher, they found that defaults continue to trade at a price, at a low yield. Since low-rated bonds have traded yields more than five percentage points over comparable Treasuries, many feel that holders of well-diversified portfolios of junk bonds are more than compensated for losses that result from defaults.

Studies of the performance of portfolios of low-rated bonds indicate that their returns are in fact higher than those of some of its operations, thereby allowing it to shed part of its debt burden.

The growth in the market for low-rated bonds may continue until a new balance of debt-to-equity is reached. Since 1979, ratings agencies have reported that downgradings have consistently led upgradings. Standard & Poor's downgraded 267 issues in 1985 while upgrading only 125. Chart 1 presents a summary of the par value of straight corporate bonds outstanding, by rating, from 1982 through 1985. In 1985, 8.8 percent of outstanding corporate bonds had speculative-grade ratings. By 1986, this figure had risen to 13.4 percent.

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Corporate Debt Growth

The growth of all forms of debt is of great concern to the nation's legislators and financial regulators. Many feel that the rapid growth of debt may eventually restrict the ability of households, government, and businesses to pay what they owe in the event of an economic downturn. The notion that there is an optimal ratio of debt-to-equity (or debt-service expense to income) is largely based on these concerns. In order to understand the perspective, economists have developed theories to help explain why households and businesses might want to accumulate debt. In particular, economicists have paid considerable attention to the idea of how firms should structure their net worth and long-term debt for the best results.

Among the first to provide a rigorous treatment of this issue were economists Franco Modigliani and Merton Miller in 1958. They demonstrated that an idealized world with no bankruptcy, the choice of financing is irrelevant. In the situation of the firm, as the fundamental characteristics of the firm's cash flows are not altered, it makes no difference whether debt or equity financing is used.

Subsequent extensions of Modigliani's and Miller's work highlight the importance of the deductibility of interest expense for tax purposes and of the so-called deadweight losses that result from bankruptcy. The deductibility of interest expense is an aspect of the firm's behavior due to the presence of personal income taxes. The fact that there are usually third-party beneficiaries when a firm declares bankruptcy has also been shown to inhibit the ability of a firm to incur debt. The notion of bankruptcy is that a bankrupt firm faces. As more debt is issued, the probability of default increases, and the value of the firm decreases. The optimal capital structure is reached when the firm's debt level equals the marginal expected costs of possible bankruptcy to the marginal gains from the firm's tax shield.

In the context of the Modigliani/Miller viewpoint, there are a number of factors that could be linked to a shift in the preference of managers for higher debt levels which, in turn, has contributed to growth in the use of speculative-grade bonds. The changing political and economic environment in the United States may have fostered a belief that the costs of bankruptcy have been reduced. This belief may be grounded in the development of our nation's financial system. When a bond manager has at his disposal many instruments to reduce the firm's exposure to the risky nature of economic changes, the development of markets for risk management instruments is essential. The development of markets for risk management instruments is essential. When a bond manager has at his disposal many instruments to reduce the firm's exposure to the risky nature of economic changes, the development of markets for risk management instruments is essential. The development of markets for risk management instruments is essential. The development of markets for risk management instruments is essential. The development of markets for risk management instruments is essential. The development of markets for risk management instruments is essential.