

ANTI-DILUTION PROVISIONS
IN CONVERTIBLE SECURITIES:
A GUIDE THROUGH THE MAZE

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Anti-Dilution Provisions in Convertible Securities:

A Guide Through the Maze

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Abstract

Companies that issue securities convertible into their common stock may take a number of actions that reduce, or "dilute," the value of the conversion right provided by these securities. To protect securityholders against such actions, convertible securities contain extensive anti-dilution provisions. This paper examines these anti-dilution provisions, the rationale for the kind of protection they offer, and whether this protection is adequate.

In principle, anti-dilution provisions ought to address two types of actions: "equity-dilutive" actions, which reduce the per-share value of the stock into which the securities are convertible; and "risk-dilutive" actions, which reduce the variance of the consideration into which they are convertible. Equity-dilutive actions, of course, need to be addressed only to the extent that they do not reduce the aggregate wealth of common stockholders.

Actual securities indeed provide for extensive anti-dilution adjustments for equity-dilutive events. Each of about 50 convertible bonds sampled contained at least three different formulas to adjust the conversion price: one applicable to stock dividends, one applicable to dividends consisting of warrants to purchase common stock, and one applicable to other in-kind dividends. An analysis of these formulas reveals that the adjustments provided for stock dividends and the other in-kind dividends adequately compensate holders of convertible securities. The formula for warrants, however, entails a systematic undercompensation of such holders.

About one-half of the sampled bonds also provide anti-dilution adjustments for cash dividends and self-tender offers. To the extent a security does not provide for such adjustments, it leaves holders exposed to potentially significant reductions in the value of their conversion rights as a result of such actions. To the extent adjustments are provided, the paper identifies some shortcomings in formulas used to make these adjustments.

In contrast to equity-dilution, most bonds do not provide for adjustments for risk-dilution. It is presumably difficult to specify contractually what constitutes risk dilution and what adjustment is necessary to compensate holders for such dilution. An important exception is the adjustment provided for certain mergers and consolidations where bonds provided that they become convertible into the property shareholders receive on the account of such transactions. While this provision may be a reasonable (although imperfect) mode of adjustment for stock mergers (where the securities become convertible into the stock of the surviving or acquiring company), they are inadequate in the case of cash mergers (where the securities would become convertible into cash). To alleviate this problem, about three-quarters of the bonds supplemented this anti-dilution adjustment with a right to put the securities to the company at par. The protection provided by a put right, however, is both overbroad and underbroad. A preferable solution, pioneered in some warrants, would be to cash the conversion right out by a payment based on a Black-Scholes valuation of the conversion right prior to the merger.

INTRODUCTION

Convertible bonds and convertible preferred stock constitute an important source of capital for U.S. companies. During 1993, companies issued more than \$15 billion worth of convertible securities.¹ In addition, companies often issue warrants to purchase common stock. For example, in the recent takeover battle over Paramount, both Viacom and QVC offered warrants to purchase their respective stock to Paramount's shareholders.² And warrants for the stock of several large companies -- such as RJR Nabisco, Hanson PLC, and Safeway -- are traded on the New York Stock Exchange.³

But once convertible securities or warrants are issued, companies can undertake various kinds of actions that reduce (or "dilute") the value of the conversion feature in these securities. Securityholders, of course, can and do protect themselves against such actions by incorporating so-called anti-dilution provisions in their instruments. Anti-dilution provisions tend to be even more technical and complex than other boilerplate terms; and the rationale for the adjustments they provide is not always immediately obvious.⁴ This article examines these anti-dilution provisions, the rationale for the kind of protection they offer, and whether this protection is adequate.⁵ Though the analysis focuses on convertible bonds for purposes of exposition, it pertains equally to convertible preferred stock and warrants.

Generally speaking, the value of a conversion feature depends on two factors over which the company has some control: the current price of the shares into which the bonds can be converted; and the "riskiness" of the share price (that is, the

extent to which the share price may increase while the convertible bonds remain outstanding). The higher the current price of the shares, and the higher its upside potential, the greater is the value of the conversion feature.

Consider, as a simplified example, a bond with a conversion price of \$12 per share which becomes due in four years. The value of the conversion feature will be higher if the current share price is \$10 per share rather than, say, \$8 per share. Similarly, given a current share price of \$10, the value of the conversion feature will be higher if the likely range of the share price over the next four years is \$5 to \$15 rather than, say, \$7.50 to \$12.50.

The interests of the company's shareholders differ, however, from those of the convertible bondholders. If the company does well, shareholders would prefer to keep the increased value of the company all to themselves, and not to share it with the convertible bondholders. Thus, companies may be inclined to take certain actions that reduce the value of the conversion feature. This can be done in two principal ways: by "equity dilution" (reducing the current price of the underlying shares) and by "risk dilution" (reducing the riskiness of the share price).

This article first analyzes the kind of protection offered against equity-dilution. As we will see, anti-dilution provisions provide coverage against equity-dilution, but these provisions contain two kinds of loopholes: the more serious one is that some anti-dilutive actions are not covered at all by these provisions; the second one is that some of the adjustments that are provided do not compensate holders fully for the reduced

value of their conversion rights. The article then turns to risk-dilution. Again, the article points to gaps in the current level of contractual protection and discusses ways in which these gaps can be filled.

A. EQUITY DILUTION

1. *Equity Dilution and Conversion Values*

The most immediate way to reduce the value of a conversion feature is to reduce the price of the underlying common stock. Obviously, companies would only be inclined to take measures that reduce the price of the underlying stock if these actions do not harm stockholders. There are, generally speaking, three types of measures that achieve this result: stock splits, dividend payments, and self-tender offers to repurchase common stock at a premium over their market price. Courts have held that protection against such measures is purely a matter of contract.⁶ Thus, absent adequate contractual protection, convertible bondholders may experience severe declines in the value of their conversion feature if a company undertakes one of these equity-dilutive measures.

To see the potential detrimental effect of equity-dilution on the value of a convertible bond, consider the following simple example. XYZ Corp. ("XYZ") has \$100 million in assets and 1 million shares of common stock outstanding. Its only liability consists of \$20 million in bonds, which are convertible into common stock at a rate of \$40 principal amount per share. If all bondholders converted immediately, they would receive a total of 500,000 shares with a value of \$33.3 million ($\frac{1}{3}$ of \$100

million). Thus, the conversion option is very much "in the money."

Now consider the effect of the following measures on the value of the bonds *absent contractual protection*: a 2-for-1 stock split; a dividend of \$25 a share; and a self-tender offer for 250,000 shares at a price of \$120 per share. A 2-for-1 stock split would increase the number of shares to 2 million; if bondholders converted after the split, their 500,000 shares would be worth only \$20 million ($1/5$ of \$100 million). The dividend would reduce the company's assets to \$75 million; upon conversion, bondholders would receive 500,000 shares worth \$25 million ($1/3$ of \$75 million). And the self-tender offer would reduce XYZ's assets to \$70 million and the number of its shares to 750,000; the 500,000 shares receivable upon conversion would thus be worth \$28 million ($2/5$ of \$70 million). In each case, convertible bondholders would suffer substantial losses.

2. Types of Anti-Dilution Adjustments

To protect bondholders against equity-dilution, indentures contain anti-dilution provisions that provide for adjustments to the conversion price. Absolute protection would leave a convertible bondholder after a dilutive event in just as good a position as before the event. With respect to equity dilution, this would mean that bondholders, upon conversion, receive property with a value equal to the value of the property receivable prior to the event.

Although absolute protection is not attainable, there are, in principle, two techniques for adjusting the conversion price

that can come close to achieving this result: a *reduction in the conversion price* (giving bondholders a greater number of shares to compensate them for the lower per-share value); and a "*partaking*" *adjustment* (giving bondholders upon conversion, in addition to the shares of common stock, an interest in the property distributed by the company equal to what they would have received had they converted prior to the distribution). With some exceptions discussed below, anti-dilution provisions provide for a reduction the conversion price, rather than a partaking adjustment.⁷

(a) Stock Splits and Dividends

Stock splits, stock combinations, and stock dividends are the easiest to deal with. Indeed, for these measures, a reduction in the conversion price and a partaking adjustment yield identical adjustments. Take the two-for-one stock split in the example above. Since the number of shares is doubled, the primary effect of the stock split is to half the value of the shares. Thus, to fully compensate bondholders, the conversion price just needs to be reduced by 50%. Equivalently, under a partaking adjustment, a holder would receive twice the number of shares of common stock as prior to the split. In either case, convertible bondholders would receive 1 million shares with a value of \$33.33 million, the same value as before the stock split.

(b) Other Dividends

It is difficult to determine the precise reduction in the conversion price that would compensate bondholders fully for

other types of dividends. However, assuming that a dividend results in a dollar-for-dollar reduction in the share price,⁸ a simple formula (the "dividend formula") yields the proper reduction in the conversion price for dividend payments. The old conversion price (principal amount of bonds per one share of stock) is multiplied by the fraction of:

(x) the value of one share of common stock prior to the dividend⁹ less the per share value of the dividend over

(y) the value of one share of common stock prior to the dividend.¹⁰

Or if expressed as a conversion rate (number of shares per \$1,000 principal amount), the old conversion rate is multiplied by the inverse of that fraction.¹¹

Take the \$25 dividend in the example above. Assume the share price before the record date for the dividend payment is \$66.67 per share (the price the shares would trade at if all bonds had been converted). Applying the dividend formula yields a new conversion price of:

\$40 [old conversion price]	<i>times</i>
\$66.67-\$25 = \$41.67 [share price less dividend]	<i>divided by</i>
\$66.67 [share price]	<i>equals</i>
\$25 [new conversion price].	

Add that price, bondholders would receive 800,000 shares upon conversion, with an aggregate value of \$33.33 million (4/9 of \$75 million), the same value that they would have received had they converted prior to the dividend payment. Under a partaking adjustment, bondholders would receive upon conversion \$12.5 million in cash (\$25 per share) and 500,000 shares (with a value

of 1/3 of \$62.5 million, or \$20.83 million), also with an aggregate value of \$33.33 million.

(c) Premium Self-Tender Offers

Premium self-tender offers involve slightly more complications. As an initial matter, it is important to realize that share repurchases at the market price do not reduce the value of the remaining shares, and thus should not result in an anti-dilution adjustment. As corollary, for premium self-tender offers, the adjustment ought to be based on the amount of the premium, rather than on the total amount spent in the tender offer. Indeed, the aggregate premium paid (i.e. the per share premium times the number of shares repurchased) represents an outflow to shareholders similar to a dividend payment in the same amount. Ignoring secondary effects, it lowers the value of each remaining share by an amount equal to the per share equivalent of the aggregate premium.¹²

Using this insight, one could apply the dividend formula to premium self-tender offers, substituting the per share equivalent of the aggregate premium for the per share value of the dividend. In the example above, with \$66.67 as pre-repurchase share price, the aggregate premium would be \$13.33 million (\$53.33 per share repurchased times 250,000 shares), or \$17.78 per share outstanding after the self-tender. Applying the dividend formula yields as new conversion price

\$40 [old conversion rate]	<i>times</i>
$\$66.67 - \$17.78 = 48.89$ [share price less premium]	<i>divided by</i>
$\$66.67$ [share price]	<i>equals</i>
$\$29.33$ [new conversion price].	

At that price, bondholders would receive about 682,000 shares out of 1,432,000 shares. With a company value of \$70 million, these 682,000 shares would have a value of \$33.33 million, the same value that bondholders would have received had they converted prior to self-tender offer.

Bonds that provide for anti-dilution adjustment for premium self-tender offers frequently use an adjustment formula (the "tender offer formula") that looks different from, but is mathematically equivalent to, the dividend formula. The tender offer formula provides for multiplying the old conversion price by a fraction of

(x) the share price prior to the expiration of the tender offer¹³ times the number of all (repurchased and non-repurchased) shares less the total amount spent to repurchase the shares over

(y) the share price prior to the expiration of the tender offer times the number of non-repurchased shares.

In the example above, XYZ repurchased 250,000 shares at \$120 per share. Thus, the tender offer formula yields:

\$40 [old conversion rate]	times
\$66.67 * 1 million - \$30 million = \$36.67 million	
[share price times number of shares less amount spent to repurchase shares]	divided by
\$66.67 * 750,000 = \$50 million [share price times number of shares not repurchased]	equals
\$29.33 [new conversion price],	

the same adjustment as under the dividend formula.¹⁴

3. The Actual Scope of Anti-Dilution Protection

To determine the actual scope of anti-dilution protection, indenture provisions in 49 convertible bonds issued by U.S.

companies during 1993 were examined. (A list of the bonds and some supplementary information about their provisions is contained in the Appendix.) As one would expect, each of the bond issues contained extensive anti-dilution provisions. But even though the general structure of these provisions was similar, there were several significant differences in the scope of the provisions and in the types of adjustments they require. Throughout the discussion, I will highlight those differences which may be of special interest to the practitioner. Most importantly, some provisions leave substantial loopholes for companies to engage in equity-dilution and thereby harm convertible securityholders, while others provide for excessive adjustments that would produce a windfall to such holders.

A typical indenture contains at least three, and some as many as five, different adjustment clauses for equity-dilutive measures: one for stock splits and stock dividends, one for most other non-cash dividends, one for cash dividends, one for self-tender offers, and one for certain warrants to purchase common stock.¹⁵ The clauses for cash dividends and tender offers are not contained in all indentures. In that case, cash dividends are usually treated in the same clause as non-cash dividends, and no adjustment is provided for self-tender offers.

(a) Stock Splits and Dividends

One adjustment clause applies to stock splits, stock combinations, and stock dividends. Most indentures provide for a partaking adjustment though, as noted, a reduction in the conversion price would yield an equivalent result. As discussed,

the adjustment offers full and effective protection to convertible bondholders.¹⁶

(b) Most Non-Cash Dividends

A second adjustment applies to in-kind dividends and stock dividends payable in a class of stock different from the one into which the bonds are convertible. This clause provides for a reduction in the conversion price according to the dividend formula discussed above.¹⁷ (The clause does not apply to the distribution of certain warrants or rights to purchase common stock discussed below.) Though not perfect, the adjustment generally provides effective protection to bondholders.¹⁸

(c) Cash Dividends

Bond indentures vary substantially in the anti-dilution adjustments provided for cash dividends. About 42% of the indentures offer no meaningful protection to bondholders for such dividends.¹⁹ For instance, companies are often entitled to pay cash dividends out of retained earnings without causing any adjustment in the conversion price. Such a provision imposes hardly any restraints on the company.

When more meaningful protection is provided, aggregate annual dividends are usually limited to a percentage of the value of the common stock.²⁰ In the indentures examined, this percentage ranged from 5% to 25%, with an average of 14%. If aggregate dividends exceed the threshold percentage, the conversion price is adjusted according to the dividend formula. Even these provisions leave companies significant scope for equity dilution. The average maximum dividend rate permitted

before an adjustment must be made is quite generous, more than twice the average interest rate (5.16%) earned by convertible bondholders. If companies paid the maximum amount of dividends every year, the conversion option in many convertible bonds would never obtain substantial value.²¹

(d) Premium Self-Tender Offers

About 46% of the bonds provide for an adjustment in the conversion price for a self-tender offer for the company's stock. Usually, an adjustment is only provided if the aggregate payments within one year exceed a percentage (often 12.5%) of the value of the common stock. About 12% of the bonds, however, provided for an adjustment for any premium self-tender offer. Most commonly, adjustments are made under the tender offer formula described above.²²

Unsurprisingly, there is a significant overlap between those bonds that provide protection against premium self-tender offers and those that provide meaningful protection against cash dividends.²³ As dividends and self-tender offers are often comparable ways of distributing cash to shareholders, one form of protection without the other would leave a gaping loophole.

Bonds that contain both kinds of provisions generally integrate the adjustments they provide for dividends and for self-tender offers. That is, in each provision, both cash dividends and tender offer payments over the last year are added to determine whether the respective threshold is exceeded.²⁴ Curiously, in virtually all of these provisions, the full amount paid to tendering shareholders, rather than only the amount of

the premium paid, is used to make that determination. This leads to the arbitrary result that self-tender offers count more heavily towards the threshold than warranted by their effect on conversion rights (which depends on the aggregate premium, not on the aggregate payment). As a corollary, companies have greater leeway to engage in equity dilution through dividends than through self-tender offers.²⁵

Another interesting aspect of the adjustments for cash dividends and tender offers pertains to the amount on which the anti-dilution adjustment is based if the threshold is exceeded. Probably the most logical approach would be to base the adjustment on the portion of the dividend or tender offer premium that is in excess of the threshold amount. However, only a few bonds take this approach.²⁶ Instead, most bonds base the adjustment on the entire dividend or premium paid in the transaction that results in the threshold being exceeded. For example, if a company paid an 8% dividend followed by a 4% dividend, and the percentage threshold is 10%, the adjustment would be based on the entire second 4% dividend. This, of course, has the perverse result that a 4% dividend followed by an 8% dividend results in a greater adjustment than an 8% dividend followed by a 4% dividend.²⁷

(e) Warrants to Purchase Common Stock

A third adjustment formula (the "warrant formula") applies to a distribution of warrants (or rights) to purchase common stock at a price per share below the current market price. In about 50% of the bonds, this adjustment is limited to warrants

that must be exercised within 45 days. In about 25%, it applies as well to warrants to purchase securities convertible into common stock. Under the warrant formula, the old conversion price is multiplied by the following fraction:

$$[O + (R/M)] / (O + N) \quad \text{where}$$

O is the number of shares outstanding
N is the number of shares purchasable if all warrants are exercised
M is the current market price; and
R is the aggregate amount payable upon exercise of all warrants.

Conceptually, a distribution of warrants to the company's stockholders is no different from other non-cash dividends.²⁸ Thus, one could apply the dividend formula to such a distribution (using the per-share value of the distributed warrants as the value of the dividend). Indeed, if one assumes that the warrants have a (pre-dilution)²⁹ value equal to the difference between the current market price and the exercise price, the warrant formula is mathematically equivalent to the dividend formula.³⁰

In reality, however, the value of a warrant exceeds that difference, often by an substantial amount. This is particularly true if the exercise price is relatively close to the market price and if the exercise period is relatively long. Take a warrant, with an exercise price of \$9-7/8, to purchase one share of common stock, with a current market price of \$10, that may be exercised within one year (or, for what matter, within 45 days). Clearly, the value of that warrant greatly exceeds 12.5 cents. Thus, the warrant formula provides for a systematic underadjustment of the conversion price. The resulting potential for equity dilution is especially high in the 50% of the bonds

that apply the warrant formula regardless of the time period during which the warrants must be exercised.

Moreover, about half the indentures provide that any adjustment made on account of warrants that expire unexercised is to be reversed. Readjustment of the conversion price for expired warrants enables stockholders to have the cake and eat it too; and leaves holders of convertible bonds the crumbs. If the stock price rises, and the warrants are exercised, the adjustment is based on the difference between the exercise price and the market price *at the time of their distribution* (which already understates the value of the warrants). But if the stock price falls sufficiently such that the warrants expire unexercised, the ultimate adjustment is effectively based on a value of zero (since the initial adjustment is reversed).

Another deficiency relates to the 25% of the indentures that apply the warrant formula also to warrants to purchase securities convertible into shares of comm

on stock at a price below their current market price.

Literally read, the warrant formula would then apply to, say, the distribution of warrants to purchase for \$9 one share of preferred stock with a value of \$20, which preferred stock is convertible into one share of common stock with a current market price of \$10.³¹

And the adjustment would in effect be based on a warrant value of \$1, the difference between the exercise price and the current market price of the common stock. Such a result, of course, would be entirely inappropriate.

A final predicament is created by the interaction between the warrant formula and the dividend formula. The dividend formula presumably governs the distribution of warrants with an exercise price above the current market price per share.³² This has the perverse result that the distribution of warrants with an exercise price slightly above the current market price (governed by the dividend formula) could cause a greater reduction in the conversion price than the distribution of warrants with an exercise price slightly below the current market price (governed by the warrant formula).

In short, the warrant formula introduces a number of problems and complications into the anti-dilution provisions. Since there is no principled reason³³ why the distribution of warrants should be governed by a different formula than other in-kind dividends, it would be both simpler and better to get rid of the warrant formula entirely and deal with the distribution of warrants under the dividend formula.

(f) Notice Requirements

To the extent effective anti-dilution protection is not provided, notice requirements offer some degree of protection to bondholders. If bondholders receive advance notice of a dilutive event that causes no adjustment (such as a major cash dividend), they can at least convert their bonds prior to that event (i.e., prior to the dividend record date). By a timely conversion, holders can freeze-in the value of their conversion option to the extent it already is in the money. This, however, comes at the often substantial detriment of being deprived of the opportunity

to wait and see whether the underlying common stock appreciates in value (in which case conversion is desirable) or whether it falls (in which conversion may not be desirable). This option to wait and see, of course, is the very reason why investors purchase convertible securities, rather than common stock, to start with.

Indentures generally do not contain advance notice requirements for events that do not result in an adjustment to the conversion price. Bondholders, however, may often be able to obtain advance notice by other means. The most significant gaps in many anti-dilution provisions concern cash dividends and premium self-tender offers. Tender offers, of course, are by their nature widely publicized. And Rule 10b-17 promulgated under the Securities and Exchange Act of 1934 requires publicly traded companies to notify the National Association of Securities Dealers or the stock exchange on which the stock is traded 10 days prior to the record date for any dividend.³⁴ Thus, Rule 10b-17 results in advance publication of dividend record dates. Nevertheless, for small bondholders who are not as attuned to stock market activities, a contractual requirement to notify them directly of tender offers and extraordinary dividends may be beneficial.

B. RISK DILUTION

If equity dilution requires complicated formulas to provide bondholders with effective protection, effective protection against risk dilution is virtually impossible to obtain. The reason is two-fold. First, there is no readily accessible

measure of the "riskiness" of common stock, comparable to the market price as a measure of its equity value. Second, there are innumerable ways in which a company can reduce the riskiness of its common stock: investing in lower-risk projects; replacing debt with equity; or for that matter, issuing additional convertible securities (which, by their dilutive effect, reduce the upside potential of the share price). It is therefore not surprising that bond indentures provide no anti-dilution adjustments for most risk-dilutive measures.

The main exception to this practice relates to mergers, consolidations, and sales of substantially all assets. With respect to these transactions, convertible bondholders are protected by the combination of a partaking adjustment and a put right. I discuss each of these devices in turn.

1. Mergers and Sales of Substantially All Assets

Almost all bond indentures contain a special anti-dilution provision for mergers, consolidations, and sales of all or substantially all of the company's assets. This provision establishes a partaking adjustment to the conversion price: instead of into common stock, bonds become convertible into the property receivable on account of the common stock had they been converted prior to the respective transaction. Thus, if a holder of a \$1,000 bond would have received 10 shares of XYZ before its merger into NewCo, and in the merger each share of XYZ is exchanged for 2 shares of NewCo, the bond becomes convertible into 20 shares of NewCo.

In the case of a stock merger, such a partaking adjustment may be a reasonable way to adjust the conversion price. In a merger where stockholders are cashed out or receive debt securities, however, a partaking adjustment is more problematic. For example, if each share of XYZ were exchanged for \$80 in cash (rather than 2 shares of NewCo), the \$1,000 bond would become convertible into \$800 in cash. While this option may possess some value (as the value of the bond may fall below \$800), it is significantly less attractive than an option to convert into stock with a current value of \$800 and fundamentally different from the conversion feature anticipated when the bonds were issued.³⁵

Other issues may arise in the event of a sale of all or substantially all assets. Indentures typically provide that the bonds become convertible into the kind and amount of property "receivable [by shareholders] upon such ... sale." Shareholders, of course, do not receive any property upon *the company's* sale of all or substantially all its assets, but only upon a liquidation or dissolution following such a sale. The partaking adjustment presumably applies only to sales of substantially all assets that are followed by a liquidation or dissolution. Otherwise, the bonds presumably remain convertible into stock of the seller company.

Which party, however, is responsible for the conversion obligation? The indenture article on successor corporations often requires the purchaser of all or substantially all assets to assume all the obligations under the indenture and the securities (without separately dealing with the conversion

obligations) and provides that the seller company is released from its obligations.³⁶ This works well if the seller company dissolves and distributes cash or stock of the purchaser company to its stockholders. But if the seller company does not liquidate or dissolve, the purchaser company would become responsible for the right to convert into stock of the seller company. And if the seller company dissolves and makes a different in-kind distribution to its shareholders, the purchaser company becomes responsible for the right to convert into a proportionate amount of this in-kind distribution. Moreover, at the time of the asset sale, it may not be determined whether and when the seller company dissolves. This could create problems even if the purchaser company is not always required to assume the conversion obligations. To avoid later disputes, care should be exercised in drafting the anti-dilution adjustment for sales of all or substantially all assets and integrating that provision with the article on successor corporations.

2. Put Rights Upon Certain Fundamental Changes

A second provision in convertible bonds partially alleviates some of the deficiencies of the partaking adjustment for mergers and asset sales. The provision gives holders of convertible bonds the right to resell (or "put") their bonds to the company upon the occurrence of certain change of control events. About 85% of the convertible bonds examined contained such a put provision. The specific details of these provisions varied significantly, and an exhaustive discussion would go beyond the

scope of this article. Nevertheless, there are some common strands in these provisions that relate to risk-dilutive events.

Of the bonds that provided for put rights, 72% made the put right available in case of a merger or consolidation in which shareholders are cashed out or receive debt securities.³⁷ Similarly, 67% made the put right available in case of a sale of all of substantially all assets followed by a liquidating distribution. These provisions pertain to the inadequacy in the partaking adjustment if, as a result of the merger or asset sale, the bonds become convertible into non-equity securities. The put right thus complements the inadequate partaking adjustment.³⁸

If a put right is available, it usually affords holders the option to have the company repurchase their bonds at par plus accrued interest (or, in case of original issue bonds, at their accreted value).³⁹ Such a put, however, only is an appropriate remedy if the value of the bonds before the event was equal to this put price. For several reasons, the market value of a bond may differ substantially from the put price. Principally, the value of a convertible bond would tend to exceed the put price if market interest rates have fallen since its issuance or if the value of the underlying stock has risen significantly; and it would tend to be below the put price if market interest rates have risen or the stock price has dropped. In such cases, however, a put would leave bondholders open to losses (if bond values have risen) or provide them with a windfall (or bond values have dropped). Thus, the protection afforded to bondholders by a put right is both overbroad and underbroad.

3. *Black-Scholes Adjustment*

An alternative way to deal with mergers and sales of substantially all assets that have a major risk-dilutive effect is to "cash out" the conversion rights upon such events. Thus, *instead of* providing for an adjustment to the conversion price, the right to convert would terminate upon specified mergers or asset sales, and holders would receive cash to compensate them for the loss of their conversion rights. Such an approach has been used in warrants issued in a bankruptcy reorganization⁴⁰ and could easily be incorporated into other convertible securities. It necessitates, of course, a method for valuing the conversion rights inherent in convertible securities.

This method is supplied by the Black-Scholes option pricing formula, which is widely used in the financial and investment community.⁴¹ The Black-Scholes formula involves (at least from the perspective of a lawyer untrained in financial economics) intricate calculations. Fortunately, however, an understanding of its mathematical basis is not necessary to employ it effectively. More importantly, the Black-Scholes formula requires little and, for the most part, easily available information to value a conversion feature. Thus, the use of the formula in a bond indenture or a certificate governing convertible preferred stock would be practicable.

In particular, the Black-Scholes formula requires knowledge of (i) the conversion price, (ii) the market value of one share of stock, (iii) the time to expiration (i.e., the time to maturity), (iv) the treasury interest rate, and (v) the variance of the rate of return on the stock (a statistical measure of the

volatility of the stock price).⁴² Most of these items are easily ascertainable at the time of the merger or asset sale. The only item involving any difficulty is the variance of the rate of return. An estimate of the variance can, however, be derived from past stock price movements and could be calculated either at the issuance of the convertible securities or at the time of the merger or asset sale. It should be noted that many companies already have to compute such estimates for purposes of the new executive compensation disclosure requirements.⁴³

Conceptually, a Black-Scholes adjustment is greatly superior to the present combination of rights offered to convertible bondholders. This, of course, is no assurance that the market will embrace securities providing for such an adjustment. But as the Black-Scholes approach is widely used to value options and to make executive compensation disclosures, a Black-Scholes adjustment may in proper circumstances be a viable alternative to the standard rights package.

C. CONCLUSION

Anti-dilution provisions are designed to protect holders of convertible securities against dilution of their conversion rights. Despite their importance, however, anti-dilution provisions are sometimes treated as arcane boilerplate, and their conceptual basis is not always fully understood. This article has examined the functioning of anti-dilution provisions and identified gaps in the protection they offer. These gaps leave convertible securityholders dangerously exposed to losses from the reduction in value of their conversion rights. In other

aspects, however, many anti-dilution provisions offer overly broad protection to securityholders. To provide effective representation to issuers, underwriters, and securityholders, lawyers need to be aware of these shortcomings when they draft anti-dilution clauses and of the alternative ways to correct these shortcomings.

Footnotes

¹ See Tom Pratt, *A Knockout Year for Wall Street*, INVESTMENT DEALERS' DIG., Jan. 10, 1994, at 18.

² See Randall Mikkelsen, *QVC, Viacom Bids Compared*, REUTER BUS. REP., Feb. 2, 1994, available in LEXIS, News Library, Busrpt File.

³ See N.Y. STOCK EXCHANGE GUIDE (CCH), Directory of Listed Securities -- Stock (1993).

⁴ See, e.g., Stanley A. Kaplan, *Piercing the Corporate Boilerplate: Anti-Dilution Clauses in Convertible Securities*, 33 U. CHI. L. REV. 1, 25 (1965) (stating that anti-dilution provisions represent a "complex, difficult, and intriguing exercise in corporate draftsmanship"); David L. Ratner, *Dilution and Anti-Dilution: A Reply to Professor Kaplan*, 33 U. CHI. L. REV. 494 (1965) (stating that anti-dilution provisions are an "arcane subject").

⁵ Only few prior articles have examined anti-dilution provisions. Martin Riger, *A Conversion Paradox: Negative Anti-Dilution*, 44 BUS. LAW. 1243 (1989), provides an insightful, but more narrowly focused analysis of the special issues arising when an anti-dilution formula results in a negative conversion price. See also *infra* note 10. William W. Bratton, Jr., *The Economics and Jurisprudence of Convertible Bonds*, 1984 WISC. L. REV. 667, and William A. Klein, *The Convertible Bond: A Peculiar Package*, 132 U. PENN. L. REV. 547 (1975), examine anti-dilution adjustments generally, as part of, respectively, the general jurisprudential and economic framework of convertible bonds. The most recent

detailed description of anti-dilution provision is contained in American Bar Foundation, COMMENTARIES ON INDENTURES 521-557 (1971). This description, however, is by now quite dated and does not provide a critical evaluation of these provisions. Anti-dilution provisions are also briefly discussed in the *Model Simplified Indenture*, 38 BUS. LAW. 741 (1983). Finally, Kaplan, *supra* note 4, and George S. Hills, *Convertible Securities -- Legal Aspects of Draftsmanship*, 19 CAL. L. REV. 1, 20-39 (1930), provide an interesting historical perspective on the evolution of anti-dilution provisions.

⁶ See, e.g., *Broad v. Rockwell Int'l Corp.*, 642 F.2d 929, 943-44 (5th Cir. 1981) (en banc), cert. denied, 454 U.S. 965 (1981) (addressing conversion rights of bondholders); *Parkinson v. W. End St. Ry. Co.*, 173 Mass. 446, 53 N.E. 891 (1899) (Holmes, J.) (id.); *HB Korenvaes Inv., L.P. v. Marriott Corp.*, FED. SEC. L. REP. (CCH) ¶97,728 (Del. Ch. 1993) (addressing conversion rights of preferred stockholders); *Helvering v. Southwest Consol. Corp.*, 315 U.S. 194, 200-01, 62 S.Ct. 546, 550-51 (1942) (addressing rights of warrant holders).

⁷ A partaking adjustment has the advantage that one does not need to determine the value of the dividend (if not in cash) to determine the correct adjustment. It entails, however, other problems. For one, the company would be forced to keep in reserve the property distributed to enable future converting holders to partake in the distribution. This may be burdensome for certain in-kind dividends. Second, with respect to distributions whose value declines over time, an entitlement to

partake does not adequately compensate convertible holders. Take, for example, a distribution consisting of warrants that must be exercised within 60 days. A bondholder that converted after 60 days could still receive warrant certificates, but by then they will have been expired, and would thus be worthless. Similarly (though less extremely), a partaking adjustment for a cash dividend would not fully compensate convertible security-holders. If holders convert after several years, they receive a proportionate amount of cash, but the present value of that cash would be significantly less than the value received by the shareholders in the original distribution.

⁸ Often dividends do not result in a dollar-for-dollar reduction in the share price. Dividend increases and extraordinary dividends generally convey positive information to the market. For that reason, the share price of a company may increase when a company announces an increase in the regular dividend or an extraordinary dividend. See, e.g., Joseph Aharony & Itzhak Swary, *Quarterly Dividend and Earnings Announcements and Stockholders' Returns: An Empirical Analysis*, 35 J. FIN. 1 (1980). This increase is analogous to the increase in the share price when a company announces unexpectedly high earnings: it reflects a different market assessment of the value of the company. As such, holders of convertible securities legitimately benefit from it. Upon actual payment of the dividend, however (or more precisely, on the ex-dividend or the record date), there will be a reduction in the stock price commensurate to the amount of the dividend. This payment effect involves equity dilution, and it

is reasonable to base an anti-dilution adjustment on the assumption that the payment in itself results in a dollar-for-dollar reduction in the share price.

⁹ That share price (defined as "current market price") is calculated as the average of closing market prices on several days prior to the record date for the dividend payment. While many indentures use closing prices on trading days immediately preceding the record date, other employ closing prices on trading days as many as 30 trading days prior to the record date.

¹⁰ To see that the dividend formula results in the proper adjustment, consider a bond with a face value of \$1 and a conversion price prior to adjustment of c_0 , convertible into stock with a per share market price prior to adjustment of p . Upon conversion, a holder would receive stock with a value of p/c_0 . Assume that a distribution with a per-share value of d reduces the per share market price of the stock to $p-d$. After the distribution, a holder who converts would receive stock with a value of $(p-d)/c_a$, where c_a represents the adjusted conversion price. If $c_a = c_0 * (p-d)/p$, that value will be equal to p/c_0 , the value of the shares receivable prior to the distribution.

The dividend formula does not result in an intelligible adjustment if the value of the dividend exceeds the market price of the stock. (This result is possible since, for purposes of the dividend formula, the share price is sometimes calculated as the closing price on days that can precede the record date by more than one month. See *supra* note 9.) For commentators and courts analyzing this contingency, see *HB Korenvaes Inv., L.P. v.*

Marriott Corp., FED. SEC L. REP. (CCH) ¶97,773 (Del. Ch. 1993) (finding implied prohibition against payment of dividend in such amount), *Harcourt Brace Jovanovich, Inc. v. Sun Bank, N.A.*, No. CI 87-3985, slip op., (Fla. Cir. Ct. June 25, 1987) (employing more current trading dates to calculate "current market price") and Riger, *supra* note 5.

¹¹ For warrants, adjustments in both the exercise price and in the number of warrants are necessary to compensate warrantholders. Generally, the exercise price would be adjusted by multiplying the old exercise price by the fraction given above, and the number of warrants would be adjusted by multiplying the number of warrants outstanding by the inverse of the fraction above. Generally, any time an adjustment is made by a reduction in the conversion price (but not by a partaking adjustment) for convertible bonds or preferred stock, such a dual adjustment is required for warrants.

¹² As dividend increases, *see supra* note 8, the announcement of a premium self-tender offer generally conveys positive information about the company to the market and results in an increase in the stock price. But once the tender offer closes, the value of shares not tendered or not accepted will decline by an amount that reflects the aggregate premium paid.

¹³ Some of the formulas provide for the use of the "current market price" as of the day after the expiration of the tender offer. The definition of "current market price", however, refers back to closing stock prices prior to the expiration date. *See supra* note 9.

¹⁴ The mathematical equivalence of the dividend formula and the tender offer formula can be easily shown. Under the dividend formula, the old conversion price would be multiplied by:

$$(MP - P/NS) / (MP)$$

where

MP = share price prior to expiration of tender offer
NS = number of shares that are not repurchased
P = self-tender offer premium, i.e. tender offer price per share (RP) less the share price prior to expiration of tender offer (MP) times the number of shares repurchased (RS), or $(RP - MP) * RS$.

Substituting $(RP - MP) * RS$ for P and multiplying both the numerator and the denominator of the fraction by NS yields:

$$\begin{aligned} (MP * NS - (RP - MP) * RS) / (MP * NS) &= \\ (MP * NS + MP * RS - RP * RS) / (MP * NS) &= \\ (MP * (NS + RS) - RP * RS) / (MP * NS) \end{aligned}$$

This is the expression used in the tender offer formula as $MP * (NS + RS)$ represents all shares times the pre-repurchase price, $RP * RS$ represents the total amount spent in repurchasing the shares, and $MP * NS$ represents the non-repurchased shares times the pre-repurchase price.

¹⁵ Historically, anti-dilution provisions also covered the sale of common stock at a price below the conversion price or below the current market price. See Kaplan, *supra* note 4, at 6-10; Ratner, *supra* note 4; Hills, *supra* note 5, at 24-30. Even as recently as 1982, such provisions seem to have been common. Bratton, *supra* note 5, at 687, n. 75 (reporting that 43 out of 46 indentures contained "market price" adjustment clauses for subsequent issues of common stock). Today, however, bonds only rarely provide for such adjustments. (Only one of the 1993 bonds

contained such a provision.) The rationale for the lack of adjustment is that such sales of stock do not involve the conflicts of interest between stockholders and convertible securityholders and are present in equity-dilutive measures. Ratner, *supra* note 4. Three of the 1993 bonds provided for an adjustment for a sale of common stock to an affiliate at a price below the current market price. A sale of stock to an affiliate below market price can involve conflicts of interest, and protection against such measures is warranted. However, from the perspective of convertible bondholders, such a sale is not fundamentally different from a sale of other assets to an affiliate below market value. Thus, it would be preferable to deal with such sales through a generally applicable "Transactions with Affiliates" covenant rather than through an anti-dilution adjustment applicable only to sales of stock. Incidentally, only two of the 1993 bonds contained such a covenant.

¹⁶ See *supra* Section A(2)(a). In a few indentures, the formula applicable to stock dividends payable in common stock also provides for a partaking adjustment for stock dividends payable in any capital stock. The advantages and disadvantages of providing for a partaking adjustment, instead of a reduction in the conversion price that would otherwise apply to such dividends, are discussed *supra* note 7.

¹⁷ See *supra* text accompanying notes 8 to 10.

¹⁸ Indentures generally provide that the fair market value of the dividend be determined unilaterally and conclusively by the issuer's board of directors. See also HB Korenvaes Inv., L.P. v.

Marriott Corp., FED. SEC L. REP. (CCH) ¶97,773 (Del. Ch. 1993) (according board of directors great discretion in determining fair value of spin-off dividend). Most boards will fulfill their duties in good faith and in a reasonable manner. However, from the perspective of representing bondholders, it may be prudent to guard against the possibility that some boards may select a method of valuation that is least advantageous to convertible bondholders.

¹⁹ There seems to have been a recent strengthening in the protection against cash dividends offered to convertible bondholders. Bratton, *supra* note 5, at 695, n. 114, reports that none of the 46 bonds issued in 1982 which he inspected, contained meaningful protection against cash dividends.

²⁰ The bond rating did not seem to be an important factor in whether such a quantitative dividend restriction was present. Of the bonds rated by Moody's B2 or lower (roughly half the sample with a rating), 68% contained a restriction. Of those rated B1 or higher, 55% contained one.

²¹ The low level of protection provided with respect to cash dividends is somewhat puzzling. As convertible bonds rarely contain restricted payments covenants, convertible bondholders are left much more exposed to excessive dividend payments than regular bondholders. But compared with regular bondholders, convertible holders have a greater need for protection against excessive dividends, and providing such protection imposes a lesser burden on the company. As long as a company is in good financial shape, dividend payments do not cause significant harm

to regular bondholder. But for convertible bondholders, dividends are harmful even if the company's profits are booming, and the share price is either "in the money" or close to the conversion price. In such cases, the conversion option has significant value, which would be greatly reduced by a substantial dividend payment. And, unlike companies in bad financial shape, companies whose profits are high would have easy access to the cash needed for dividend payments. Moreover, unlike restricted payments covenants, a broader anti-dilution provision would not prohibit dividend payments; it would merely result in a reduction of the conversion price. Including such a provision would thus impose a lesser burden on companies than a restricted payments covenant.

²² See *supra* text accompanying notes 11 to 12. A few bonds provide for a different adjustment formula. According to that formula, the old conversion price is multiplied by a fraction of (x) the number of shares outstanding prior to the tender offer times the market price prior to the tender offer over (y) the sum of (i) the aggregate amount spent in repurchasing the shares and (ii) the number of shares outstanding after the tender offer times the market price prior to the tender offer. This formula yields an adjustment that is less beneficial to bondholders than the one under the tender offer formula, and thus fails to provide full protection to bondholders. The basis for the use of this different formula is unclear.

²³ Of the bonds that provided no meaningful protection against cash dividends, only 15% provided for adjustments for self-tender

offers. For those that provided some meaningful protection against cash dividends, 71% provided for adjustments for self-tender offers.

²⁴ Of bonds that provided meaningful protection against cash dividends and self-tender offers, 65% used such an integrated adjustment mechanism. These bonds usually provide for identical numerical thresholds for cash dividends and self-tender offers.

²⁵ For instance, the total amount spent in the tender offer for XYZ's 250,000 shares in the example above was \$30 million, or 45% of the value of the common stock. Yet the effect of the self-tender offer was equivalent to a dividend of \$17.78 per share, or only 26.7% of value of the common stock. See *supra* Section A(2)(c). If the percentage threshold for dividends and self-tender offers were, say, 30%, the self-tender offer would result in an anti-dilution adjustment, but a dividend with the same effect on the value of the convertible bonds would not.

²⁶ Of the bonds providing for an adjustment for dividends in excess of a threshold, 36% provided that the adjustment should be based on that excess. Of those providing for an adjustment for tender offer payments in excess of a threshold, 6% provided that the adjustment should be based on that excess.

²⁷ Yet other bonds (about 21%), took a third approach, providing for an adjustment, once the threshold is exceeded, based on the full amount of all dividends paid within one year.

²⁸ To be sure, a warrant distribution does not result in an out-flow of assets, but neither does a dividend consisting of equity securities. Both a warrant distribution and any other

dividend, however, reduce the economic interest in the company represented by one share of common stock. This leads to a decline in the share price, which (absent an anti-dilution adjustment) reduces the value of the conversion feature. Of course, from their position as debtholders, a distribution of warrants to purchase common stock (just like a dividend payable in common stock) is not detrimental to bondholders.

²⁹ By pre-dilution value, I mean that value that the warrants would have before taking account of the dilution caused by the issuance of the warrants itself (i.e. if the warrants were options to purchase outstanding shares of stock, rather than newly issued ones). Generally, the post-dilution value is equal to the pre-dilution value multiplied by a fraction of (x) the number of shares outstanding over (y) the sum of the number of shares outstanding and the number of shares issuable upon exercise of the warrants.

³⁰ To see the equivalence, assume that a total of N warrants (each exercisable for one share of stock) with an exercise price of E are issued. The value per warrant, after taking account of the dilution caused by the warrant issuance itself, would be $(M-E) \cdot O / (O+N)$, and the per share value of the warrant distribution would be $(M-E) \cdot N / (O+N)$. Using this expression in the dividend formula, the old conversion price would be multiplied by:

$$\begin{aligned} & \left[M - (M-E) \cdot N / (O+N) \right] / M = \\ & 1 - (M-E) \cdot N / (O+N) \cdot M = \\ & [O \cdot M + N \cdot M - N \cdot M + N \cdot E] / (O+N) \cdot M = \\ & [O + N \cdot E / M] / (O+N) \end{aligned}$$

which is equivalent to the warrant formula since R (the aggregate

amount payable upon exercise) equals $N \times E$ (the number of warrants times the exercise price).

³¹ The warrant formula would apply since the exercise price of one warrant (\$9) is less than the current market price of the shares which can ultimately be purchased with one warrant (\$10). Since no additional consideration is payable upon conversion of the preferred stock, their value does not figure in the calculation.

³² There is some ambiguity of to whether the distribution of such warrants results in any adjustment. The dividend formula, by its terms, does not apply to "distributions referred to" in the warrant clause. Grammatically, this phrase could be read as a reference either to "warrants to purchase common stock" or to "warrants to purchase common stock at a price per share lower than the current market price." Under the former reading, no adjustment would be provided for such warrants.

³³ The use of a separate warrant formula apparently has historic origins. Early anti-dilution adjustments covered not only the distribution to stockholders of warrants with an exercise price below the stock's current market price, but any sale of common stock at a price below the conversion price. The warrant formula originated as a replacement for these formulas. See Kaplan, *supra* note 4, at 6-10; Ratner, *supra* note 4; and Hills, *supra* note 5, at 24-30.

³⁴ See 17 C.F.R. §240.10b-17 (1993). As interpreted by courts, this rule applies to companies with publicly traded convertible securities even if the underlying stock is not

publicly traded. See *Pittsburgh Terminal v. Baltimore & O. R.R.*, 680 F.2d 933 (3rd Cir. 1982), cert. denied, 459 U.S. 1056 (1982).

³⁵ See, e.g., *Broad v. Rockwell Int'l Corp.*, 642 F.2d 929, 943-44 (5th Cir.) (en banc), cert. denied, 454 U.S. 965 (1981) (holding that, upon cash merger, bonds become convertible into cash and not into stock of the surviving corporation); David Zigas, *The One-Two Punch Pummeling Convertibles*, BUS. WEEK, Feb. 8, 1988, at 82 (reporting that convertible bondholders are adversely affected by cash mergers); John C. Boland, *When Bonds Lose Their Convertibility*, N.Y. TIMES, Jan. 31, 1988, at 10 (reporting that convertible bondholders took a beating as a result of cash mergers). In other instances, however, convertible bondholders may gain in cash mergers at a premium over the pre-merger market price.

³⁶ But see *Model Simplified Indenture*, supra note 5, at 755 (explaining that purchaser does not necessarily assume conversion obligations).

³⁷ By contrast, none of the bonds provide for a put right in case of a merger in which shareholders retain their stock and which thus does not affect the consideration into which the bonds are convertible.

³⁸ A few bonds provide for a put right if the stock into which the bonds are convertible is no longer listed on a national securities exchange or approved for quotation in Nasdaq. Such an event is clearly detrimental to bondholders, and it is appropriate to provide contractual protection against this contingency. Cf. *Levine v. Chesapeake & O. R.R. Co.*, 60 A.D.2d

246, 400 N.Y.S.2d 76 (App.Div. 1977) (rejecting bondholder complaint, absent contractual protection, that lack of market for stock destroyed value of conversion right).

³⁹ About 84% of the bonds with a put right provided for a put at par or at the accreted value. Most of the other bonds provided for a put at the then applicable call premium. Many bonds do not make the put right available if bondholders, upon conversion, would receive property with a value of at least 105% of the bond's principal amount. This exception should not be consequential since, in such cases, bondholders would be better off converting than exercising their put rights.

⁴⁰ See Warrant Agreement between Kindercare Learning Centers, Inc. and The First National Bank of Boston, Mar. 31, 1993, §12(b) (on file with author). I would like to thank Warren Ingber for bringing this provision to my attention.

⁴¹ See, e.g., Richard A. Brealey & Stewart C. Myers, PRINCIPLES OF CORPORATE FINANCE 488 (3rd ed. 1988) (reporting that Black-Scholes formula is frequently used by option dealers to make huge deals); see also Regulation S-K, 17 C.F.R. §229.402(c), Instruction 9 (1993) (encouraging use of Black-Scholes formula for valuing executive stock options).

⁴² Under the Black-Scholes formula, the value of a call option equals:

$$PN(d_1) - Ee^{-rt}N(d_2)$$

where

$$d_1 = [\log(P/E) + rt + \sigma^2 t/2] / \sigma\sqrt{t}$$

$$d_2 = [\log(P/E) + rt - \sigma^2 t/2] / \sigma\sqrt{t}$$

N() = cumulative normal probability density function
E = exercise (i.e. conversion) price
t = time to expiration (i.e. maturity)
r = risk-free (i.e. treasury) interest rate
P = present market price of stock
 σ^2 = variance of the rate of return on the stock
log() = common logarithmic function.

See Brealey & Myers, *supra* note 41, at 487-488. For example, an option to buy one share of XYZ stock (with a current value of \$35 and a variance of .8) for \$50, exercisable within 3 years (assuming a treasury rate of 5% per year) would have a value of about \$16.80.

The actual reproduction of the Black-Scholes formula in the bond indenture would not be required. Instead, the indenture could make reference to option valuation tables. See, e.g., *id.*, Appendix Table 6.

⁴³ See also 17 C.F.R. §229.402(c)(2)(vi) (requiring disclosure of potential realizable value or present value for each option grant); *id.*, Instruction 9 (requiring that, if Black-Scholes formula is used to calculate option value, assumptions relating to expected volatility must be disclosed).

APPENDIX

Company Name	Title of Securities	Amount	Rating	Div's	STO	Put
AG Services of America, Inc.	7% Conv. Sub. Deb. due 2003	\$12	NR			x
Air Express International Corp.	6% Conv. Sub. Deb. due 2003	\$75	B1	x	x	x
Aspect Telecommunications Corp.	5% Conv. Sub. Deb. due 2003	\$50	B3	x	x	x
Big B, Inc.	6.5% Conv. Sub. Deb. due 2003	\$35	B2	x	x	x
California Energy Company, Inc.	5% Conv. Sub. Deb. due 2000	\$100	Ba3			x
Chiron Corp.	1.9% Conv. Sub. Notes due 2000	\$244	Ba3	x	x	x
Cross Timbers Oil Company	5.25% Conv. Sub. Notes due 2003	\$75	B2	x	x	x
Daka International, Inc.	7% Conv. Sub. Notes due 2003	\$25	B3	x		x
Delta Air Lines, Inc.	3.23% Conv. Sub. Deb. due 2003	\$800	Ba3			x
EMC Corp.	4.25% Conv. Sub. Notes due 2001	\$200	B2		x	x
Food Lion, Inc.	5% Conv. Sub. Deb. due 2003	\$100	A3	x		x
General Instrument Corp.	5% Conv. Sub. Deb. due 2000	\$500	B1	x	x	x
Genesis Health Ventures, Inc.	6% Conv. Sub. Deb. due 2003	\$75	B2	x		x
Lam Research Corp.	6% Conv. Sub. Deb. due 2003	\$60	B2	x	x	x
Legg Mason, Inc.	5.25% Conv. Sub. Deb. due 2003	\$60	Baa3			
Leucadia National Corp.	5.25% Conv. Sub. Deb. due 2003	\$100	Ba2	x		x
Lowe's Companies, Inc.	3% Conv. Sub. Notes due 2003	\$250	Baa1			x
Medusa Corp.	6% Conv. Notes due 2003	\$50	B1	x	x	x
Nationwide Health Properties, Inc.	6.25% Conv. Sub. Deb. due 1999	\$65	Baa2			
Noble Affiliates, Inc.	4.25% Conv. Sub. Notes due 2003	\$200	Baa3			x
Novacare, Inc.	5.5% Conv. Sub. Deb. due 2000	\$175	Ba3	x	x	x
Omnicare, Inc.	5.75% Conv. Sub. Notes due 2003	\$70	B2	x		x
Omnicom Group Inc.	4.5/6.5% Step-Up Conv. Sub. Deb. d. 2000	\$144	Baa3	x	x	x
Orbital Sciences Corp.	6.75% Conv. Sub. Deb. due 2003	\$63	Caa			x
Phycor, Inc.	6.5% Conv. Sub. Deb. due 2003	\$50	B3			x
Pioneer Financial Services, Inc.	8% Conv. Sub. Deb. due 2000	\$50	NR		x	x
Quantum Health Resources, Inc.	4.75% Conv. Sub. Deb. due 2000	\$75	B2	x	x	x
Raymond Corp.	6.5% Conv. Sub. Deb. due 2003	\$50	B3			x
Re Capital Corp.	5.5% Conv. Deb. due 2000	\$69	Baa3			x
Regency Health Services, Inc.	6.5% Conv. Sub. Deb. due 2003	\$50	NR			
RLI Corp.	6% Conv. Deb. due 2003	\$40	Baa3			

Company Name	Title of Securities	Amount	Rating	Div's	STO	Put
Roadmaster Industries, Inc.	8% Conv. Sub. Deb. due 2003	\$45	NR	x	x	x
Savoy Pictures Entertainment, Inc.	7% Conv. Sub. Deb. due 2003	\$75	B2			
Schuler Homes, Inc.	6.5% Conv. Sub. Deb. due 2003	\$50	B2	x	x	x
Sizeler Property Investors, Inc.	8% Conv. Sub. Deb. due 2003	\$65	NR			
Sports & Recreation, Inc.	4.25% Conv. Sub. Notes due 2000	\$65	B2	x	x	x
Starbucks Corp.	4.5% Conv. Sub. Deb. due 2003	\$70	B2	x		x
The Statesman Group, Inc.	6.25% Conv. Sub. Deb. due 2003	\$60	NR			x
Sterling Software, Inc.	5.75% Conv. Sub. Deb. due 2003	\$115	B1	x		x
Stone Container Corp.	8.875% Conv. Sen. Sub. Deb. due 2000	\$250	B2			x
Swift Energy Co.	6.5% Conv. Sub. Deb. due 2003	\$29	NR	x	x	x
Synoptics Communications, Inc.	5.25% Conv. Sub. Deb. due 2003	\$110	Ba3	x	x	x
Systems & Computer Technonoly Corp.	6.25% Conv. Sub. Deb. due 2003	\$30	B2	x		x
Time Warner Inc.	8.75% Conv. Sub. Deb. due 2015	\$3,050	Ba3		x	
Titan Wheel International, Inc.	4.75% Conv. Sub. Deb. due 2000	\$90	B2	x	x	x
Trimas Corp.	5% Conv. Sub. Deb. due 2003	\$100	Ba3			x
United States Filter Corp.	5% Conv. Sub. Deb. due 2000	\$60	B3			x
U.S. Home Corp.	4.875% Conv. Sub. Deb. due 2005	\$70	B2	x	x	x
Varlen Corp.	6.5% Conv. Sub. Deb. due 2003	\$60	B2	x	x	x

Explanation of Chart

Rating: Rating of bonds by Moody's (NR = not rated)

Div's: Anti-dilution adjustment for cash dividends based on percentage of company's stock value

STO: Anti-dilution adjustment for premium self-tender offers

Put: Put right of bondholders upon occurrence of specified event