

**THE USE OF SECURITY OPTIONS TO GAIN
STRATEGIC FINANCING ADVANTAGES:
THEORY AND PRACTICE**

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Abstract

Security options such as convertibles and warrants that create hybrid securities have been the subject of a great deal of research in finance for many years. Most studies have attempted to find methods to establish the value of those options to investors. This study examines the strategic financing advantages that have been reported by financial managers as reasons for issuing such options and to consider whether or not those reasons are consistent with theory. If such advantages exist to the extent reported by those financial managers, there is no reason to believe that they remain static over time or exist to the same degree over time. Capital market conditions are constantly changing. Thus, it was necessary to identify a unique, episodic time period in capital market history on which to base the study. That market was characterized by very high interest rates. It was found that corporations were simply using options in an attempt to escape those high rates and lower the cost of capital. That reported strategy is observed not to be consistent with the basic theory of financial management. It could be concluded that either the theory or the practice at that time was wrong. Instead, it is suggested that the period itself was an anomaly that allowed firms to achieve a lower cost of capital by issuing options regardless of theory.

INTRODUCTION

Security options such as convertibles and warrants that create hybrid securities have been the subject of a great deal of research in finance for many years. Most studies have attempted to find methods to establish the value of those options to investors. This study examines the strategic financing advantages that have been reported by financial managers for issuing such options and to consider whether or not those reasons are consistent with fundamental financial theory. Financial strategy is said to include attempts to exploit timing and whatever gross imperfections the market is subject to that allow firms to offer their securities in some best (most valuable) form. Financial policy, on the other hand, is said to refer to the question of what the long-run appropriate mix of financing should be [15]. This study involves financial strategy. If financial strategy explains the use of hybrid securities, a logical question is what strategic advantages can be gained by offering them in very tight capital markets, and are those advantages consistent with theory?¹

The purpose of this study will be to examine an historically unique capital market situation and to note how firms attempted to offer their securities in a form that would allow them to gain strategic financial advantages. This study provides insight into today's dynamic markets. As long as business and capital market conditions change firms will come to the market with many types of instruments all designed to be strategically advantageous and lower the cost of capital. If such advantages exist to the extent reported by financial managers there is no reason to believe that they remain static over time, or exist to the same degree over time, since capital market conditions are constantly changing. Thus, it was necessary to identify a unique episodic time period in capital market history on which to base this study.

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FINANCIAL PRACTICE IN A UNIQUE CAPITAL MARKET²

The year 1966 appeared to be the end of a boom that had lasted since 1961. Sales of manufacturing corporations increased a mere two hundredths of one percent over 1965. The year before had been considered more normal in those war years when sales had increased by ten and seven tenths percent [5]. The demand for long term funds is usually increased at the end of a boom period. One reason for this is that corporations commit themselves to capital projects in boom periods that depend, in part, on cash flows resulting from the high level of sales activity. When the cash flows from the boom period start to taper off, the project commitments still require funds. This particular period was characterized by the construction of new plants and equipment by heavy goods producers such as air transport, aircraft construction, and heavy equipment industries. Total plant and equipment expenditures for manufacturing firms started to level off at around \$30 billion per year in 1966, but that was still more than double the 1958-1959 rate [14]. Capital expenditures had increased every year since 1961, and corporate profits had increased every year since 1960 [6]. In addition, inventory accumulations were high at the time business started to slow down. In situations like this, one of the first alternatives for financial managers has been to turn to banks for short term loans; this has the advantage of buying time. The financial managers can decide during this time what form their new permanent financing will take. One option resulting from such action would be to let the short term bank loans hold them over until business had taken an obvious downturn and then try the bond market at what should be lower post boom interest rates. By the middle of 1966 there was a great demand for short term bank loans. In the late summer interest rates on high quality corporate securities reached their highest level since 1929, a period of thirty-seven years. Although the loans at commercial banks were at an all time high, there was great demand for still more loans [21]. The scarcity of funds was, in part, due to actions taken by the Federal Reserve Board to offset the pressures of demand-pull inflation. The restrictive measures were actually initiated around the end of 1965 and lasted until the fall of 1966. The money supply M_1 declined from April to October. It leveled off in early 1967 and then started to increase. Before the leveling period, the credit restraint brought such severe pressures to the financial markets that it was referred to as the "Credit Crunch of 1966" [10]. The Federal Open Market Committee appeared to want a rather tight money market in 1966 but they did not want the credit crunch that resulted from their policy of restraint. One of the complications of the great demand for business loans was that banks were liquidating great numbers of government securities to make the higher yield commercial and industrial loans. For example, in the first eight months of 1966, bank loans had increased at an annual rate of twelve percent. But, bank lending to business had increased at an annual rate of twenty percent [4]. The last thing the Federal Reserve wanted was a disorderly market condition for government securities, and this now seemed like a distinct possibility. In an effort to dissuade member banks from further expansion of commercial and industrial loans at the expense of government securities, the Board of Governors took an unusual action. They authorized a letter to all member banks that modified the conditions under which member banks could use the discount window. The essence of the letter was that bank lending to business was expanding at too rapid a rate. It condemned this rapid expansion, and promised more consideration at the discount window to banks that slowed down on such loans.³ This action nearly stopped the expansion of commercial and industrial loans. In the six month period from June 30, 1966, to December 31, 1966, commercial and industrial loans increased by a mere four percent. The letter was rescinded in December, but by the end of the year many firms were desperate for funds.

In the credit crunch of 1966 some firms turned immediately to the bond market instead of trying to compete for short term bank loans. There they found interest rates at historic highs. The highest grade corporate bonds were selling with a 5.13 percent coupon. This was the highest rate on comparable securities since 1929. Even with the extraordinarily high interest rates the total bond offerings was a record \$15.6 billion [21].

The end of the six year boom and the credit crunch of 1966 seemed to lay the groundwork for the capital market situation in 1967. It was the year 1967 that broke the records of the previous year both in volume of bonds offered and interest rates applicable to those offerings. In fact, the year 1967 was so unique that the collective attitudes of both borrowers and lenders seemed to change. Carol Loomis wrote in *Fortune*:

When the time comes to write a history of the corporate bond market, 1967 may be remembered as the year when 50 million got to seem like small potatoes . . . it became obvious that an important change had taken place in attitudes toward borrowing. Debt had taken on some new class. In that great parade to the bond market there were corporations that had once rejected

debt and were now ready to take it on; corporations that had always had debt and were ready to build it up; even corporations ready to build it up just so the new money could be passed on in dividends [21].

By early 1967 there was a great pent-up demand for long term funds. The corporations that postponed going to the bond market in 1966 found themselves now facing the highest rates since 1920. Even with these high rates there were 22 billion dollars in corporate securities offered in 1967. A more significant, and surprising, statistic is that while new issues of regular bonds increased by 60 percent over 1966, new issues of convertible bonds increased by an astronomical 129 percent [21]. A fair question now seems to be why the great increase on convertible offerings and what strategic financing advantages did the offering firms hope to accomplish.

STRATEGIC FINANCING ADVANTAGES ASSOCIATED WITH HYBRID SECURITIES

The literature concerning convertible bonds offers some suggestions about why they might be good strategy in capital market situations such as described above. It will be useful, at this point, to consider some of that literature.

Since Haley and Schall identified financing strategy, it is appropriate to consider first the reasons they suggest for using convertible bonds. They suggest first, that issue costs are lower for convertible bonds than they are for common stock. Thus, if the firm were interested in issuing stock, it might issue convertible bonds to save on issue costs, expecting the securities to convert shortly [15]. This seems possible, but their second reason may have a greater impact on a firm's decision to issue convertibles. This is the concept of the delayed equity issue and is mentioned by several writers. For example, they first assume asymmetric information and suggest that, "now there may be very good reason for management to use convertibles." The situation is that management has investment opportunities that they believe to be highly profitable. Either the market is not aware of these opportunities or it is aware, but it is more pessimistic concerning the profitability of the projects. The price of the firm's stock will reflect the opinion of the market and not of management. The firm is assumed to have reached its capacity for long-term unconvertible debt and the flow of internal funds are not sufficient to support the proposed projects. In this case management would prefer to issue new shares of common stock, but the price of the new shares will reflect the market's more pessimistic view of the projects. The present share holders will not receive the full benefits of the investment opportunities. This is an appropriate scenario for management to make a delayed equity issue. That is, issue convertible bonds with a conversion price approximating the value of the stock if the market agreed with management on the value of the investments. If the investment opportunities turn out as well as management expected the market price of the stock will go up and the bonds can be called and converted. Thus, management was able to issue delayed equity and the present shareholders received the benefit of the profitable investment opportunities [15].

A more recent strategy, is evidenced by the dominance of liquid yield option notes (LYON). Issues of these securities rose 68 percent in 1991 over the previous year. Essentially, they are simply zero coupon convertibles. They offer the issuing firms several advantages, including making no interest payments until the bond matures, and offering the investor downside protection at the fixed bond rate. This security was not available during the period under study, but it is a strategy actively pursued in the current market.

In a recent dissertation Balebail developed a theoretical model that explained the rationale for the issuance of convertible debt [2]. It was shown that straight debt and equity represent the opposite ends of the spectrum of fixed payment obligations incurred by a firm and are issued by the most superior and most inferior firms respectively. Convertible debt on the other hand permits a tradeoff between the fixed payment obligation and the equity component. Balebail contended that among the issuers of convertible debt, the better firms select the higher coupon and conversion price to signal their relative superiority. He further concluded that there was thus, a signaling motive to the selection of the coupon rate and the conversion price for convertible bond issuers. If financing strategy includes signaling by management, then yet another component of strategy is established.

In addition, Brigham suggested two reasons why firms would issue convertible securities. First, he states that "the firm desires equity capital and believes that convertibles are an expedient way of selling common stock," and secondly "the firm desires more debt and believes that adding the convertible feature will result in substantially lower interest costs" [9]. In an effort to determine which of the above two reasons was predominant in his sample

firm's decisions to issue convertibles. He sent questionnaires to each of the 42 firms in his sample. Fifty-two percent of the firms in the sample responded. Of these, 73 percent indicated that they were interested in obtaining equity, and the remaining 27 percent stated that they were simply interested in "sweetening" a debt issue. It is interesting to note that Brigham's respondents each indicated that they had financing alternatives at reasonable costs. That is, they stated that they could have issued common stock at prices ranging from 2 to 5 percent below the market price and the straight debt alternative would have increased interest costs only « to 1 percent. The point is, that the firms indicated that they were in no way forced to use convertibles. If those firms thought they were indeed in no way forced to use convertibles, it may be concluded either that the firms were in a position to take advantage of the best financing strategy package available, or that firms that respond to questionnaires do not like to admit that they were forced into some single alternative.

In a 1971 dissertation at the University of Iowa, Lavelly studied the comparative usage of convertible bonds and bond-warrant packages. He was interested in the nature and characteristics of each security and offered reasons why a firm might use convertible bonds as financing strategy. Again, one of the first reasons mentioned is the concept of "delayed equity." Like Brigham in his earlier work, Lavelly sent questionnaires to selected firms. Sixty-nine percent of his respondents indicated that their goal was to increase equity, but on a delayed basis. Apparently they seemed to feel that a direct equity issue would have an adverse effect on earnings per share, but by issuing stock on a delayed basis, i.e., through a convertible bond, the investment projects financed through the issue would generate funds and by the time conversion occurred the earnings would have increased enough to offset the fact that there would now be more shares to dilute those earnings [20].

The use of a conversion privilege as a "sweetener" to obtain lower interest rates on debt is well known in financial markets. Purchasers feel that the conversion privilege is worth at least as much as the difference in interest on a straight bond and interest on a convertible. Recall that 17 percent of Brigham's respondents stated that they were primarily interested in obtaining debt and were simply using the convertible feature as a "sweetener." Lavelly also asked his respondents to express their motive for issuing convertibles. He received 65 "usable" replies from firms that issued convertible debt. Executives of 22 of the firms or 34 percent, expressed the "sweetener for debt" strategy as their reason for issuing convertibles [20].

In a 1955 study Pilcher asked the presidents of 100 firms, which of the following played the more important role in the decision to issue convertibles: "the desire to sweeten the senior leverage issue, therefore making it more attractive to buyers, or the desire to raise common equity on a delayed basis" [23]? Seventy-five firms replied to Pilcher. Forty-seven of the respondents, or 63 percent, stated that their primary purpose was to issue equity on a delayed basis while 17 firms, or 23 percent, indicated the reason was to "sweeten" the security to obtain a lower interest charge.

The empirical studies by Brigham, Lavelly and Pilcher seem to corroborate each other. That is, that the primary reason for issuing convertibles is to increase equity, and specifically to issue this new equity on a delayed basis. These studies also back up the theoretical contention by Haley and Schall that the firm might have some investment opportunities that the market is not aware of or if the market is aware, it is simply more pessimistic concerning the profitability of those projects. The second major reason, for issuing convertibles, uncovered in the empirical studies was that the convertible feature was used to "sweeten" a debt issue so as to obtain a lower interest rate. Twenty-three percent of Pilcher's respondents in 1955, twenty-seven percent of Brigham's respondents in 1963, and thirty-four percent of Lavelly's respondents in 1970, gave this second reason as their major consideration in issuing convertibles. The empirical studies cited above are remarkably consistent, and seem to answer the question first raised by Haley and Schall's definition of financing strategy: What strategic advantages can be gained by the use of convertibles? The first theoretical reason suggested by Haley and Schall: The firm might issue convertibles to save on issue costs was mentioned in none of the empirical studies. In fact, Brigham left open in his questionnaire a response entitled "other." That is, he was giving financial executives an opportunity to express reasons other than those suggested for issuing convertibles. Not one of his respondents suggested another reason. Regardless of the order given the reasons for issuing convertibles by the above-named scholars, the primary reason for their use in the tight market of 1967 was to try to escape record high interest rates. For example, R.C.A. issued 160 million in 4.5 percent convertibles in July. The interest rate differential between convertibles and straight bonds was about 1.25 percent for the firm [21]. Both large and small companies seemed to be seeking a way to escape the high interest rates. Hershmann wrote that many unseasoned companies could hardly raise funds in any other way [16]. As in the case of R.C.A., another "blue chip" company, Ralston Purina,

offered a forty million dollar issue in late 1967. Ralston clearly had other alternatives, but their convertible issue carried a 4 7/8 percent coupon and a straight bond issue would have probably been around 6 5/8 percent [16].

FINANCIAL THEORY AND SECURITY OPTIONS

The practices reported by financial executives in the foregoing pages are in direct conflict with financial theory. Copeland and Weston indicate that the reasons given by managers make no sense. They state:

Convertible bonds are not cheap debt. Because convertible bonds are riskier, their true cost of capital is greater (on a before tax basis) than the cost of straight debt. Also, convertible bonds are not a deferred sale of common stock at an attractive price [11].

To illustrate their contentions, Copeland and Weston provide several numerical examples that contain undisputed arithmetic as well as intuitive logic.

In a recent study Brennen and Schwartz described as a "popular misconceptions" the fact that convertible bonds generally carry coupon rates lower than market rates on straight debt and that they allow companies to sell stock at a premium over the current price [7]. Their study concluded that the real cost of convertible debt should be thought of as a weighted average of the cost of straight debt and the higher cost associated with the conversion or equity option. They further concluded that the continuing popularity of convertibles lies in their insensitivity to company risk. Their argument is supported by some evidence. In a 1977 dissertation Payne found that companies that were more likely to benefit from convertible financing had greater earnings volatility, higher levels of financial leverage and more growth potential than firms selected at random [22]. In an earlier article Brennen and Schwartz analyzed the valuation of convertible bonds assuming that the entire outstanding issue, if converted, would be converted as a block. They concluded that the market value of convertible debt is simply the market value of straight debt and a warrant [8]. Ingersoll concluded, as did Copeland and Weston, that the true cost of capital cannot be lowered by issuing hybrid securities in lieu of straight debt or equity, because the lower cost of convertible debt would be offset by signaling a greater degree of company risk. [19].

It is indeed the consensus of these and other scholars that the cost of capital and the value of the firm cannot be affected by issuing hybrid securities instead of straight debt or equity.

SUMMARY AND IMPLICATIONS FOR THIS STUDY

The historical market identified in this study and the advantageous financing strategies associated with hybrid securities in that market provide insight into today's dynamic markets. In a seminal study Ross concluded that markets can be completed by supplementing primary securities with calls written on single assets. In a unique market, such as described, Ross further stated that an institution can facilitate trades in options written on the market portfolio. Such options are said to have great intuitive appeal to investors [29]. As long as business conditions change radically, whether cyclical or not, firms will come to the market with an incredible array of ingenious financing instruments all designed to take advantage of whatever imperfections that are perceived to be associated with that market in order to maximize the value of the firm. The implications, for this study, of the possible advantages of financing strategy are that they affect the value of the firm. For example, in the aforementioned case of Ralston Purina convertible bonds were issued with a 4 7/8 percent coupon; a straight bond issue would have been 6 5/8 percent thus the cost of new debt was 1.75 percent lower using convertibles. The important point is that their outstanding equity suffered no decline as a result of the new offering. The convertible issue had resulted in a lower overall cost of capital, and an increased value. Thus, the aforementioned Copeland and Weston conclusions did not apply in this market.

Principles of basic financial theory are in direct conflict with the reasons given by practitioners to issue security options in this period. However, principles apply generally and not to unique capital markets. The conclusion is forced here that the period under study was itself an anomaly, and that financial managers could accomplish their goal of lowering the cost of capital and thus increasing the value of the firm by issuing hybrid securities regardless of theory.

This study has resulted in a contribution toward the construction of a theory concerning how anomalous markets may cause conflicts in the perceptions of correct financial practice and correct actions dictated by theory. The contribution is offered as a plausible explanation of observed phenomena.

TABLE 1
Bond And Stock Financing By Type 1964-1970
Gross Proceeds Of Bond And Stock Financing In Percentages

	1964	1965	1966	1967	1968	1969	1970
Straight Debt, Public Offerings	30	43	40	50	42	48	78
Straight Debt, Privately Offered	64	46	44	28	29	22	12
Convertible Debt For Cash	4	9	12	21	17	20	9
Convertible Debt In Mergers	2	2	4	1	12	10	1
Total Bond	100	100	100	100	100	100	100
Total Bond	79	86	87	88	82	72	78
Total Stocks	21	14	13	12	18	28	22
Total Bond And Stocks	100	100	100	100	100	100	100

SOURCE: Sidney Homer, Henry Kaufman, and James McKeon, Supply and Demand for Credit in 1970 (Salomon Brothers and Hutzler, March 1970), Table 1, Reprinted in J. Fred Weston and Eugene F. Brigham, Managerial Finance, 4th ed. (New York: Holt Rinehart and Winston, 1972), p. 689.

ENDNOTES

1. Hybrid Securities as the term is used here applies to convertible bonds, convertible preferred stock, bond-warrant packages, and the seldom used convertible notes. Since the reasons for the uses of options are usually the same and convertible bonds seem the most common, the discussion centers on convertible bonds to represent all hybrid securities.
2. The data in this section is partially based on a working paper entitled, "The Corporate Use of Convertible Bonds In Periods of Capital Contraction", by Bruce Payne, Nancy Rumore, and Elizabeth Harris. University of Southwestern Louisiana, working paper series. It is used here with permission.
3. The entire text of the letter is reprinted in the Federal Reserve Bulletin 52, September 1966, pp. 1338-1339.

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