
Security Design Special Issue

Introduction

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■ Traditionally, firms have used a limited number of securities, including equity, debt, preferred stock and convertibles to finance their activities. These have been introduced over several centuries along with many others which have not proved as durable. The stability in the set of securities had an important effect on the way in which financial markets were analyzed. In particular, most analyses of corporate financing and asset pricing assumed that the characteristics of the securities were a given.

In recent years, the pace of financial innovation has been relatively rapid. Many new instruments, such as options, financial futures and mortgage-backed securities have been introduced and have come to play a significant role in the financial system. This change has highlighted the need to understand why the securities that are used have the particular form they do. As a result, financial economics has paid increasing attention to the issue of security design. Recent surveys of this growing literature are contained in Allen [2] and Allen and Gale [3].

The papers in this Special Issue represent a range of the work that is currently being done on security design. They will hopefully be of interest to both practitioners and academics. One of the most active topics of debate in the area has concerned the impetus for financial innovation. Miller [10] has emphasized taxes and governmental regulation. Van Horne [13] has stressed the importance of improving risk-sharing opportunities. Merton [9] has suggested that reducing transaction and agency costs and improving liquidity also have a role.

The first group of papers is concerned with the design of specific new securities and the reasons for their introduction. Finnerty [7] analyzes a security offered by the Republic of Austria in U.S. markets in 1991 called stock index growth notes or SIGNs. These are essentially zero coupon bonds which are bundled with a call option on the S&P 500 Index. Finnerty finds that although SIGNs have taxation and transaction cost advantages, their real benefit appears to be the creation of a new opportunity for small

investors that was not previously available. Barber [4] looks at debt which is convertible into the common stock of another company. For example, in 1985, Petrie Stores issued debt which enabled the purchaser to exchange each bond for just over 27 Toys "R" Us stock. It has been claimed in the financial press that exchangeable debt of this type has tax advantages. However, Barber's analysis suggests that this is not the prime motivation for issuing it. Instead, the security represents a way for a firm to lower the transaction costs of selling a large block of stock in another company. Alderson and Fraser [1] consider auction rate preferred stock. This security was designed to take advantage of the Internal Revenue Code's Section 246(c) dividends-received deduction for corporations but otherwise has the characteristics of money market investments. Despite significant initial success, the amount outstanding peaked in 1988 and has fallen since then. Using an empirical analysis of redemption decisions together with a survey of issuers, Alderson and Fraser conclude that the size of the investor clientele desiring the security has changed over time and this caused the change in popularity. In their view, the security remains viable.

The second group of papers considers more practical aspects of the design of securities. Finnerty [8] develops a contingent claims methodology for valuing indexed sinking fund debentures (ISFDs) which were first issued in 1988 by the Federal National Mortgage Association. The novel feature of these securities was that the repayment schedule is contingent on interest rates; repayments are higher when interest rates are low and vice-versa. ISFDs thus provide a useful asset-liability management tool for financial intermediaries which issue mortgages. Brown and Smith [5] consider interest rate swaps. They develop a framework for considering the default risk of these instruments and suggest two ways in which this risk can be reduced. The first involves periodic marking-to-market of the swap while the second has a time-varying fixed rate rather than a uniform rate for all periods. The problems of implementing the designs are also discussed.

The third group of papers consists of theoretical contributions which develop general principles of security design rather than focusing on specific instruments. Asymmetric information appears to be a critical aspect of financial innovation. De and Kale [6] show that making debt payments contingent on information such as earnings may be undesirable if the issuer of the security is better in-

formed than investors. The theory provides an explanation of why securities such as income bonds, which would appear to have substantial advantages because they reduce expected bankruptcy costs, are so little used by corporations. As Ross [11] has stressed, marketing is another critical aspect of financial innovation. In this vein, Shefrin and Statman [12] consider the use of behavioral theories in the design of new securities. It is argued that investors' perceptions of securities are of major importance in determining their success.

The field of security design is at an early stage. Much work remains to be done, particularly in terms of developing practical techniques of valuation and design. As the rapid pace of innovation in financial markets continues, there is a pressing need for such techniques.

References

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