THE USE OF CONVERTIBLE PREFERRED STOCK AS A TOOL OF MERGER

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1964

Submitted to the faculty of the Graduate School of
the Oklahoma State University
in partial fulfillment of the requirements
for the degree of
MASTER OF BUSINESS ADMINISTRATION
August, 1965

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Thesis Approved:

Thesis Adviser

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PREFACE

This report explains the use of features attaching to preferred stock that is issued in conjunction with a merger. A background on merger activity from 1900 to 1960 is presented together with the use of preferred stock during this same period. The major emphasis of this report is consideration of the preferred stock and its attached features as used in recent merger activity. Particularly, this report considers the use of the conversion feature, the callable feature, and the cumulative feature as they are used in each of the eleven preferred stock issues analyzed. The amount of the dividend and the extent to which dividends change as a result of the exchange of common stock for convertible preferred stock is also considered.

Throughout this report, the merging company refers to the corporate entity that remains in existence after the merger is consummated. The merged company is that company which loses its corporate identity. Shareholders of the merged company exchange their common stock for preferred stock of the merging company.

The writer wishes to acknowledge the assistance of his adviser, Dr. James F. Jackson. His guidance and constructive criticism proved to be very timely and valuable in the development of this paper. Marguerite Howland, Head Documents Librarian and Richard E. King, Social Sciences Librarian at the Oklahoma State University Library provided assistance in gathering material for this paper. Their interest and patient understanding was very much appreciated.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION TO MERGERS

Recent financial literature has presented numerous articles[1] on the subject of mergers. One particular facet of current interest in the merger activity is the use of convertible preferred stock as a financial tool to effecting a merger.

The marketing of a preferred stock issue to shareholders of the merged company functions within certain constraints. It is the attempt of the merging company to offer these shareholders a consideration attractive enough to obtain their shares. On the other hand, such an offer must respect the rights and future income prospects of the present shareholders.

Preparation of a merger offer to shareholders of the firm to be merged must consider that the convertible preferred stock replaces a present outstanding common issue. The stream of future income or other features of such an issue must be attractive enough (commensurate with the risk) to warrant the common shareholders to accept such an exchange. The current shareholders and the faith of stock market activity will be viewed in terms of the earnings dilution that will occur as a result of the merger transaction. Folz and Weston suggest that too much emphasis

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[1] See the periodical section of the bibliography.

is placed on current earnings dilution that would be reflected by a merger.[2]

Faced with the consideration that few mergers are entertained if an initial earnings dilution should take place, many firms attempt to offset the dilution indirectly by the use of other features to attract shareholders of firms that are prospective merger candidates. This paper considers some of the features attached to a preferred stock issue that is offered in conjunction with a merger.

Definition of a Merger

A merger is defined differently by different people. The point of view taken by the party defining a merger results in a variance between parties as to the ultimate definition. Accountants and accounting literature consider business combinations as either a purchase or a pooling of interests. A pooling of interests is a business combination of two or more corporations in which the holders of substantially all of the ownership interests in the constituent corporations become the owners of a single corporation which owns the assets and business of the constituent corporations.[3] For tax purposes, a purchase can be the outright acquisition of the assets of one firm by another firm. It can also be the acquisition of the voting stock of one firm by another through the issuance of non-voting stock. A business combination can

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[2]David F. Folz and J. Fred Weston, "Looking Ahead in Evaluating Proposed Mergers," N.A.A. Bulletin, April 1962, pp. 17-27.

[3]American Institute of Accountants, Accounting Research Bulletin No. 48, Business Combinations, Committee on Accounting Procedure (New York: January, 1957), p. 22.

also be a purchase when factors requisite to a pooling of interests are not present.[4]

For the purposes of this report, a meaningful interpretation of a merger would be the absorption of one or more existing corporations by another existing corporation where the absorption is effected by acquisitions of voting capital stock of a company or companies involving the issuance, wholly or in part, of securities other than voting stock.

Purpose of a Merger

Ultimately, the purpose of a merger is to increase the profits of the merging company. In the long run, earnings resulting from a merger should be greater than the projected additive profits of the two firms prior to merger.[5]

Some of the reasons for entering into a merger are to reduce competition, broaden the scope of operations horizontally and/or vertically, tax considerations, to maintain or increase the rate of corporate growth, to acquire certain physical assets and/or technical competence required for government contract bidding, or for some internal reason known only to management. While the above reasons are admittedly short range goals, they are intended to reflect the overall long run goal of increased earnings in a shorter period.

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[4] George D. McCarthy, Acquisitions and Mergers (New York, 1963), p. 103.

[5] Frank K. Reilly, "What Determines the Ratio of Exchange in Corporate Mergers?" Financial Analyst's Journal, November-December, 1962, p. 50.

Financial determination of mergers is a quantitative expression of the research, production and/or marketing aspects of the particular transaction. Some firms merge because the prospect of maintaining the current above-average returns on the present operation over the long run is not good. Other firms merge because policies and objectives and/or the present management is not conducive to future growth that will create future long-run profits.

Mergers can be within an industry (horizontal integration) or cut across traditional industrial lines (vertical integration). Mergers within an industry tend toward a more oligopolistic market with stronger control exercised by fewer corporate entities in the particular industry. Vertical integration of a firm's activities guarantees more cohesiveness and control of the total objectives of the firm. Control of the product from the raw material stage to the ultimate consumer has merit with respect to some products. Such a firm has more effective power available to manuever its resources. At the same time it has a larger operating base and hence larger fixed costs with which to contend. Flexibility is limited to the resources of the total merged entity rather than to one or two specific functions in creating a particular good or service.

Inter-industry mergers are very common today. By merging with firms in other industries the degree of risk is reduced for the total entity. Should a depressed market occur in one industry, the earnings in the other industry or industries accruing to the merging company will partially offset the losses of the one entity.

A firm in one industry may be providing a market for the goods of another industry. By combining with one of the firms in its source-industry, the merging company will have obtained a form of vertical integration. This reduces the uncertainty of a potential market for the merged firm and gives the merging firm a more considerate source of raw materials or services.

Sustaining or increasing the rate of return on the investment of the firm often requires diversification into other fields. Many such mergers are an attempt to cope with the rapid technological advances that are being made in industry. By purchasing the physical facilities and/or technological skills, a firm more quickly enters a new field of endeavor than if the technological and productive facilities in the new industry had to be developed from scratch. The merged company already has experience and technical knowledge in their particular industry. Incorporating the results of an existing profitable firm into the financial statements of the merging company will be reflected by increased earnings. At the same time, the prospects for the future combined organization should, assuming a constructive merger has been made, represent a greater potential future than the two former separate entities.

Survey of Recent Merger Activity and Method of Analysis of Preferred Stock Issues

Eleven recent or proposed mergers are surveyed in Chapter IV. The information used was obtained from the listing applications (and attached prospectuses) made to the New York Stock Exchange. Each application was analyzed in terms of the specific features attached to the preferred stock that was offered to shareholders of the merged company.

The preferred stock was analyzed in terms of its conversion premium to the shareholder acquiring the issue. This analysis is achieved by comparing the difference in the market price of the common stock given up to the market price of the securities received for this common stock as of the date of conversion. From the investor's point of view, the current market price of the common stock of the merged company is compared with the market price of those securities offered for a share of this common stock. The market price of the common stock of the merged company is used as one basis of comparison. This market price is compared with the par or stated value of the convertible preferred stock. Implicit in such a comparison is the assumption that the convertible preferred stock will trade at its par or stated value on or near the date of issue. Where the merger has not been consummated, there is no market price for the preferred stock since this stock will only be issued as of the date of the merger. The ratio of conversion between the convertible preferred stock and the common stock of the merging company is used to convert the convertible preferred to common stock and thereby obtain a market value for the convertible preferred stock. This price is then used as a basis for determining the value to be received by the common shareholders of the merged company. The offer is compared with the current market price of the common stock of the merged company. In this way, a measure of the premium to be paid or received by shareholders of the merged company can be ascertained.

The merger is next analyzed by considering the potential amount of dilution that may occur. Consideration is given to decreasing earnings per share and its effect on the market price of the common stock of the merging company. In all the mergers considered, there is a time period over which the convertible preferred stock can be converted into common stock without being subject to redemption. Of the eleven preferred stock issues analyzed, two were redeemable after fifteen years outstanding. The other nine issues were redeemable after five years. Therefore, it is assumed for the analysis of dilution that all the convertible preferred stock will be converted upon issue. Total conversion of the convertible preferred stock upon issue will increase the dilution effect of the conversion of the preferred, but it offers a measure of the maximum dilution effect that may occur. The total number of shares outstanding after the conversion of the preferred stock is then divided into the aggregate net income for all the merging entities.

Dividend payments to the common shareholder of the merged company are compared before and after the merger. The difference between the dividend income received on one common share and the dividend income received on the securities exchanged for the one common share is the positive or negative dividend premium. The new dividend payment is then divided by the market price of the common stock of the merged company given up to determine a yield on the investment. The average yield and the range of yields are compared with Standard and Poor's weekly preferred stock average yield of non-callable preferred stocks. The averages presented are the result of averaging the monthly averages of weekly indexes for the composite indexes of the Industrial, Rail, and Utility bonds for the years 1963 and 1964. The preferred stock indexes are the average of the monthly averages of the weekly averages of the yield on preferred stock indexes. Each of these weekly preferred stock indexes is based on fourteen high-grade non-callable issues, the yield being determined for each issue and the average of the eight median yields represents the group yield. This comparison attempts to show the difference in yield that is paid by either the shareholder or the issuing company for the right to be granted or to include a convertible feature in a preferred stock issue.

By projecting the earnings per share and assuming the present price-earnings ratio to be constant, the price of the common stock is estimated. The projected value is compared with the conversion price of the common stock at the time the convertible preferred stock was issued to determine the approximate time of conversion. The estimated time of conversion is next compared with the time at which the redemption feature will take effect.

CHAPTER II

THE OCCURRENCE OF MERGERS OF THE USE OF PREFERRED STOCK SINCE 1900

Major Merger Movements

Since 1900, mergers have tended to occur in cycles. Twelve cycles of merger activity have been clearly defined. There was a positive correlation between the timing of the merger cycles and the level of the stock market prices. At the same time, these merger cycles tend to substantially lead the peaks in the level of industrial production.[1]

These twelve merger cycles have been grouped into three major movements. The first major merger movement occured from 1898 to 1902. This era in merger activity was unprecedented in both size and in the scope of its effect. It was most extensive with a larger number of mergers undertaken in this period than in the two following periods. Oligopolistic situations were created in many industries. The mergers and the general tendency toward corporate bigness laid the foundation for modern American business and industrial activity.

Mergers during the period 1898 to 1902 were not as successful as anticipated. A. S. Dewing, in analyzing 35 corporate industrial mergers of this period, reported the following results:

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[1]Ralph L. Nelson, Merger Movement in American Industry 1895-1956 (Princeton, 1959), p. 7.

> The promoters expected the earnings to be a half greater than the aggregate of the competing plants; instead they were about a fifth less. The estimated earnings /after consolidation/ were half again as large as the actual earnings of the first year after the union, and nearly twice as great (175%) as the average earnings during the ten year period following consolidation.[2]

The period 1926 to 1930 was considered as the second major period of merger. In this period an attempt was made to return to the industrial concentration that resulted from the first merger movement.[3]

The third merger movement took place from 1945 to 1956. Unlike the first two major movements in which most of the merger activity was bunched into a five year span, the third merger movement had a longer duration and fewer mergers occurred in any one year of the postwar decade.

Currently, merger activity is increasing. An improved financial position and improved liquidity of many firms coupled with stiffer competition in the market has forced many firms to consider diversification and/or expansion of their activities. Merger has been a favored method of obtaining a desired broad base of operations in a short period of time. A recent Business Week article condenses some of the findings of the Federal Trade Commission and the Justice Department's Antitrust Division regarding merger activity. In 1964, the Federal Trade Commission counted 1797 mergers, a 20% increase over 1963. The Antitrust Division of the Justice Department counted 501 mergers in the first quarter of 1965, almost a one-third increase over the same period in 1964.[4]

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[2] Arthur S. Dewing, "A Statistical Test of the Success of Consolidations," Quarterly Journal of Economics, November, 1921, pp. 90-91.

[3] Nelson, p. 5.

[4] "Merger Tide is Swelling," Business Week, May 29, 1965, p. 27.

The Use of Preferred Stock Prior to 1960

Before 1960, preferred stock was not used extensively as a tool of merger. In the 1960's convertible preferred stock has been used in the consummation of a number of mergers.

A. V. Woodworth suggests that many corporate entities were created prior to 1900 by the sale of corporate bonds and preferred stocks. Should the venture prove successful, common stock was issued. Preferred stock would therefore be the only form of equity to be initially invested in the undertaking.[5] By comparing the dividends paid on the common stock of a company and the dividends paid on an equal dollar value of the same firm's preferred stock, Woodworth showed the relatively poor return that was to be earned by investing in preferred stock. The editors of Harvard Business Review suggested that preferred stock was used for reorganization purposes since it served the purpose of reducing fixed charges at a critical time for the reorganized firm.[6]

During the 1930's, preferred stock was issued by banks as a form of distressed financing. The preferred stock which banks issued was purchased by the Reconstruction Finance Corporation. This provided additional capital funds for banks in order that they could operate. For banks, preferred stock seemingly continues to have the stigma of distressed financing.[7]

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[5]A. V. Woodworth, "Common vs. Preferred Stock as an Investment Over a Long Period of Years," The Annalist, May 23, 1930, pp. 1107-1109.

[6]"Legal Status of Non-Cumulative Preferred Stock," Harvard Business Review, IV (1926), pp. 495-500.

[7]Charles M. Williams, "Senior Securities--Boon for Banks?" Harvard Business Review, July-August, 1963, pp. 82-94.

CHAPTER III

THE USE OF ATTACHED FEATURES TO PREFERRED STOCK

Definition of Preferred Stock

Before considering the features that form part of the preferred stock issue, consideration is given to what is meant by a preferred stock. Preferred stock is a senior equity. It is used to increase the equity base of the firm by appealing to a particular type of investor. This type of investor may be an institutional investor who, by virtue of the articles of incorporation of the investing firm, can only invest in senior equities and debt obligations which tend to offer less risk to the holder than common stock.

On the other hand, and as is brought out in this paper, certain preferred stock issues are tailored to meet the requirements of the common shareholders of a company with whom the company issuing the preferred stock proposes to merge. Such a preferred stock issue must be designed to appeal to a former common stockholder of one firm as a preferred stockholder of another firm if the convertible stock issue is to be accepted by these common stockholders.

Tailoring a preferred stock issue to some specific institutional investor or using preferred stock in merger activity are two examples of the broad scope of financial activity that may be considered in the use of a preferred stock. Such a diversity of applicability precludes a broad definition of preferred stock. The specific preferred stock is given unique characteristics by attaching such features as convertibility and callability to the preferred stock issue. Upon liquidation of the assets of the firm, holders of preferred stock shall have priority to the proceeds upon distribution of the firm's assets up to a stated value per share. Both of these preferences were qualifications for selection of the particular preferred stock issues analyzed in this paper. Features other than preference to dividends and preference to assets upon dilution may be included in a preferred stock issue. Conversion, redemption, pre-emptive rights, sinking fund provision, callable or non-callable provisions are only some of the provisions that may be included.

The Convertible Feature

The convertible feature on the eleven preferred stock issues considered is important to the development of this paper. Convertibility of preferred stock places the preferred stock in a special position not shared by nonconvertible stocks. By making the preferred stock convertible, the preferred issue is (given the appropriate conditions of a favorable conversion premium) an actual deception for issuing common stock. Donald Fergusson suggests that, based on his study of preferred stock issues, preferred stock is issued as a pretense for issuing common stock.[1] Issuing a convertible preferred stock may also be an attempt on the part of management to reduce the

[1]Donald A. Fergusson, "Recent Development in Preferred Stock Financing," Journal of Finance, VII (1952), p. 462.

immediate impact of dilution of earnings per share on the common stockholders by spreading common stock acquisitions over the years following issue of the convertible preferred stock.

In evaluating the emphasis placed on the convertibility feature in preferred stock issues, Pilcher suggests that the major reason for issuing convertible securities is to raise common stock equity indirectly. The second reason for such issues is to improve the market acceptance of a bond or preferred stock contract.[2]

More recently, convertible preferred stock issues have been used very effectively in negotiating mergers. The recent increase in merger activity has increased significantly the number of convertible preferred stock issues currently issued or proposed. The use of a preferred stock in these instances is to increase the assets of the merging company while at the same time offering shareholders of the merged company preferred stock in exchange for their common stock holdings in the merged company. This preferred stock, while offering the former common stockholder an equity having less risk than his former common stock holding, is convertible into common stock of the merging company at some predetermined rate.

Timing is important to the conversion feature of convertible preferred stock. While the timing of conversion is not explicitly stated, it may be assumed that conversion from convertible preferred stock to common stock may economically take place when the price of the common stock of the merging company exceeds five to ten percent of the price of the convertible preferred.

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[2] C. James Pilcher, Raising Capital With Convertible Securities (Ann Arbor, 1955), p. 95.

One way of considering the value of the convertible preferred stock is to consider the absolute dollar value that would be paid for an equivalent number of common shares of the merged company at the time of merger. The conversion price is set in terms of the common stock price at the time of the merger. This common stock price is a projected market price that is assumed to occur at a certain time from the date of issue of the convertible preferred stock. The timing of the conversion is contingent on the future market price of the common stock of the merging company, the proximity of the potential market price of the convertible preferred stock to the market price of the common stock at the time the convertible preferred stock is issued, and the ratio of exchange between the convertible preferred stock and the common stock of the merging company.

Timing of conversion is also contingent on the dividends paid on common stock. By increasing the dividend paid on common stock, common stock holdings become more attractive relative to holding the convertible preferred stock. Such an increase in the dividend rate on common stock may be the result of increased earnings of the firm, or it may be a direct attempt on the part of management to induce convertible preferred stockholders to convert their preferred stock holdings to common stock.

The timing of conversion can be controlled to some extent by the merging company. This is an attempt to offset the effects of dilution on the earnings of the common stock. The future price of the common stock of the merging company can be projected by estimating the future price-earnings ratio of the common stock. The common stock price at which preferred stock may economically be exchanged for common stock can be established based on the approximate future time period in which this market price for common stock is expected to occur. This method of projection offers an estimate of the time at which conversion may take place. By varying the conversion ratio, the major impact of conversion can be timed to coincide with the most opportune conversion period for the merging company.

A premium on conversion in terms of increased market value may be offered to holders of common shares of the merged company when these common shares are exchanged for convertible preferred stock of the merging company. One way of determining a premium on conversion is to compare the market value of the common stock given up with the par or redemption value of the convertible preferred stock issued for the common stock. This par or stated value is assumed to represent the market value at or near the date of issue of the convertible preferred stock. This method is used in the subsequent analysis of the mergers under consideration. It would be preferable to compare the price of the common stock with the market value of the convertible preferred issue. Where the merger has not been consummated, this is not possible because there is no market price obtainable for the convertible preferred stock. Another method of determining the market value of the convertible preferred stock would be to determine an imputed future market value for the convertible preferred stock. Such an imputed value may not be very accurate with respect to the actual market price that will occur since the market price of the convertible preferred stock is subject to movements of supply and demand in the market place. Another way to determine the amount of a premium on conversion is to compare the dollar value of the common stock that can be obtained by converting the preferred stock to an equivalent number of common shares of the merged company.

In the foregoing discussion about conversion and callability of the convertible preferred stock, it has been assumed that dividend payments on the common stock have been some constant factor of the annual earnings per share of the common stock of the issuing company. If dividends on the common stock were increased as a percent of the earnings per share, conversion from convertible preferred stock to common stock would be indirectly forced because the holder of the convertible preferred stock will convert his holdings because he can obtain a greater current return on common stock holdings than on the convertible preferred stock.

The Dividend Feature

The dividend payment on preferred stock is considered by financial officers as virtually a mandatory payment because a dividend on common may not be paid unless the preferred dividend is first honored. As the Financial Handbook points out:

> Although non-payment of preferred dividends will not create a condition of default or bring about bankruptcy, it could have a number of other highly undesirable consequences. For this reason the financial manager typically considers the payment of preferred dividends mandatory rather than discretionary.[3]

The dividend is a distribution of income to the firm and a source of income to the owners of the firm. While the cost to the firm of the dividend payment is a fixed amount, the yield to the holders of a

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[3] Jules I. Bogen, ed., Financial Handbook (4th ed., New York, 1964), p. 17.53.

security varies depending on the price paid for the preferred stock. Typically the dividend (or the yield on the preferred security investment, depending on one's point of view) should be adequate to compensate for the inherent risk in holding such a security.

Convertible securities fall into two categories, debt (bonds) and equity (preferred stock). All other things being equal, the cost of using convertible debt issues is less than the cost of convertible preferred stock. Interest paid on bonds is tax deductible while dividends paid on convertible preferred stock is not deductible for tax purposes. Depending on the tax rate, the annual cost for the use of debt funds would be less than the annual cost of using funds raised by a preferred stock issue.

If convertible bonds are so much cheaper, why use convertible preferred stock at all? The answer would center on a consideration of the amount and/or degree of risk that the issuing firm is willing to assume. A temporary strain on cash on the part of a firm issuing convertible preferred stock can be reduced by foregoing a dividend payment at a time of cash shortage. On the other hand, debt servicing in the form of periodic bond interest payments must be met as they arise. It is acknowledged that firms issuing preferred stock do tend to consider dividend payments on this preferred stock as a fixed payment to be met in order to preserve public faith in both preferred and common stock issues of the firm.

Convertible preferred stock is an equity security whereas convertible bonds are a type of debt instrument. Since the convertible preferred stock is a type of equity issue, it represents more risk to the shareholder than a bond issue would to a bondholder. The yield on a convertible preferred stock would, it is assumed, have to be higher in order to attract funds to this higher risk type of investment.

Table I shows the yearly composite averages of the average weekly yields on different quality bonds and preferred stock for 1963 and 1964. The preferred stock yields listed in the right hand column of Table I are based upon fourteen high-quality, non-callable preferred stock issues. The yield for each preferred stock issue is determined, and the average of the eight median yields represents the average group yield as shown in Table I for 1963 and 1964.

The results shown in Table I require some explanation. The yield on preferred stocks is lower than the average yield on all four different quality classification of bonds except for Class AAA bonds in 1963. Since holders of preferred stock are assuming more risk than bondholders, preferred stockholders are assumed to be anticipating a capital gain income from holding the preferred stock for a period of time. A capital gain could also be obtained by exchanging the convertible preferred stock and selling the common stock. The total income obtained from holding the preferred stock and selling it for more than the purchase price plus the annual yield for each year the preferred stock is held represents the total income over the life of the investment. If this total yield were prorated over the time the preferred stock was held, the preferred stock would show a higher yield than any one of the four bond classifications in Table I.

The average yield on the convertible preferred stock issues considered in this paper is 4.02% and ranged from 3.00% to 4.63%. Some of these convertible preferred stocks were issued in conjunction with mergers that took place in 1963 and 1964. Some of the mergers under

TABLE I

YEARLY COMPOSITE AVERAGES OF AVERAGE WEEKLY YIELDS ON BONDS AND PREFERRED STOCKS[a]

YEAR	CLASS OF SECURITY				
	AAA	AA	A	BBB	Preferred Stock
1963	4.243%	4.353%	4.486%	4.022%	4.30%
1964	4.368%	4.468%	4.559%	4.944%	4.32%

[a]Calculated from: Standard and Poor's Trade and Securities, Statistics, Security Price Index Record (Vol. 30, No. 4; Orange, Conn: Standard and Poor's Corporation, 1964), pp. 115, 186, 187, 188, 189. Also, see Standard and Poor's Trade and Securities, Security Price Index Record (Vol. 31, No. 1; Orange, Conn: Standard and Poor's Corporation, 1965), pp. 63-64.

consideration were negotiated or proposed in the first half of 1965. This low yield on convertible preferred stock indicates that investors will pay a premium for the right to convert to common stock. While the difference between the yield on the convertible preferred stocks analyzed in this paper and the yields on the securities in Table I is significant, the difference is even more significant when consideration is given to the fact that less than one half of the convertible preferred stocks considered were of a high grade quality. The majority of these convertible preferred stocks would not qualify (on the basis of risk) for the preferred stock listing as displayed in Table I.

Over the past two years, investors in these securities have accepted a lower yield on preferred stock issues relative to the yield on bonds. For example, in 1964 the yield on the AAA bonds averaged 4.37% while the yield on high-quality preferred stocks was 4.32%. Bondholders of lower-quality bonds obtain an even higher yield than AAA bondholders. At the same time, holders of convertible preferred stocks have, on the average, accepted an even lower yield on the convertible preferred stocks than on high-quality, non-callable preferred stocks. In 1964, preferred stockholders, as shown in Table I, accepted an average yield on high-quality, non-callable preferred stocks of 4.32%. The eleven convertible preferred stocks analyzed in this study obtained an average yield of 4.02%.

The Callable Feature

The issuing firm obtains a certain degree of financial flexibility by making a preferred stock callable. The callable feature may be used at the discretion of the issuing company. If the callable feature may be used at the discretion of the issuing company, the call feature is of value to the firm in coping with the firm's future financial developments. If the firm is required by the terms of the preferred stock agreement to call a certain number of preferred shares during any one year (or other stated period) the call feature could be a financial burden to the firm. Donaldson and Pfahl suggest that by buying back a certain amount of the outstanding issue, the market price of the convertible preferred stock will be maintained thereby providing a relatively more secure position for the remaining outstanding shares.[4]

By granting the issuing firm the right to redeem the preferred stock, the firm may take advantage of any future changes in the capital

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[4] Elvin F. Donaldson and John K. Pfahl, Corporate Finance (2nd ed., New York, 1963), p. 118.

market. Redemption of preferred stock may be a better use of idle funds than the acquisition of some new asset. On the other hand, the preferred stock may be replaced by another preferred stock issue more favorable to the issuing company.

Dilution of earnings per share of the common stock may result from using the call feature of a convertible preferred stock. Most convertible preferred stocks are callable at some premium above the par or stated value of the particular stock. If the number of common shares which could be exchanged for one convertible preferred stock is selling above the call price of the convertible preferred stock, the rational investor will convert his preferred stock holdings to common stock. The investor would receive more on the market from the sale of the common stock than the redeeming company would offer upon redemption of the stock. At the same time, the common stock will tend to suffer from dilution upon conversion of the preferred stock to common stock holdings. One measure of the potential dilution effect on the common stock presently outstanding is to consider the amount of common stock that will be issued upon conversion as a percent of the total amount of common stock presently outstanding. This represents the maximum dilution that results from conversion of the issue.

The use of the call feature will depend on the amount of common stock to be used for conversion of the convertible preferred stock. The amount of common stock used for conversion can be expressed as a percent of the total amount of the common stock outstanding before the merger took place.

Of the eleven mergers issuing convertible preferred stock that were analyzed, five firms offered common stock on conversion that was

10 percent of the amount of the common stock issued and outstanding before the merger took place. Three firms offered between 11 and 20 percent of the total amount of common stock outstanding before the merger for conversion of the convertible preferred stock. The remaining three firms offered between 41 and 50 percent of the total amount of common stock outstanding before the merger for conversion of the convertible preferred stock. Forcing conversion through the use of the call feature will increase the amount of common outstanding in a short period of time. The increased common stock outstanding will result in a decrease in the earnings per share of the common stock. Assuming a constant price-earnings ratio for the common stock, the market price of the common stock will decline in response to the decreased earnings per share.

Determination of the return on a convertible preferred stock will be affected by the possible implementation of the call feature. The yield on the convertible preferred stock is a measure of the amount of dividends received as a percent of the purchase price of the preferred stock. The total return on an investment in a preferred stock includes the yield on the preferred stock plus any premium or discount earned over the time the preferred stock is held. In the case of the eleven convertible preferred stock issues considered in this paper, yield on the preferred stock is determined at the point of time of issuance to the point of time when the convertible preferred stock is converted to common stock, or when the convertible preferred stock is called.

If the convertible preferred stock is refunded by issuing another security only a small amount of cash is required by the firm doing the refunding. If the security is called, the amount of cash outlay will depend on a number of factors. The major ones are: the premium on conversion, the market price of preferred stock relative to the common stock into which it is convertible, the number of institutional holders of the stock not allowed to hold common stocks, and the current market price of the convertible preferred stock compared to the conversion price.

The Cumulative Feature

The cumulative provision reduces the risk to the holder of the preferred stock. At the same time it assures the issuing company that each dividend will have to be paid sometime in the future. Walker and Baughn consider this particular feature of preferred stock by stating: "The question of the cumulative feature is generally not raised. It is assumed that preferred stock will be cumulative, and unless there is a provision to the contrary, dividends are deemed to accumulate when passed."[5]

The use of the cumulative feature may have a negative connotation. Dividends may not be paid in periods of little or no profit. If dividends are not paid during such periods, the yearly dividends payable on the cumulative preferred stock accumulate. When earnings of a firm improve to a point where dividend payments can be resumed, the accumulated dividends on the preferred stock must be paid before any dividends can be paid on the common stock. This cumulative feature has two drawbacks to the firm. First, payment of the accumulated

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[5]Ernest W. Walker and William H. Baughn, Financial Planning and Policy (New York, 1961), p. 297.

dividends on the preferred stock may place a heavy cash strain on the firm at a time when an improved earnings per common share would enhance an otherwise poor market picture of the common stock. Second, not only will the large payment of accumulated dividends help to maintain a low earnings per share on the common stock after the firm's earnings have actually improved, but this in turn will be reflected in the market price of the firm's common stock. The market price of the common stock will be adjusted as a result of the investment community's opinion of the market value of the common stock.

The investor in convertible preferred stock views the cumulative feature as providing greater assurance of dividend payment. When the accumulated back dividends will be paid is not known. There is still a degree of uncertainty as to when the dividend payments will be continued. Anticipated payment may mean very little if the firm is not earning enough to pay an annual dividend on the preferred stock. Where such a situation exists, it is doubtful if the firm would have adequate resources and/or the potential market to consider business combinations with other firms.

The cumulative feature as used in convertible preferred stock that is issued in conjunction with a merger does offer one distinct feature to the preferred stockholder. The cumulative feature grants the holder the right to receive preferred dividend payments on the convertible preferred stock up to the date of conversion. After conversion, the preferred stockholder (who was formerly a common stockholder in the merged company) will become a common shareholder in the merging company. If the common stock of the merging company pays a dividend, the investor in convertible preferred may, by proper timing of the conversion, have a continuous income stream from his equity holdings.

The common stock investor of the merged company may have looked upon his holdings of common stock as a hedge against inflation. By trading his common stock holdings in the merged company for convertible preferred stock of the merging company, and subsequently converting the convertible preferred stock into common stock of the merging company, the common shareholder has effectively traded one common stock for another common stock. A time period will elapse between the initiation and consummation of the two transactions.

If the earnings of the merging company are moving with the economy, and if both the merged company and the merging company pay dividends that correspond closely to these earnings movements, the investor will continue to receive dividend payments commensurate with the earnings ability of the firm. The cumulative dividend feature attached to the convertible preferred issue provides some guarantee of a measure of income to the holder before and during the transition from one common stock to another.

CHAPTER IV

EXAMPLES OF THE USE OF CONVERTIBLE PREFERRED STOCK IN MERGER ACTIVITY

The purpose of this chapter is to analyze each of the eleven mergers that are considered. The sinking fund feature is absent from all the convertible preferred stock issues. This feature, while relatively important in debt issues of securities, is not common with convertible preferred stock.[1]

The cumulative feature which was discussed in Chapter III is important to a convertible preferred stock. A comprehensive analytical discussion of the effect of the cumulative feature on the convertible preferred stock issue is not included in the scope of this paper. The effect of the cumulative feature on the convertible preferred stock issues under consideration will be the same in each of the eleven preferred stock issues since the cumulative feature was explicitly stated in nine of the eleven convertible preferred stock issues. The other two convertible preferred stock issues did not include a cumulative provision but, since accumulation of the right to payment for passed dividends was not explicitly prohibited, it is assumed that the unpaid dividends accumulate in these three convertible preferred stock issues.

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[1] Pilcher, p. 95.

The analysis of these mergers considers the premium on conversion (if any), and the maximum potential dilution that may occur upon conversion of the convertible preferred stock. Dividends paid on the new stock holdings that were received for the common stock given up is compared with the dividends paid on the common stock of the merged company. An earnings per share growth rate is determined, and the future yearly price of the common stock of the merging company is projected. The projected price of the common stock is compared with the price of the convertible preferred stock to determine the most probable time when conversion will occur. This probable conversion time is compared with the time after issue that the convertible preferred stock is callable. The specific details for obtaining the results as shown in this chapter and in Chapter V are outlined under the appropriate section in Chapter III. In each title of the particular merger, the first company mentioned is the merging company while the second company named is the merged company.

Thompson Ramo Wooldridge Inc. Merger With Marlin-Rockwell Corporation

Thompson Ramo Wooldridge Inc. is an Ohio company that commenced operations in 1916. The company's domestic and Canadian operations employ 27,000 employees. Commercial and industrial sales of parts for cars, trucks, and tractors accounted for 46 percent of total sales in 1964. Government defense and space sales of missile, space, electronics and associated research activities accounted for 54 percent of the firm's activities.

Marlin-Rockwell Corporation is a Delaware company. It commenced business in 1935 as a result of the acquisition of the assets of various machine tool businesses. The company, employing 3,200, manufactures a complete line of ball and roller bearings. The firm is currently expanding its research facilities. Research activities on friction have resulted in a number of new products.

For purposes of this analysis,[2] the market price of TRW[3] common stock is $54.50 per share, MRC common stock $39.25 per share, and the par or stated value of the convertible preferred stock is $100.00. The terms of conversion call for one share of MRC common stock to be exchanged for .25 shares of TRW common stock and .25 shares of TRW convertible preferred stock. Assuming that the convertible preferred stock will trade at or near its par value on issue, the holder of MRC common stock will lose $.62 per share in market value of MRC upon acceptance of the offer.

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[2]A consistent method for analysis of the relevant financial data is used for each of the eleven mergers. The common stock prices of both the merging company and the merged company are obtained by taking the mean of the high and low prices for the month in which the listing application was made to the New York Stock Exchange. If there is a market for the convertible preferred stock of the merging company, the price for the convertible preferred is obtained from the same month's quotations as for the common stock of the merging company. The date of the merger or proposed merger is assumed to be the date the listing application was made to the New York Stock Exchange. The specific terms of each merger were obtained from the listing applications made to the New York Stock Exchange for each of the mergers considered in this paper.

[3]The following is an analysis of the use of the convertible preferred stock used in the merger of the two firms just described. For purposes of brevity and clarity, the initials "TRW" and "MRC" shall mean Thompson Ramo Wooldridge and Marlin-Rockwell Corporation, respectively.

TRW's earnings per share have increased over the past five years. However, there has been a marked range of fluctuation in earnings. The merger of MRC into TRW will not dilute the earnings per share of TRW, because the increased earnings of TRW resulting from the merger will offset the increased common stock outstanding that will result from the conversion of the convertible preferred stock. The price-earnings ratio is currently 11.3. Based on these figures, the market price of TRW common stock is estimated to be $60.13 one year from merger, $65.55 two years from merger and $71.07 three years from merger.[4] The conversion preference for the TRW common stock over the TRW convertible preferred stock is assumed to be about five to ten percent higher than $65.00 per common share. Therefore, the preferred

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[4]For each of the eleven mergers analyzed, the estimated common stock prices are projected by adding an annual increase in earnings per share to the earnings per share reported for the last full operating year (referred to as the base year) as reported in Moody's Industrial Manual for the merging company. This calculation obtains a series of projected earnings per share for the forthcoming years. This series increases by an absolute amount from year to year. The earnings per share figure for each year is then multiplied by the price-earnings ratio obtained for the same base year as the earnings per share figure. The price-earnings ratio is assumed constant for the short-run considerations of this analysis.

The premium on conversion is the market value increment accruing to holders of common stock of the merged company who exchange their common stock holdings for convertible preferred stock of the merging company, and perhaps some common stock of the merging company. Where the merger has been consummated, the premium is the difference between the market price of the total amount of the common stock of the merged company given up and the market price of the total amount of the common stock of the merging company. The common stock of the merged company is the amount exchanged for one share of convertible preferred stock. The amount of common stock of the merging company is the amount of common stock received in exchange for one convertible preferred stock. Where the merger has not been consummated, the market price of the common stock is compared with the par or stated value of the convertible preferred stock for which the common stock was exchanged.

stock could economically be converted sometime after the third year the convertible preferred is outstanding.

This convertible preferred stock is callable after five years. Thus, TRW apparently is allowing approximately two years during which it anticipates the conversion of the preferred stock may take place based on the increasing market price of the common stock. That is, the holder of the convertible preferred stock will have two years in which to convert his convertible preferred holdings before the company can force conversion through redemption of the convertible preferred stock.

Litton Industries, Inc. Merger with Hewitt-Robins Incorporated

Litton Industries was incorporated in 1953 in Delaware. A wide variety of commercial and industrial products accounted for 46% of its total business. Another 46% of its sales were for United States defense products and the remaining 8% were sales involving Free World defense activities. Litton is made up of a systems group, components group, business equipment industrial group and nuclear powered submarines and other vessels. Litton produces everything from the infra-red heating equipment for vending services to nuclear-powered attack submarines. Litton has about 47,600 employees. Litton also controls the Royal McBee Corporation.

Hewitt-Robins, with about 4,000 employees, designs and manufactures complete systems of bulk material conveying equipment, industrial rubber products and power transmission components and products. Currently, 40% of its business comes from each of the bulk material handling and the power transmission products. The remaining 20% of sales are from the sale of industrial rubber products.

The market price of Litton common stock at the time of the merger was $73.75 and the market price for H-R common stock was $31.75.[5] At the time of merger, the market price of Litton convertible preferred stock was $95.75. The terms of conversion were such that 2.65 shares of H-R common stock was convertible into one Litton convertible preferred share. On the basis of the prices at the time of exchange, H-R shareholders received a premium of $4.33 for each share of H-R given up for the acquisition of Litton convertible preferred stocks.

The maximum potential dilution of the number of Litton common shares to be exchanged for Litton preferred stock only amounts to about 0.5% of the total amount of common stock currently outstanding. Dilution of earnings per share would not be significant. As a result of the conversion from Litton preferred stock to Litton common stock, the earnings per share of the common stock would actually increase by $.11.

Prior to conversion, H-R common stockholders received dividends in the form of common stock. A $3.00 cash dividend is paid on each Litton convertible preferred stock. This represents a $1.13 cash dividend for each common share of H-R formerly held.

Of the eleven merging company's analyzed, Litton's earnings per share have increased the fastest, about 260% over the past five years. Earnings per share are currently increasing about $.50 per share per year, and are currently $2.70 per share. Given this rate of growth

[5]The terms "Litton" and "H-R" shall be used to mean Litton Industries, Inc. and Hewitt-Robins Incorporated, respectively.

and an abnormally high price-earnings ratio of 27.3, the projected common stock price would be about $115.00 within three years. If such is the case, the shareholders of convertible preferred will find it feasible to convert to common stock holdings of Litton sometime after the third year.

Since the callable feature does not become operational for five years, it is conceivable that the majority of the convertible preferred stock will be converted before it can be called. This would be true only if Litton does not increase the common stock dividends.

Gamble-Skogmo Merger With Aldens

Gamble-Skogmo, Inc. was incorporated in 1928. Its principal business is retail merchandising through retail stores and selling merchandise at wholesale to franchised dealers located principally in small and middle-sized communities in central United States and Canada. In 1963, net sales were about $230 million.

Aldens was incorporated as a mail order company in Chicago in 1889. It is the fourth largest mail order retailer in the United States. The company and its subsidiaries are engaged in the general retail business as well. The firm had sales of about $92 million for 1963.

The acceptance of Gamble-Skogmo convertible preferred stock for Aldens common on a one for one share basis was not a particularly favorable merger for Alden's shareholders. G-S[6] common stock is $36.75, the market price of Aldens common stock is $37.00 and the market price of the convertible preferred stock is $42.00. The premium on conversion

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[6]Gamble-Skogmo is hereinafter referred to as "G-S."

to Aldens common shareholders is $5.25 per common share of Aldens. The most favorable attribute of this merger, as far as current G-S common stockholders are concerned, is the fact that the earnings per share will actually increase $.77 per common share (of G-S) after conversion of the convertible preferred stock as a result of the merger.[7] Aldens shareholders will also receive a $.60 per year dividend premium over the per share dividends received on Aldens common stock as a result of the acceptance of the convertible preferred stock.

G-S's earnings per share have been fluctuating erratically over the past five years. Aldens earnings per share have tended to fluctuate as well but not as extensively. If G-S were able to increase earnings per share $.10 per annum, it is conceivable that the preferred stock would be converted in the fourth or fifth year that it is outstanding. Based on a price-earnings ratio of 20.6, the market price of the G-S common stock would be about $45.00 in the fifth year. Because earnings per share of neither G-S nor Aldens has increased consistently over the past five years, it is doubtful that a common stock market price of $45.00 will obtain in four or five years. Because of the instability of the earnings per share of the two merging companies, the convertible preferred stock of G-S is a more speculative holding than would be the convertible preferred stock of Litton for example. (G-S convertible preferred stock did not measure up as well as any of the other convertible preferred stock issues. This was primarily due to the random

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[7] Dilution of earnings per share, whether positive or negative, is determined by adding the earnings of Aldens and G-S and dividing this sum by the sum obtained by adding the number of common shares of G-S outstanding before the merger and the maximum number of G-S common shares that could be issued in exchange for the convertible preferred stock.

movement in the earnings of the two companies entering into the merger.) Hence, the convertible preferred stock may be subject to call at a price of $35.00 per convertible preferred stock.

American Water Works Company, Inc. Merger With
Southern Gas and Water Company

American Water Works Company[8] is a Delaware corporation incorporated in 1936. American is the largest investor-owned group of water companies in the United States, having a majority interest in 81 water companies and other companies in associated businesses. The business of American is primarily that of collecting, treating, distributing and selling water. American has 2,700 employees and in 1964, gross revenues were in excess of $71 million.

Southern Gas and Water Company[9] is a West Virginia company incorporated in 1926 to operate a water utility business. Like American, Southern's principal business is that of collecting, treating, distributing and selling water. Southern has 343 employees and earned about $5.7 million in 1964.

The market price for American common stock at the time of the merger was $19.00. The market price of Southern common stock was $31.25. The par value of the American convertible preferred was $35.00. (This is the price at which the convertible preferred stock is assumed to sell at or near the date of issue.) The premium to Southern common

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[8] American Water Works Company is hereinafter referred to as "American."

[9] Southern Gas and Water is hereinafter referred to as "Southern."

stockholders on conversion to American convertible preferred stock as of the date of merger would be approximately $3.75.

The maximum potential dilution if total conversion of all convertible preferred stock were undertaken as of the date of issue of the convertible preferred stock would be $.02 dilution per common share of American. Earnings per share of American would be reduced from $1.29 to $1.27 per share. In terms of dilution of stock by the total amount of common stock to be converted, only 9.9% of the currently outstanding common stock will be converted.

There is a dividend premium to Southern common shareholders of $0.035 per common share of Southern by conversion to American convertible preferred.

At the rate of conversion of one American convertible preferred share for 1.3 shares of American common stock, conversion will not take place until the fifth or sixth year. Most of the stock will probably be converted before the call feature comes into effect fifteen years after issue of the convertible preferred stock.

Georgia-Pacific Corporation Merger With Bestwall Gypsum Company

Georgia-Pacific Corporation[10] was organized in 1927 under the laws of Georgia. G-P has 2.75 million acres of timber births, interests in coal mines and gas wells and some 35 mills capable of producing a wide range of wood products. These products include plywood, kraft paper,

[10]Georgia-Pacific Corporation is hereinafter referred to as "G-P."

newsprint, napkins and chemical by-products. G-P earned $35.4 million dollars in 1964 and has 20,000 employees.

Bestwall Gypsum Company[11] was incorporated in Maryland in 1956. Various types of gypsum and gypsum wallboard are produced at a number of plants in the United States. The third largest manufacturer of gypsum in the United States, employing 2,000 employees, Bestwall sold $5.8 million worth of gypsum and gypsum products in 1964.

The market price of G-P common stock at the time of merger was $64.00. The market price of Bestwall common stock was $42.25 and the redemption value of the G-P convertible preferred stock issued upon merger of the two firms was $41.00 per share. The terms call for an exchange of one Bestwall common share for one G-P convertible preferred stock. The Bestwall common stockholder would lose $1.25 in market value upon conversion of a common stock of Bestwall to a convertible preferred stock of G-P.

Total common stock to be used to convert the convertible preferred stock represents 10.8 percent of the total amount of common stock outstanding prior to the merger. This potential maximum dilution is reflected as an even smaller percentage dilution on the earnings per share. Earnings per share would decrease from $3.01 per share to $2.98 per share.

The timing of conversion from G-P convertible preferred stock to G-P common stock will be contingent on the rate at which the market price of the common stock increases over time. Currently the earnings per share are increasing at an approximate, although erratic rate of

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[11]Bestwall Gypsum Company is hereinafter referred to as "Bestwall."

\$.22 per common share per year. The current price-earnings ratio is 21.3. Based upon these considerations, conversion of the preferred stock to common stock of G-P would occur two to three years after issue of the convertible preferred stock. Since the callable feature does not take effect until fifteen years after issue, it is presumed that all the preferred stock will be converted without the call feature being implemented. If G-P forces conversion, it will have to be done through an increase in the amount of dividends paid on the common stock.

The preceding five examples illustrate the process whereby the potential worth of a convertible preferred stock issue is considered from the point of view of the investor (that is, the common shareholder of the merged company) and from the point of view of the issuing company. A complete tabulation of these analyses is set out in the concluding chapter.

One consideration that was not accounted for in the analysis of each firm was the fact that as the market price of the common stock rises, the market price of the convertible preferred stock tends to move in sympathy with the common stock price. This movement would tend to offset the price spread between the securities thereby prolonging the time during which the convertible preferred stock is outstanding. Since this sympathetic movement is subject to the supply and demand of the market place for the particular security, it can only be suggested that some period longer than anticipated will probably be required before conversion is complete. How long this extra period would be in any given case has not been estimated.

CHAPTER V

SUMMARY AND CONCLUSIONS

The convertible preferred stock has reached new prominence as a tool of merger in the 1960's. The successful application of the convertible preferred stock to many varied merger situations point up its applicability. Table II presents the results of an analysis of eleven mergers where convertible preferred stock was issued as the result of a merger. The guide following Table II gives the meaning of the figures in each of the eight columns.

The premium on conversion is the amount of market value in terms of the market price that the common shareholder receives by accepting preferred stock (and possibly some common stock). In cases where a merger has taken place, this premium is the difference between the average market price in the month in which the application was made to the New York Stock Exchange, and the average market price of the common stocks of the merging company in the same month. Consideration is given to the amount of common stock of the merged company required to obtain one convertible preferred stock of the merging company. The rate of conversion between the convertible preferred stock and the common stock of the merging company is also considered in the determination of the premium. Where the merger is only in the proposal stages, the common stock of the merged company is compared, on the basis of the ratio of exchange, with the par value of the convertible preferred. It

TABLE II

COMPARISON OF PREMIUMS, DILUTION AND TIMING OF
CONVERSION OF CONVERTIBLE PREFERRED STOCKS

		(1)[a]	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I.	Thompson Ramo Wooldridge - Marlin-Rockwell	(11.8%)	15.9%	4.3%	40¢	11.3	54 1/2	3	5
II.	Litton - Hewitt-Robins	(12.3%)	9.5%	No Prev. Div.	50¢	27.3	73 3/4	2	5
III.	Gamble-Skogmo - Aldens	0.7%	48.6%	25%	10¢	20.6	37	5	5
IV.	American Water Works - Southern Gas and Water	21.0%	9.9%	2.5%	12¢	12.4	19	5	15
V.	Georgia-Pacific - Bestwall Gypsum	1.6%	10.8%	37%	22¢	21.3	64	3	15
VI.	International Telephone and Telegraph - Aetna Finance	(12.5%)	48.5%	(33%)	18¢	13.8	54 1/2	1	5
VII.	Hercules - Haveg	(14.2%)	8.0%	50%	11¢	26.2	44 3/4	4	5
VIII.	The Warner Brothers - Puritan	7.1%	26.9%	53%	15¢	10.2	28 1/4	2	5
IX.	Eaton Mfg. - Yale and Towne	(2.2%)	43.3%	60%	35¢	12.1	36 1/4	1	5
X.	Continental Oil - American Agricultural Chemical	1%	7.1%	100%	13¢	18.5	64 3/4	2	5
XI.	Emerson Electric - Rantec Corp.	32.3%	2.2%	No Prev. Div.	13¢	18.9	34	3	5

[a]For definition of column headings (1) to (8) see Guide for Column Headings in Table II on Page 41.

Guide for Column Headings in Table II

1. The premium on conversion granted to shareholders of merged companies.

2. The amount of dilution calculated by determining the amount of common stock to be issued upon conversion of the convertible preferred stock expressed as a percentage of the common stock outstanding prior to the merger.

3. The dividend premium paid on the new holdings expressed as a percent of the dividends paid on a common share of the merged company.

4. A short run projection (in absolute cents) or the amount of annual increase in earnings per share for the common stock of the merging company.

5. The current price-earnings ratio of the common stock of the merging company.

6. The price of the common stock of the merging company as of the date of issue of the convertible preferred stock.

7. The estimated number of years after issue of the convertible preferred stock before this issue could be economically converted.

8. The period after issue of the convertible preferred stock during which the convertible preferred stock is not callable.

is assumed that the convertible preferred stock will sell at its par value at or near the date of issue.

Of the eleven mergers considered, the premium on four of these mergers was between $\pm$ 2.5 percent of equality on conversion. Four of the mergers offered a premium to the shareholders of the merged company of something less than 2.5 percent and three of the mergers granted premiums in excess of 2.5 percent.

Maximum dilution of common stock holdings is the amount of common stock issuable in conversion of the convertible preferred stock expressed as a percentage of the amount of common stock of the merging company currently outstanding.

Earnings per share dilution measures the effect of increasing the common stock outstanding in relation to the earnings of the firm. The earnings per share decrease at any given level of earnings as the amount of common stock outstanding increases. Of the mergers analyzed, dilution in an amount of less than ten percent occurred in five of the eleven mergers. An 11 to 20 percent dilution effect would occur in two of the mergers and a greater than 20 percent dilution effect could occur in the remaining three mergers.

There was no correlation between the premium on conversion or dividend premium granted and the amount of dilution incurred in any one transaction.

The premium on dividends is the amount of cash dividends received from the holdings of the new convertible preferred stock (and possible common stock) of the merging company as compared to the amount of cash dividends received from holding one common share of the merged company. The difference between the dividends paid on the two stock holdings is presented as a percentage of the dividends accruing to one common share of the merged company. As with the calculation of the premium on conversion, the dividend paid on the common stock might be compared with the dividend to be paid on the common stock of the merging company that will ultimately be received in exchange for one share of the common stock of the merged company. Such a conversion assumes that the convertible preferred stock, issued in exchange for the common stock of the merged company, will be converted to common stock of the merging company at the time the convertible preferred stock is issued. As is brought out later in this chapter, the convertible preferred stock will, in all probability, not be converted until after the second year the convertible preferred stock is outstanding. At this time the amount of dividends paid on the common stock of the merging company may well vary. Thus, the dividend premium could not be adequately determined because of unpredictable future developments.

A future increase in the dividends paid on the common stock of the merging company may not be the result of increased earnings per share of the firm. Rather, the increased dividend payments may be the result of an attempt by management to force conversion of any outstanding convertible preferred stock.

Of the eleven mergers considered, two of the merged companies did not pay a dividend prior to merger. Thus, any dividend payment to common shareholders of these two merged companies represented a new income stream. Of the remaining nine mergers, only one paid a smaller dividend after the merger than before the merger.

The time required after the convertible preferred stock was issued for the preferred stock to be converted to common stock of the merging company was next to be considered. The procedure followed to estimate the number of years required for conversion considers the price-earnings ratio for the full operating year prior to conversion. This ratio is held constant in estimating the time of conversion. An annual rate of growth in earnings per share was estimated and used in the assessment of the conversion. Using the last full year before the merger as the base year, this annual incremental earnings per share is added to the earnings per share for each of the following years. The constant price-earnings ratio is then multiplied by the estimated earnings per share which increases for each successive year. Thus, a market price for the common stock is projected for the next two or three years. The yearly projected common stock prices are compared with the price paid for the convertible preferred stock to determine the approximate time of conversion. The year of conversion is the year in which the projected market price for the common stock is five to ten percent higher than the price of the common stock at the time the convertible preferred stock was issued. By estimating the time at which conversion will take place, the firm can estimate when the maximum dilution effect will take place. By planning the time when the major effect of dilution will take place, the firm can attempt to offset any dilution effects to the best of its ability. This projected number of years is then compared with the time period between the date of issue of the convertible preferred stock and the date when the redemption feature on the convertible preferred stock becomes operational. This comparison allows some measure of the extent to which the call feature may be used by the issuing company in forcing conversion.

Of the eleven mergers considered, only one convertible preferred stock issue will probably be subject to the use of the call feature. Since the use of the call feature is at the discretion of the issuing company, the call feature will be used only if the convertible preferred stock is to be purchased by the firm or if the firm wishes to force conversion. One other stock issue may be subject to the call feature since there is about one year between the estimated time of conversion and the time at which the call feature takes place.

Seven other convertible preferred stocks have call features that become active within three years of the projected time of conversion. These seven preferred stock issues have a call feature that is not operational until five years after the date of issue of the convertible preferred stock has elapsed. Such a timing of the implementation of the call feature allows enough time for conversion to be made. At the same time, the call feature protects the issuing company from any extended outstanding convertible preferred stocks resulting from a poor market for the common stock.

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