

# HOW TO INVEST USING CONVERTIBLES



*The Guide to Using*  
**THE VALUE LINE**  
**CONVERTIBLES SURVEY**

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## CHAPTER

## 1

## A CONVERTIBLES PRIMER

**What is a convertible?** A convertible is a bond or preferred stock that can be exchanged for another security, usually the common stock of the company. Generally, no payment is required to effect conversion other than the surrender of the bond or the preferred stock. The conversion privilege normally lasts for the life of the bond, or for the life of the preferred stock, though in a few instances, the number of shares of common for which the convertible can be exchanged may change during the life of the convertible.

**Why are convertibles issued?** Convertible bonds and stocks are usually sold by corporations when other means of raising money would be more expensive. The conversion feature is a “sweetener” to persuade investors to accept a rate of interest on a bond or preferred stock that is below prevailing levels. If the stock rises in value, the value of the convertible will rise with it.

**What convertible terms should I become familiar with?**

See The Convertibles  
Survey,  
Pages 6 to 27,  
Column -

<b>Conversion ratio</b>	The number of shares of stock for which the convertible can be exchanged. If a “#” sign appears after the figure in Column 10, something is given in addition to shares. See the footnote. (Note: Only the holder of a convertible may convert the issue. The issuing company cannot require the holder to convert or convert for him or her.)	10
<b>Conversion value</b>	The value of the convertible if converted into the common (i.e., the price of the common multiplied by the conversion ratio). Example: If the conversion ratio is 5.0 and the stock is \$20, the conversion value is \$100.	33
<b>Premium over conversion value</b>	The percentage by which the price of the convertible exceeds the conversion value. Example: If the convertible price is 130 and the conversion value 100, the premium over investment value is 30%.	34
<b>Investment value</b>	The price at which the convertible would likely trade if it were not convertible. In other words, the price at which a “straight” (non-convertible) bond or preferred stock would trade.	38
<b>Premium over investment value</b>	The percentage by which the price of the convertible exceeds its investment value. Example: If the convertible price is 130 and the investment value 65, the premium over conversion value is 100%.	39

See The Convertibles  
Survey,  
Pages 6 to 27,  
Column - (cont.)

<b>Call price</b>	The price the convertible may be called at...if it is callable. (See “Hard call” protection and Provisional call protection.) Note: When an issue is called, holders have a certain number of days to decide whether or not to convert.	<b>15</b>
<b>“Hard call” protection</b>	Most convertibles, at issue, will be protected from being called. “Hard call protection” means that the issue cannot be called for any reason during the specified period. If an issue has hard call protection, “NCB” (not callable before) appears in Column 15, the date it’s first callable in Column 16, and the first call price (FCP) in Column 18.	<b>15-18</b>
<b>Provisional call protection</b>	A convertible that has “provisional call protection” can be called only if the underlying stock rises to the price shown in Column 17 and remains at that price, or higher, for the number of days indicated in Column 18.	<b>17-18</b>
<b>Coupon</b>	The interest payment on a bond. Bonds are almost always issued with a par value of \$1,000, the price they will be redeemed at maturity, so an 8% bond pays \$80 in interest a year.	<b>24</b>
<b>“Euro” bonds</b>	These are bonds that were originally sold overseas, usually by U.S. companies. They trade and pay interest in U.S. dollars. Coupon payment is usually once a year compared to twice a year for domestically issued bonds.	<b>22</b>

*For explanations of the information in the other Columns, please see the tab sheet .*

Convertible preferred stocks and convertible bonds (or debentures) are basically alike with the exception that preferred stocks represent equity in a company whereas bonds represent debt.

**Bonds** are designated in Value Line Convertibles as follows:

- (1) Quanex Corp. 6.875s2007
- (2) Halliburton (Valhi) 0s2007

- (1) This Quanex Corp. bond is convertible into NX common stock; it pays interest of \$68.75 a year and matures in 2007. (Note: bond prices are quoted as a percentage of par value which is usually \$1,000, so a price of “80” means that the bond is priced at 80% of \$1,000, or \$800.)
- (2) This Valhi bond converts into Halliburton common stock; the second name (shown in parentheses) indicates that the bond was issued by, and is the financial obligation of Valhi, Inc.

**Preferred stocks** are designated as follows: INCO \$2.75

This preferred stock converts into INCO common and pays a \$2.75 annual dividend. Preferred stocks usually pay dividends four times a year. Prices for preferred stocks are quoted in full dollars, not in percents.

**What gives a convertible its value?** A convertible’s value is drawn both from its conversion privilege (thus, on the price of the underlying stock), and from the value it commands simply because it’s a bond or preferred stock. While its price rises with its conversion value (i.e., with a rise in the stock), its price will normally fall no lower than its investment value.

Most often, however, convertibles sell at premiums above both their conversion and investment values. (When you can buy a convertible at its investment value, you get the conversion privilege free of cost. By the same token, when you can buy a convertible at its conversion value, you get the investment feature—better quality and generally higher income—free of cost.)

**Why buy convertibles rather than common stocks?**

- 1) Convertibles are less risky.
- 2) Convertibles almost always provide greater income.
- 3) Fairly priced convertibles are almost always favorably “leveraged.” (That is, they will rise more than they will fall on an equal move, up or down, in the price of the common stock.)
- 4) When the market rises swiftly, convertibles will generally lag. Over longer periods, however, convertibles have consistently outperformed common stocks when both income and price appreciation (i.e. total return) are measured.

CHAPTER

2

WHAT RETURNS CAN I EXPECT FROM CONVERTIBLES AND WARRANTS?

The return and risk on the convertibles Value Line has recommended are shown below. These are not hypothetical estimates but are based on the actual results of ALL of our recommendations since we began evaluating and ranking convertibles in 1971. (Year-by-year results appear in the Appendix 1 on page 32.)

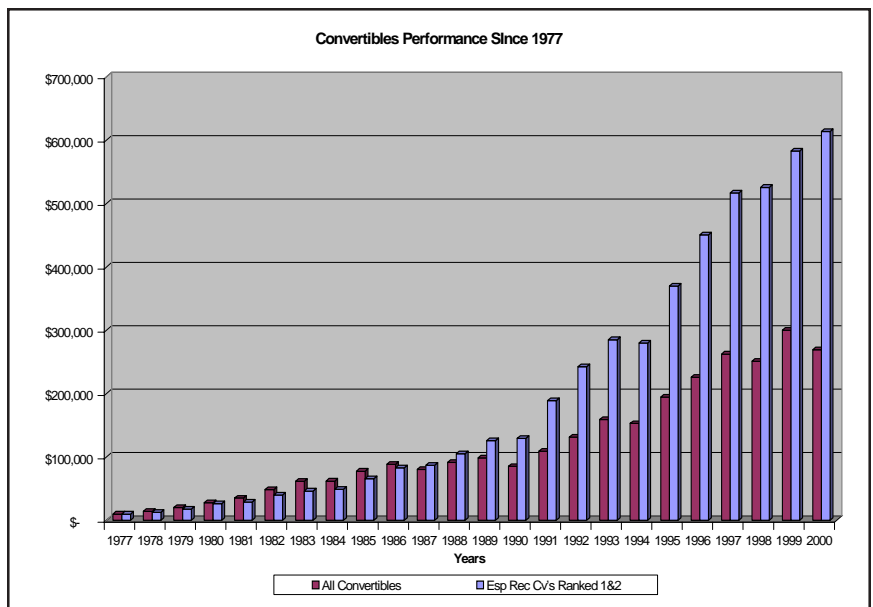
	RISK (VERSUS CM STOCKS)	ANNUAL PROFIT POTENTIAL	MINIMUM CAPITAL REQUIRED	# OF ISSUES IN PORTFOLIO
--	-------------------------	-------------------------	--------------------------	--------------------------

<b>CONVERTIBLES</b>	85%	21%	\$50,000	10
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As you can see, convertibles are about 15% less risky than stocks. That’s because they almost always possess a higher yield, which helps cushion them against a drop in the common. Surprisingly, over long periods, they typically provide a better total return than stocks. (As you probably know, the typical return on stocks over the years has been between 10% and 12%, including both price appreciation and dividends.)

The first full year using the Value Line convertible ranking system was 1972. In the 27 years since, our recommendations have provided positive returns in all but three years—1973, 1974 and 1994. The years 1973 and 1974 saw a severe bear market with stocks dropping more than 35% in each year. In 1994, a severe bear market struck bonds. Including the years, 1977 through 2000, the Especially Recommended issues have provided a total return that has averaged more than 19% a year. Here’s show an original \$10,000 investment in convertibles would have grown:

**Note:** While past performance cannot be a guarantee of future results, Value Line believes that, as in the past, its methods for selecting convertibles and warrants are likely to continue to give investors an edge.



## CHAPTER

## 3

## WHY CONVERTIBLES ARE SAFER THAN STOCKS, YET MORE PROFITABLE

Risk typically increases with potential return. To achieve higher returns, one normally needs to take on greater risk. There are, however, certain investments that historically have thrown off larger returns in proportion to risk than would be expected. Convertibles fall into that category.

**Why convertibles are lower in risk than stocks.** It is easy to understand why convertibles are lower in risk than common stocks. First, they are of higher quality: If a company's earnings decline, it might skip its common dividend but would discontinue paying bond interest or preferred dividends only as a last resort, for if it did, bond and preferred holders could take control of the company. Further, if a company did fail, bond and preferred holders would get paid off before common stock owners. In addition, convertibles almost always offer a higher yield than stocks. So, if the price of the common falls, the higher yield helps support the bonds and preferreds.

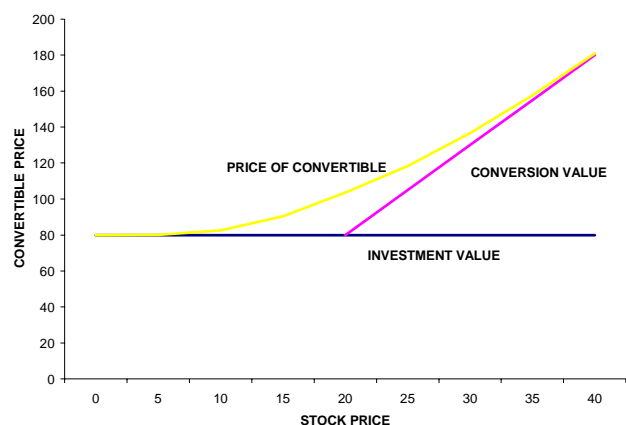
What this means is that fairly priced convertibles are always “favorably leveraged.” Leverage describes the price movement of one issue relative to another. A warrant is highly leveraged; it will rise or fall faster than its underlying stock. A convertible almost always moves more slowly than its underlying stock. An issue is described as “favorably leveraged” if it will rise more on a rise in the underlying stock than it will fall on a decline in the stock. Convertibles are favorably leveraged since they are free to participate in a rise in the stock, but their higher yields limit the extent of any drop. The following illustration will make this clear:

The illustration on the right depicts a typical convertible. It has a “conversion value” that rises as the stock rises, and an

“investment value” that remains reasonably constant. (Because the issue converts into a fixed number of shares, its conversion value rises in line with the underlying stock. Its investment value is the price it would sell at if it weren't convertible, that is, if it were a “straight” bond or preferred stock of equal quality paying equal interest or dividends.)

The investment and conversion values are “floors” that support the price of the convertible. If the convertible's price dipped below conversion value, arbitrageurs would snap it up, convert it and sell the common to make an instant profit. Similarly, if its price dipped below investment value, income-oriented investors would snap it up to get the conversion privilege for free.

The dotted line traces the price path along which the convertible trades. Notice that it usually trades at a premium over



both its conversion and its investment value. (Investors pay more than conversion value because the convertible pays higher income than the common; they pay more than investment value because there is the chance that if the stock rises, the convertible's price will rise, too.)

Examine the price path of the convertible. You can see that at any point, the convertible will rise faster than it will fall. This, then, is favorable leverage; it follows that the convertible must have a better reward/risk ratio than the stock, for it will share in a greater proportion of any rise in the stock than in a decline.

**Why Convertibles Outperform Common Stocks.** Studies have demonstrated that convertible securities produced near-equity returns over the long term with significantly less risk. A study by Ibbotson covered 27 years between 1973-1999 and showed an average annual return of 12.62% for convertible securities, or over 90% of the 13.89% return for the S&P 500 for the same period. The average volatility (standard deviation) of convertible returns was 12.37%, substantially lower than the 16.71% of equities. During this period, convertibles earned on average 68% of the upside performance

of equities, while suffering less than half (47%) the downside performance of stocks. Why this should be so is best explained if we look at what happens in various phases of the market. When the market falls, it's easy to see that convertibles will do better. Not only do they fall less, but they also provide greater income. In a flat market, their greater income is the deciding factor. In a rising market, convertibles do not normally appreciate in price as fast as the common, but if the market rise is slow, the greater income from convertibles causes the total return from convertibles to equal or exceed the total return from common stocks. Only in a rapidly rising market, then, do convertibles fall behind. That convertibles have historically outperformed common stocks suggests what we already know, that stocks don't spurt upwards most of the time.

A final note: One of the most attractive features of convertibles, a feature pointed out by consultants to pension funds, is that a convertible portfolio will typically be less volatile than a portfolio of common stocks...which means that convertibles offer investors a more favorable risk/reward ratio than common stocks.



## CHAPTER

## 4

## HOW VALUE LINE EVALUATES AND “RANKS” COMMON STOCKS, CONVERTIBLES AND WARRANTS

**Common stocks.** The Value Line Timeliness Ranking System for common stocks is designed to select the equities likely to perform best over the coming year. The systematic method by which Value Line ranks stocks is similar to one that most investors use intuitively. The system selects issues whose earnings are growing fastest and whose share prices are lowest. These are the issues likely to perform best in the market. Instead of looking at just the present quarter, however, a 10-year history of earnings and prices is systematically compared. Each company's stock is examined relative to 1700 others. To be top-ranked, a stock's recent earnings must be better than it's been in the past 10 years relative to the price of the stock and relative to the other stocks.

In addition to earnings trend and price, the Value Line Timeliness Ranking System also takes into account “price momentum” and earnings “surprises.” A stock that has been performing well relative to other stocks tends to continue to perform well for a period of time, and the system allows for this. In addition, when a company reports earnings that are either substantially better or substantially worse than the analyst estimated, investors are “surprised” and the price of the stock responds accordingly. Value Line's ranking system takes this into account as well.

All 1700 stocks that Value Line evaluates are ranked from best to worst on the considerations above. The 100 best are ranked 1; these are stocks expected to most outperform the

others during the coming year. The 1700 stocks are ranked as follows:

RANK	EXPECTED PERFORMANCE	NUMBER OF STOCKS
1	Highest	100
2	Above Average	300
3	Average	900
4	Below Average	300
5	Lowest	100

It is important to bear in mind that Value Line's Timeliness Ranking System predicts relative performance, not absolute performance. In a rising market, stocks ranked 1 are expected to perform better than stocks ranked 2, 3, 4 & 5, and stocks ranked 2 would be expected to outperform stocks ranked 3 and lower, etc. But, again, rankings are “relative”: in a falling market, even top-ranked stocks may fall. If they do, however, price declines are expected to be less than the declines of lower-ranked issues.

Bear in mind, however, that returns on investments relate to risk. T-bills are low in risk and offer low returns. Corporate bonds are more risky and offer larger returns; the higher risk bonds offering larger returns than those of lower risk. The same is true for convertibles and warrants.

**Convertibles.** The ranks assigned to common stocks predict price performance only. The ranks assigned to convertibles and warrants predict total return, including both price change and interest or dividend income. Unlike the ranks assigned to common stocks, ranks assigned to convertibles are “risk adjusted.”

Investment risk is measured in terms of price volatility. The more up and down movement there is in a price, the greater the risk that the value may not be there when you need it. A convenient way to visualize risk is in terms of the risk in the average stock. If we say the risk in the average stock is equal to 100%, it’s easy to visualize the risk in other issues. For example, an issue with a “relative volatility” of 200% would be twice as risky as the average stock, while one with a relative volatility of 50% would be just half as risky. In the Value Line Convertibles Service, you will find the relative volatility of every convertible and warrant, and of their underlying stocks, as well. This makes it easy to select only those issues whose risk is in a range acceptable to you.

As mentioned above, convertible and warrant ranks are adjusted for risk. That is, ranks for these issues take into account the total return expected from the price appreciation and income of the issue vs. its risk. The expected price appreciation of the issue depends, of course, partly on the movement of the underlying stock. This we deduce from the stock’s performance rank. But the interest or dividend the issue pays, plus the extent to which the issue’s price will participate in a rise or fall in the underlying stock, are more important factors in the issue’s performance.

Once we estimate the total return that the convertible or warrant is likely to provide, we are ready to rank it, and we do this by comparing the estimated return with the risk of the issue. This gives us a “reward/risk” ratio...and ranks are assigned on the basis of this ratio.

For example, if an issue was required to have a reward/risk ratio of .20 in order to be ranked 1, then an issue with a relative volatility of 100% would be ranked 1 if it offered an expected return of at least 20%. Similarly, another issue with half the risk (i.e., a relative volatility of 50%) would also be ranked 1 if it was expected to return at least 10% over the coming year...and an issue with a relative volatility of 200% would need an expected return of at least 40% to be ranked 1.

Unlike Value Line’s Timeliness Ranking System for common stocks, the number of convertibles or warrants of a given rank is not fixed. When a large number of convertibles are found to be undervalued, the number that are top ranked will be greater; conversely, when the convertible market becomes overheated, the number of top recommendations will shrink.

There are a number of evaluation models publicly available. Value Line’s evaluation model is proprietary. While we do not make the specifics public, a general description of how the model functions will be found in the Appendix on page 34.

## CHAPTER

## 5

## HOW TO MANAGE YOUR CONVERTIBLES PORTFOLIO FROM THE ESPECIALLY RECOMMENDED LIST

The object of managing any investment portfolio is to earn maximum returns at an acceptable level of risk. The Value Line Convertibles Service provides the two tools you need to do that. The performance rank enables you to select those issues that offer maximum returns consistent with their risk. In addition, the relative volatility (risk) of each issue is shown to enable you to select the issues that are at the desired level of risk. To use Value Line's recommendations to your best advantage, it is wise to diversify your portfolio, holding a minimum of eight issues in different industries, each holding of roughly the same dollar value.

**Where can I find the convertibles Value Line recommends?** A list of Especially Recommended Issues is listed on the second and third pages of the *Convertible Survey*. You'll find the terms for each convertible and warrant we follow along with a complete evaluation of each on pages 6 through 31. In addition, a list of all convertibles ranked 1 (Highest) for year-ahead performance and warrants from which the Especially Recommended Issues are selected can

be found on page 5. Information about the convertible market can be found on the back page.

**How to manage a portfolio directly from the Especially Recommended list.** While we suggest that you become familiar with all of the information contained in the publication, you can manage your portfolio solely from the Especially Recommended list in the *Value Line Convertibles Survey*. Please turn to page 3 now. All issues on this list are ranked 1 (Highest) for year-ahead performance and are recommended for purchase. Issues on the list are set out in four groups according to profit potential and risk:

Warrants - High Risk

Above Average Profit Potential - Above Average Volatility

Moderate Profit Potential - Modest Volatility

Modest Profit Potential - Low Volatility

Here, for example, is an excerpt from a previous list showing the *High Risk and Above Average Profit Potential - Above Average Volatility* categories:

<b>Especially Recommended Issues</b>										
<b>DATA ON CONVERTIBLES AND WARRANTS</b>								<b>COMMON DATA</b>		
Name	Page Ref	Exch	Recent Price	Performance Rank	Rel. Vol.	Current Yield	Liquidity Grade	Recent Price	Perf Rank	Rel. Vol.
				∇			∇			
<b>Warrants - High Risk</b>										
✓ ALZA 99 wt	10	O	0.470	1↑	370%	NIL	3	47 1/2	3	125%
<b>Above Average Profit Potential - Above Average Volatility (Relative Volatility 95% or Above)</b>										
ALPHARMA 5.75s2005 (144A/R) cv deb		O	125	1	100	4.6%	3	31.440	1	155
◇ AnnTaylor Stores \$4.25 (144A/R) cv pfd	142	O	108 1/4	1	190	3.9	2	40 7/8	1	195
◇ Apple Comp 6s2001 (144A/R) cv deb	18	O	145 3/8	1	145	4.1	3	41.310	1	195
Centocor 4.75s2005 (144A/R) cv deb	6	O	101 1/2	1	115	4.7	3	40 3/8	2	280
Comverse Tech 4.5s2005 (144A/R) cv deb	10	O	130 7/8	1 e	120	3.4	3	75.940	1 e	170

Notice that the first issue on the list is ALPHARMA 5.75s2005. The information set out is:

ALPHARMA	the name of the stock into which this issue converts
5.75s2005	the interest rate (5.75%) and the year of maturity
cv deb	this is a convertible debenture Bonds and debentures almost always have a \$1,000 par value; as the interest rate is based on the par value, this issue pays interest of \$40.00 a year.
Page Ref.	The page on which this security was last discussed
O	Exchange (on which traded)
125	Recent Price. As bonds are quoted as a percentage of par, the full cost would be \$1250.00
1	Performance Rank
100%	Relative Volatility of the convertible.
4.6%	Current Yield
3	Liquidity Grades, which run from 1 (best) to 6 (worst), give an indication of how easy it may be to trade this issue. An issue with a liquidity grade of 3 or higher normally will trade easily in quantities of \$500,000 or more.
31.44	Recent Price of the common stock
1	Performance Rank of the common stock
155%	Relative Volatility of the common stock

**How to use the Especially Recommended lists.** There are two Especially Recommended lists:

- A. The list on the *third page* of each issue includes all issues currently recommended for purchase.
- B. The list on the *second page* (to the left) are Especially Recommended issues that we previously recommended for purchase that are now ranked HOLD or SELL.

Once recommended, an issue remains on one list or the other until its sale is recommended. An issue will move to the HOLD list on the second page for one of three reasons:

1. If a convertible's price moves out of line with the common's, its rank will drop to 2 and it will be moved to the HOLD table. If the price later comes back into line, its rank will rise to 1 again and it will once more be recommended for purchase.
2. The issue has moved into a price range where there is a reasonable chance that it may be called. Though it is still ranked 1 (Highest) for expected year-ahead performance, under the circumstances, while we recommend owners continue to hold the issue, new purchases are not recommended.
3. The fundamentals have deteriorated and a SALE is recommended. The week this occurs, the issue will appear on the HOLD AND SELL TABLE on the second page with the notation "SELL."

Whenever there is a rank change for an issue on either list, the reason for that change is described in the "SPOTLIGHT ON RECOMMENDED ISSUES" which begins at the top of the second page, above the HOLD AND SELL TABLE. In addition, important news about issues on these lists appears here, too. Thus, investors who manage their portfolios from these tables can look in one convenient location to remain current with events in the company and our most recent recommendations.

Note: A change in price of up to 3% will not change our buy recommendation for issues on this list as long as the price of the underlying stock has changed by a similar percentage. When there is a question, however, use the "leverage projections" in Columns 29-32 to confirm that the price of the convertible has remained in line with its underlying stock.

**The criteria for issues designated as Especially Recommended.** Issues on the "Especially Recommended" list are selected from the complete list of all 1-ranked issues that appears on page 5. Although all 1-ranked issues are recommended for current purchase, when an issue is placed on the "Especially Recommended" list, it has a reasonably large float (that is, it's relatively easy to trade), is favorably leveraged and, except in the case of zero-coupon convertibles, offers a yield advantage over its underlying stock. Excluded from the Especially Recommended list are the highly speculative issues in the three lowest investment grades.

CHAPTER

6

REGULATION D, REGULATION S  
AND 144A OFFERINGS:

Before April of 1990, a company looking to raise money in the capital markets would have to basically follow the procedures found in the Securities Act of 1933 (“1933 Act”). Under the 1933 Act, the company would have to file a registration statement with the Securities and Exchange Commission (SEC), and wait for this agency to declare the registration effective. This process could take anywhere from a few weeks, if everything was in order, to a few months, if everything was not. A company could also choose to raise capital via a private placement, or Regulation D, filing. One major drawback of filing a Reg. D, however, was that it was often difficult for a company to raise a significant amount of money (over \$100 million) using this filing. In April 1990, Rule 144A and Regulation S were adopted. These two pieces of regulation helped change the way U.S. companies raise capital in the public markets, and more importantly, which investors can participate in these offerings.

**Registered, or Non-Exempt, Offerings**

Under the 1933 Act, any issuer must file a registration statement with (and have it declared effective by), the SEC in order to publicly issue and offer securities in the U.S. The registration statement must contain, and appropriately disclose, SEC-mandated information concerning, among other things, audited financial statements, a description of the issuer’s business and risks, a list of directors and officers, the rights of purchasers, and information about other outstanding securities of the issuing company (i.e., the registrant). Once filed with the SEC, a registration statement is generally subject to a review period that is typically anywhere from 30

to 45 days. This is sometimes referred to as a cooling off period. The length of this review period will depend on the nature of the issuer, the securities being offered and whether the issuer is filing an S-1 or S-3 registration form.

Prospective issuers of convertible securities would file an S-3 (and related Rule 415 “shelf” offerings), if they are larger, more seasoned issuers. Form S-3 requirements include having publicly issued securities already outstanding and a prior 12-month history of filing SEC periodic statements like 10-Qs and 10-Ks. Such seasoned issuers, who can file Form S-3/Rule 415 shelf offerings, are able, once the generic shelf registration statement is declared effective, to issue securities quickly, in some cases on an overnight basis. These “takedown” offerings require the filing of a pricing supplement prospectus with the SEC, essentially at the same time as issuance of the securities and without further review by the SEC.

Companies that have not been around that long and cannot fulfill the requirements of an S-3 filing will file an S-1. Needless to say, the S-1 is a bit more involved than an S-3, which is why it usually takes quite a bit longer for it to be considered effective by the SEC. Companies filing either an S-1 or S-3 registration form would be limited in their ability to take advantage of a time-sensitive development in their particular industry, like an acquisition, or if they are pressed for financing for any other reason. In these cases, waiting more than a month may be quite burdensome.

Another reality of the convertibles new issue market concerns arbitrageurs, or hedgers, that make a living setting up

convertibles against short stock positions. A company does not necessarily have to announce that it will be filing a registration to cover the issuance of a convertible security; these filings are a matter of public record, so anyone can find out about it. Once the news is out, hedgers will start selling stock short in anticipation of the deal. Even though a short sale of a NYSE or AMEX stock must be done on a plus tick, this process can still put enough pressure on the stock during the cooling off period to effect how the new deal is priced. The combination of speed to market, as well as a chance to limit short selling into a deal, has led many convertible issuers to use exempt (overnight) or unregistered offerings to raise capital.

### Exempt Offerings

Some transactions are exempt from the registration requirement of the 1933 Act. The overnight offering, for example, could not be done without these exempt options. While the 1933 Act was designed to protect individual investors from fraud, exempt offerings allow companies to bypass the SEC review and disclosure obligations. The key to understanding the exempt nature of these securities, is to realize that since they are not being offered to the general public, but instead being placed on a select basis with permissible types of sophisticated (typically institutional) investors, the registration process for such securities is not required. The assumption supporting exempt transactions is that the investor is sufficiently sophisticated to be able to assess the merits and risks of the particular offering and have the financial wherewithal to assume such risks. As a result, SEC-mandated registration statement forms, such as scope of disclosure, are not required. The three main types of exempt transactions are the Regulation D, Regulation S, and 144A offerings.

### Regulation D

Regulation D outlines what the SEC considers a private placement to be. Regulation D offerings have the following key features:

The issue can be sold to a maximum of 35 “non-accredited” investors and an unlimited number of accredited investors.

An accredited investor is a person or entity that meets one of the following criteria:

- Has net worth of at least \$1million;
- Has had annual income of at least \$200,000 a year for the past two years or a joint income of \$300,000 over the same period, and every expectation that that income level will be sustained;
- Is an officer or director of the issuer;
- Is a financial institution, such as a bank, insurance company or mutual fund or a corporate or other legal entity with assets of over \$5 million;
- Is a not-for-profit institutional investor, e.g., a pension plan or college endowment fund with more than \$5 million in assets.

There is no limit on the amount or units sold, or the number of states in which the offering is made.

Investors would be given disclosure of material information via an Offering Circular or Private placement Memorandum. All non-accredited investors must be deemed “sophisticated” in the eyes of the issuer.

### Regulation S

Issuers who offer U.S. dollar-denominated securities outside the U.S. typically take advantage of Regulation S. This fairly recent addition to the 1933 Act was first proposed in 1988 and finally adopted in 1990. Regulation S consists of four rules (901 to 904) that require securities to be offered and sold in offshore transactions. In other words, the transaction cannot be made to an U.S. person or entity, and the primary transaction cannot involve an U.S. person or entity in any way. Nor can the offering in any way involve an U.S. person or entity by way of mailing a prospectus or any other form of information related to the sale of the issue. Of course, Regulation S does not pertain to a foreign branch of a U.S. bank or insurance company operating as a locally regulated enterprise, or an employee benefit plan established and administered in accordance with foreign law.

About 40 days after the settlement date of the issue (the restricted period), the securities become seasoned and can trade in the U.S. Any investor can then buy or sell these securities. But during the restricted period, there can be no “directed selling efforts” into the U.S. or pre-arrangements for resale in the U.S. upon expiration of the restricted period.

### Rule 144A

As mentioned earlier, Rule 144A and Regulation S were actually designed as companion pieces of regulation and adopted in April 1990. Rule 144A outlines the types of securities that may be sold, who can buy them and the financial requirements that must be met by buyers and sellers of securities offered under this rule.

Rule 144A is only available for restricted securities that when issued, are not part of, or considered fungible (interchange-



able), with any other class of publicly issued security. Convertible securities and warrants, for example, are considered interchangeable with the underlying securities issued upon conversion or exercise if at the time of issue the premium over conversion value is 10% or less. Therefore, a Rule 144A convertible security would have to have a premium over conversion value of at least 10% at issuance in order not to be considered fungible with its underlying security.

Rule 144A securities can only be bought and sold by Qualified Institutional Buyers (QIBs). A QIB is:

- An entity, other than a broker dealer, that owns and invests on a discretionary basis at least \$100 million (not including government securities, repurchase agreements, certificates of deposit, currency and commodity swaps), and has an audited net worth of at least \$25 million;
- A broker dealer that invests on a discretionary basis at least \$10 million, or is acting as a “risk-less principal” (i.e., has both sides of the trade) for a QIB, or is acting as an agent for a QIB;

Rule 144A allows certain affiliated institutions, such as a mutual fund family, to aggregate its holdings for purposes of determining whether it meets the \$100 million requirement.

Recall that a Regulation D issue is one that can be sold to individuals who meet certain financial requirements. Rule 144A securities are issued with the larger institutional investor in mind. Clearly, a company can issue a number of tranches, or series, to enable a wider distribution among sophisticated investors.

### **Individual Investors on the Sidelines**

Regulation D, Regulation S, Rule 144A exempt transactions, and Rule 415 shelf offerings for qualified issuers, all allow an issuing company to come to market quickly and with a minimum of disruption to its common stock. For these reasons, the popularity of exempt-transaction financings will probably continue to grow. This trend has put the individual investor in a difficult position. It was difficult enough for individual investors to make odd lot trades (trades of less than ten bonds, or 1000 shares of preferred stock, although most broker dealers are loathe to deal in orders of less than 100 bonds) before exempt transactions. Now, there is a whole universe of securities that typically do not become available for the small investor for at least three years after issue. Issuing exempt convertibles with registration rights, however, should help to slightly ease the plight of the small

investor.

The increasing popularity of exempt transactions actually led to an unusual problem for issuers and underwriters. With so many exempt offerings, many institutional investors were coming up against internal and SEC limits on the amount of restricted securities a fund could hold as a percentage of total assets. Because only institutions can trade 144A securities among each other, it was safe to assume that they were all looking to do the same thing when a new exempt deal was offered; mainly, sell old deals to make room for the new deal. After one too many “Wish I could participate, but I am at my limit” responses to new exempt deals, underwriters and issuers began offering 144A securities with registration rights. The issuer could still come to market quickly with a minimum of disruption to its common stock; however, it would go through the registration process after the deal was placed. It is now common for 144A securities to be offered with registration rights that require the issuer to file the appropriate forms within 60 to 180 days after settlement. Some offerings require that the security actually be registered within that time, while others simply require the issuer to file by that time. Clearly, the former condition is more desirable than the latter.

As can be expected, the registration process is far from uniform. Some convertibles become registered and the holder doesn't have to do a thing. In other cases, the holder has to effectively exchange what they have by sending in the original certificates to the company; in return, they get registered bonds. In other cases, a bond has to be sold, with a prospectus, in order for the registration to be effective. Needless to say, it has become very common for a convertible offering to have three or four series, including Reg S, 144A and registered bonds. Besides the obvious confusion this can cause investors, it is also important that the stock into which the convertible exchanges is registered, as well. This is of particular concern to hedgers, since a convertible that is exchangeable for restricted stock is not considered fungible, so any stock shorted against the convertible would be considered naked, and subject to much more stringent margin, if the position can be set up at all.

### **Final Words**

144A convertible securities in our Survey are easily identifiable by the “144A” designation after the issue's name. In addition, the footnotes of these issues warn that they can only be purchased by QIB's. Once the issue is either registered or becomes free to trade, the 144A designation is dropped and individual investors will be able to trade them.



CHAPTER

7

HOW TO USE VALUE LINE TO TAILOR  
A PORTFOLIO OF CONVERTIBLES  
TO YOUR OWN OUTLOOK  
FOR THE MARKET

COMMON						CONVERTIBLE FACTS																	
EXCHANGE		PERFORMANCE		YIELD (%)		CURRENT	YIELD TO	PAYMENT	CONVERSION		BREAK	HEDGE	ISSUE	CALL	VALID	IF COMMON	FOR THIS	IND.	CV PAGE	SYMBOL			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
SYMBOL	PRICE	RANK	RELATIVE VOLATILITY			YIELD (%)	MATURITY	DATES	RATIO	EVENTIME (MOS)	RANK	RATIO	SIZE	PRICE*	UNTIL	IS (\$)	# OF DAYS		REF	EXCHANGE			
B	AES	N	48.94	2	105	NIL	1	3.8	PFD	MJSD31	1.382	17	C	119	5,000	NCB	3/31/00	FCP	51.680	Coal	N	AESP1	
	AES	N	48.94	2	105	NIL	2	4.1	2.8	1A15	18.519	52	C	106	150.0	NCB	8/15/01	FCP	102.570	Coal	141	N	
	AEG	N	126.25	1	75	.8+	3	1.0	NMF	Nov1	36.000	NMF	C	345	96.63	NCB	11/1/01	FCP	125.600	Ins Dv		"EURO"	
	AZA	N	50.63	3	125	NIL	4	NIL	2.4		12.987	NMF	C	110	372.5	NCB	7/14/99	FCP	45.963	Drug	069	N	AZA/ZR1
	AZA	N	50.63	3	125	NIL	5	3.5	NMF	Mh	26.184	20	C	210	500.0	NCB	5/1/99	FCP	102.140	Drug		N	AZA/06
	PIN	N	5.13	-	100	NIL	6	0.0	9.7		8.673	NMF	C	9	1125	NCB	5/12/03	FCP	35.628	Rec	231	O	
	ANTC	O	18.19	2	e 210	NIL	7	4.6	5.2	Mn15	41.667	58	C	180	115.0	NCB	5/15/01	FCP	101.800	CabTV	021	O	
	PAP	N	8.19	-	100	NIL	8	5.1	13.9	Ac30	57.971	72	C	50	500.0	NCB	4/30/01	FCP	100.000	Paper	239	O	
	SRS	A	6.00	-	175	NIL	9	7.0	7.5	Ao	53.850	NMF	C	91	57.50	NCB	4/1/99	FCP	104.725	Med Sv		O	
P	ASTA	O	5.31	-	210	NIL	10	NIL	6.1		12.993	NMF	C	0	315.0		45.963	12/13/99		Cmptrs		O	ASTAL

Reproduced above are the convertibles data and evaluations found on Pages 6 through 27 of the Value Line Convertibles Survey. (Warrant data and evaluations appear on Pages 28 through 31.) All of this information is used to evaluate and rank convertibles, and for selecting issues for the Especially Recommended. Become familiar with these data and evaluations even if you rely primarily on the Especially Recommended list.

NOTE: An explanation of the data in each column appears in the tab sheet in your three-ring binder. It's a good idea to lay this tab sheet alongside these pages as you read this chapter and refer to it as needed.

Where to begin the selection process. It is easy to tailor a convertibles portfolio to your specific investment outlook if you learn to use the information provided.

For issues convertible into the stock of a particular company, refer to Column 24. Convertibles are listed here alphabetically according to the company into which the issue converts. If the convertible was issued by a company other than the one into which it converts, the issuer will be shown in parentheses. Example: Halliburton (Valhi) 0s2007. This was issued by (and is the obligation of) Valhi, Inc., but converts into Halliburton shares.

Selecting the most attractive issues. Convertibles allow you a wide latitude for selection. The information below will help you choose the issues best for you:

COLUMN

QUALITY

Investment Grade: ..... 37

(For the full range of Value Line's investment grades and the corresponding market yields of non-convertible bonds and preferreds, refer to the back page of the *Convertibles Survey*.)

CONVERTIBLE EVALUATION					CONVERTIBLE ANALYSIS											B O N D S & P		
FOOTNOTE ↓ 23	NAME OF CONVERTIBLE ↓ 24	PERFORMANCE RANK		LIQUIDITY ↓ 27A	OVER(+) UNDER(-) VALUED (%) ↓ 28	PROJECTED % CHANGE FOR THESE CHANGES IN THE PRICE OF THE UNDERLYING SECURITY				CONVERSION VALUE ↓ 33	PREMIUM (%) ↓ 34	STOCK MARKET RISK ↓ 35	BOND MARKET RISK ↓ 36	I.V. GRADE ↓ 37	PUT DATE ↓ 37A		INVESTMENT VALUE ↓ 38	PREMIUM (%) ↓ 39
		PRICE ↓ 25	RELATIVE VOLATILITY(%) ↓ 26			+50% ↓ 29	+25% ↓ 30	-25% ↓ 31	-50% ↓ 32									
1	1 ● AES (Trust 1)\$2.688 A	71.50	2	90	1	+5	40	20	-21	-40	67.63	6	85+	5.00	E			33
2	● AES Corp 4.5s2005	110.00	2	55	2	+7	25	11	-13	-20	90.63	21	50+	5.00	E		84	31
3	2 AEGON N.V. 4.75s2004 (144A)	468.50	2 ▼	70	1	+3	45	22	-24	-50	454.50	3	70+	0.00	B		97	383
4	3 ● ALZA Corp 0s2014	66.00	♦3	95	1	+0	50	25	-19	-30	65.75	0	95+	0.00	E	7/14/99	44	50
5	4 ● ALZA Corp 5s2006	141.00	3	90	1	+6	40	19	-19	-30	132.56	6	90+	0.00	E		85	66
6	5 ● AMF Bowling 0s2018 (144A/R)	16.75	-	260	3	-1	3	1	0	-1	4.44	277	5+	255.00	I		16	5
7	● ANTEC 4.5s2003 (144A/R)	97.50	1	e 80	3	-1	22	10	-7	-11	75.78	29	70+	10.00	G		83	17
8	● APP Fin1 VII 3.5s2003 (144A)	68.50	-	45	3	-5	10	2	0	0	47.47	44	10+	35.00	I		72	-5
9	ARV Ass't Living 6.75s2006	96.50	-	40	3	+2	2	1	-2	-3	32.31	199	10+	30.00	H		93	4
10	6 ● AST Research 0s2013	41.50	-	5	1	-9	0	0	0	0	6.90	501	0+	5.00	H	12/14/03	45	-9

YIELDS

Current Yield: ..... 7

Yield to Maturity: ..... 8

Yield of the Underlying Stock: ..... 6

VALUATIONS

Over/Under Valued: ..... 28

Sensitivity to the Movement of the Underlying Stock: ..... 29-32 and 40

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SENSITIVITY TO THE STOCK/TO INTEREST RATE CHANGES

Premium over Conversion Value: ..... 34/33

Premium over Investment Value: ..... 39/38

CALL PROVISIONS ..... 15-18

Issues deemed callable "♦" ..... 26

RECENT PRICES

The Convertible: ..... 25

The Underlying Stock: ..... 3

OTHER INFORMATION

Issue Size: ..... 14

Industry: ..... 19

Page of Last Write Up: ..... 20

Ticker Symbols and the Exchanges on which Trades: ..... 1,2, 21,22

FOOTNOTES: Footnotes contain vital information. For ..... 23  
an explanation of the abbreviations, see page 36 of the *Convertibles Survey*.

**How to select convertibles for different market and interest rate environments.** The guidelines below are intended to help you select the best convertibles to meet your specific investment objectives. Before purchasing any convertible, however, you will want to be sure that it meets some basic requirements. Under what conditions is it callable, for example? Is it fairly priced relative to the underlying stock? Is the credit worthiness of the issue acceptable? Does it provide sufficient income? What are the prospects for the underlying stock?

If the convertible meets your requirements in these areas, you will then want to determine whether the issue is sensitive to, or insulated from, movements in the underlying stock and changes in interest rates. Here's how:

Convertibles incorporate characteristics of both equity and debt instruments. A convertible trading close to its conversion value will follow in step with the stock's price changes, particularly on the up side. A convertible trading close to its investment value and well above its conversion value will act like a straight bond, rising and falling in relationship to bonds or preferred stocks of similar investment grade, term and interest rates. As such, convertibles can be selected that are geared to perform best in any particular environment.

As a manager of a convertibles portfolio, you have still further latitude in positioning your holdings. In terms of risk, convertibles can be selected with relative volatilities from 20% (one-fifth as risky as the average stock) to 200% (twice as risky). Convertibles can also be found in all quality levels with underlying stocks ranging from blue chip to over-the-counter issues.

While timing market conditions with a high degree of accuracy is a difficult task even for investment professionals,

there are times when the signposts seem clear. The guidelines offered here will enable you to achieve the degree of sensitivity to the bond and equity markets with which you are comfortable, given your risk requirements and view of market prospects.

Selecting the right convertible. Just what characteristics should one look for in a convertible to position it for particular market and interest rate environments? Factors such as coupon, time to maturity, quality and yield to maturity affect the performance of all interest-sensitive instruments...and so can be used to further fine tune a portfolio of convertibles positioned at the income end of the spectrum. These are discussed below. But to get to that end of the spectrum, we must first consider the magnitude of the issue's premiums over conversion and investment values.

In the figure below, we have set out a table which shows the premiums over conversion and investment values to look for to position a portfolio for a specific outlook for the bond and equity markets. Notice that premium levels are classified as low, moderate and high. A low premium ranges from 0%-30%, moderate from 30%-50% and high is above 50%.

**Rising Equity Market/Falling Interest Rates:** This is a win-win scenario for convertibles. Both markets are moving in a direction which will boost an issue's price. In this type of market, look for issues with low premiums over conversion value or investment value, or both.

**Rising Equity Market/Flat Interest Rates:** With interest rates expected to remain flat, less exposure to interest rate moves is acceptable so a moderate premium over investment value should be considered. The premium over conversion value should remain low to take advantage of rising equity values.

		←———— INTEREST RATES —————→					
		FALLING		FLAT		RISING	
		Premium Over		Premium Over		Premium Over	
		CV	IV	CV	IV	CV	IV
<b>E Q U I T Y</b>	<b>RISING</b>	Low	Low	Low	Moderate	Low	High
		V	V	V	V	V	V
	<b>FLAT</b>	Moderate	Low	Moderate	Moderate	Moderate	High
		V	V	V	V	V	V
	<b>FALLING</b>	High	Low	High	Low	High	High (Consider Hedges)

**Rising Equity Market/Rising Interest Rates:** Though it is unusual for the market to make a sustained rise when interest rates are rising, if a rise is expected in the market, a low premium over conversion value would be desired. Now, of course, sensitivity to the bond market should be shunned, which means a high premium over investment value. In such an environment, it would be prudent to seek added protection for the portfolio in the form of some sort of hedge...either a convertible hedge (selling common short against the long convertible, or selling covered call options against the portfolio).

**Flat Equity Market/Falling Interest Rates:** The outlook for declining interest rates again justifies a low premium over investment value. A low premium over conversion value is no longer a prime requirement.

**Flat Equity Market/Flat Interest Rates:** With both markets expected to be flat, moderate premiums over both conversion and investment values would be in order. In this type of market, investors would look for convertibles that offer attractive yields consistent with the investment grades with which they are comfortable.

**Flat Equity Market/Rising Interest Rates:** An outlook for a flat equity market warrants a moderate premium over conversion value, offering some exposure to an upturn in the market. But again, rising interest rates don't usually augur well for a rising - or even a flat - market. In any event, with interest rates expected to rise, emphasis would be placed on issues with high premiums over investment value.

**Falling Equity Market/Falling Interest Rates:** This type of market is also rare. Lower interest rates ultimately spark a rally in stock prices. Given this outlook, however, you'd choose low premiums over investment values and high premiums over conversion values.

**Falling Equity Market/Flat Interest Rates:** In this case, emphasis would be on selecting issues with little sensitivity to the equity side of the market and low premiums over investment values to provide downside protection in case of a drop in the prices of the underlying stocks.

**Falling Equity Market/Rising Interest Rates:** This is the worst possible scenario for convertibles. It calls for high

premiums over conversion and investment values. It would be an ideal time to consider hedge strategies to cushion positions. Convertibles should also be selected based on company strength, targeting industries expected to weather the downturn well. Yields that can help withstand the downturn are desirable, as well.

**Fine tuning selections for expected changes in interest rates:** Generally, three features of a bond determine how it will respond to changes in interest rates, the time to maturity; coupon rate; and quality. Thus, if you are choosing between issues that are identical in all respects other than these three features, you can position your portfolio to your interest rate outlook as follows:

<b>For: Falling Interest Rates</b>	<b>Rising Interest Rates</b>
Increase Sensitivity	Reduce Sensitivity
<i>by choosing issues with:</i>	<i>by choosing issues with:</i>
More time to maturity	Less time to maturity
Lower coupon	Higher coupon
Lower quality	Higher quality

It is important to remember, however, that convertibles have varying sensitivity to interest rates. Convertibles trading on their conversion values and well above their investment values are relatively impervious to changes in interest rates. At the other end of the spectrum, issues trading on their investment values and well above their conversion values are highly sensitive to changes in interest rates. Thus, if you wished to align a portfolio to benefit from a drop in interest rates, it would be of no avail to switch into an issue with a lower coupon, more time to maturity or lower quality if that issue was trading on its conversion value, and was essentially a stock equivalent.

The key figure in determining interest rate sensitivity is the ratio of conversion value to estimated investment value. For example, if the conversion value is 45 and the investment value is 60, the ratio is 0.75 (45/60). Generally, issues with a ratio well below 1 have a high sensitivity to changes in interest rates while those with ratios well above 2 have virtually no sensitivity. The following table provides an estimate of a convertible's interest rate sensitivity:

RATIO OF CONVERSION VALUE TO INVESTMENT VALUE	CHANGE IN INVESTMENT VALUE			
	+50%	+25%	-25%	-50%
	EST'D. CHANGE IN CONVERTIBLE'S PRICE*			
.25	+49%	+24%	-24%	-48%
.50	+45	+22	-22	-41
.75	+40	+19	-18	-31
1.00	+33	+16	-13	-20
1.25	+27	+12	-9	-10
1.50	+20	+9	-4	-4
1.75	+14	+5	-1	-1
2.00	+8	+3	0	0
2.25	+4	+1	0	0

\*Since the ratio doesn't depend on the convertible's price, the table assumes the convertible is fairly priced and its price will not be influenced by the likelihood of redemption or approaching maturity. The table doesn't apply to plus-cash convertibles. Note that the investment value of a particular issue may not vary proportionately with prevailing interest rates due to the likelihood of redemption or the approach of maturity.

## CHAPTER

## 8

## HOW TO SELECT A BROKER; HOW TO TRADE CONVERTIBLES

Trading convertibles is quite different from trading stocks, listed options or other listed securities. This is because some 80% of all convertibles are traded over the counter by firms that make markets in the particular security. Thus, though an issue may be listed on an exchange, prices quoted there may be “away” from the actual market. Indeed, more than half the prices shown in Value Line Convertibles are gathered by phone each week directly from the market makers and are not taken from the exchanges.

Unlike listed issues for which there is an auction market, the bid/asked price quoted for convertibles by various market makers may be different. In the case of a lightly traded issue, one quotation may be several points away from another.

Among the major brokerage houses which actively trade convertibles are Bear Stearns, Donaldson Lufkin Jenrette, First Boston, Goldman Sachs, Kidder Peabody, Lehman, Merrill Lynch, Morgan Stanley, PaineWebber, and Salomon. A number of smaller brokerages make markets in convertibles, as well. But not all houses trade every issue. Of course, even if a house makes a market in a particular issue, it may not have the best price.

**Choosing a broker.** Neither at full-priced brokerage houses nor at discount houses are all account executives schooled in convertibles. (Indeed, subscribers have reported that account executives at the houses listed in the paragraph above have sometimes even been unaware that their own firms make markets in convertibles.) If your account executive is awkward dealing in convertibles, it may well pay to find another with experience in this field.

Generally, a firm that makes markets in convertibles is better placed to handle orders than one that doesn't, but there are drawbacks, too, for these firms often put trades through their own convertibles desks exclusively rather than checking among the various market makers for the best price. Thus, a knowledgeable discount broker will often execute a trade as well or better than a full-service broker and save you commissions, as well.

**Trading convertibles.** Perhaps the major difficulty in trading convertibles, however, is one of liquidity, which is a measure of the ease of trading. At Value Line Convertibles, we grade liquidity on a scale of 1 to 6, from best to worst. Issues graded 3 or better will usually trade easily in quantities of \$500,000 or more, while issues graded 6 will be hard to trade at any price. But the market — even for liquid issues — may dry up at times, so trading convertibles successfully requires two things:

1. Understanding of the price relationship between the convertible and its underlying stock; and
2. PATIENCE.

Illiquid issues often trade at price spreads of 4 to 5 points or more, so even if you can buy an illiquid issue at a fair price, you may not later be able to sell it at a fair price. When it comes to more liquid issues, unless you have an urgent need to sell, if the price of the issue is out of line with the underlying stock (see Column 28), sit tight until it is back in line. (Naturally, there's rarely, if ever, a reason to buy an overpriced issue.)

Finally, since convertibles move with the price of the underlying stock, it is best to confirm trades with the broker over the phone. But if that's not possible, place Day Orders only, never Good-Till-Canceled orders.

**When a convertible is called.** Once a convertible is called, the holder usually has 30 days in which to convert—if he or she chooses to do so. During that period he or she may also sell the convertible. If the holder does neither, the issue will be redeemed by the company at the stated price.

Once called, the price of the convertible will move to the call price or conversion value, whichever is higher. Naturally, if the conversion value is higher, it pays to convert. But if you convert, don't convert before an interest payment if you can avoid it, or you will forfeit the accrued interest.

In some cases, you have no choice but to convert before an interest date, or you'll be left accepting a call price which is lower than the conversion value. You can still sell the convertible, but the price will only reflect conversion value. Typically, it will be one of the market makers who will bid for the issue at this time, bidding conversion value less about one-quarter point. Before selling the issue, however, be certain that the issuer will not pay the accrued interest, because honest confusion does occur, even among the market makers.

**How to close out a position in a convertible trading on its conversion value at a premium over the market.** Issues may trade on (or below) conversion value when called, when a call is expected, or when the conversion value is substantially above the investment value and the income yield has dropped below that of the underlying stock. Instead of

selling such an issue, there are several other ways to close out your position that may be more advantageous. You can, for example, sell short the underlying common, converting the issue and delivering the common to cover your short position. (A short sale is the sale of stock you do not own; to do this, the broker must borrow the stock from an owner.) In this way, you save any special charges a market maker might make. Check carefully, however, for it may be difficult to borrow the stock and, in any event, the commissions may more than offset the savings.

But if the issue is optionable, you can almost always sell it at a premium over the market by selling calls against it, for calls almost always sell at a premium over the price of stock.

It works this way: Assume you held 10 bonds that have been called at \$1,040. Each bond is convertible into 50 shares of stock, the stock is selling for \$25 a share, so the conversion value of the bonds is \$1,250. Naturally, you plan to convert or sell the bonds rather than let them be called away. Before you do so, however, you check the listed options on the stock and find that a call expiring in one month exercisable at \$20 is selling for \$5.50 a share (\$0.50 more than its tangible value).

(The tangible value of an option is the amount the option would be worth if it were exercised and the stock were sold at its current price. Thus, it is equal to the price of the stock less the exercise price of the option. In this example that's \$25-\$20, or \$5.)

Let's now compare what you would receive if you sold the bonds — or, instead, sold the calls, converted the bonds into stock and delivered the stock when the calls were exercised:

<b>Sell bonds:</b>			
	Sell 10 bonds @ \$1,225 (\$1,250 - 1/4 point)	=	<u>\$12,250</u>
<b>Sell calls:</b>			
	10 bonds convert into 500 shares; as each call is for 100 shares, you'd -		
	Sell 5 calls @ \$5.50 a share or \$550 a call	=	\$ 2,750
	When the holder exercises the calls, you receive -		
	\$20 a share x 500 shares	=	<u>10,000</u>
		TOTAL	<u>\$12,750</u>
	ADVANTAGE		\$500



Commissions would be slightly higher if you sold the calls rather than sold the bonds, but it would still leave you with a net advantage of about \$415. Bear in mind, however, that the market maker will usually pay you a price based on the price at which he or she can sell the underlying common and, in doing so, he or she might well depress the stock, which means that if you sold to him or her you might wind up with less than \$12,250 for the bonds.

On the other hand, if you sold calls to close out your position, you would be assured of receiving the amount you expected only if the stock didn't fall below the exercise price at expiration. If it did, you could wind up with less. In this example, by selling a call exercisable at 20 for \$5.50, you realize \$25.50 a share for your convertible as long as the stock is \$20 when the call expires, and you still come out with \$25 a share if the stock drops to \$19.50. If it were to fall further, you'd do less well (though you also pocket any dividends paid on the stock from the time you convert until the issue is called away).

Notice that in this example, by selling the calls, you come out ahead even if the stock drops 20% and you do as well as you

would if you sold the convertible even if the stock drops 22%. If you held just a couple of bonds, it might not be worth the trouble, but if you had a large quantity, the difference could be substantial.

**Pricing out your portfolio.** Most convertible preferred stocks are listed on an exchange and so their price movement is relatively easy to follow. Most convertible bonds, however, are traded by market makers, so their prices won't be found in the newspaper listings. One way to price these issues is to get quotations from your broker. Another way is to rely on the prices in Value Line Convertibles, pricing out your portfolio as of the pricing date of the issue (the pricing date of the issue is shown near the top of Page V-28).

Remember, when valuing bonds, to add accrued interest from the last interest payment date (except if the bond "trades flat"). To calculate accrued interest, multiply the coupon in dollars by the number of days since the last interest payment and divide by 360. For example, the accrued interest 60 days after the last interest payment on a 9.0% bond would be  $\$90 \times 60 / 360 = \$15.00$ .



## CHAPTER

## 9

## WRITING COVERED CALLS AGAINST CONVERTIBLES

Convertibles typically have less downside risk than their underlying stocks. Covered call writing against convertibles further reduces the downside risk and not only boosts income, but over the longer run, enhances total returns, as well.

**Covered call writing.** Covered call writing involves the sale of one call option against each 100 shares of common stock held in your portfolio. The call gives the buyer the right (but not the obligation) to buy 100 shares of the specified stock at the designated price (known as the strike or exercise price) during a specified period of time.

In payment for selling the call, the seller (or writer) receives a payment (known as a premium). Thus, for example, if you held a stock priced at \$20, you might sell a six-month call against it struck at \$20 for \$2 a share. That would reduce your cost basis for the stock from \$20 to \$18, giving you \$2 a share in downside protection (and so reduce your risk in holding the stock).

The buyer of this call has the right to purchase your stock at the strike price (\$20) and will do so at the end of six months if the stock is above \$20. His or her profit would be the difference between the price of the stock then, the \$20 he or she pays you for it, less the \$2 he or she paid you originally for the call. Only if the stock is above \$22, then, will he or she make a profit.

If the stock makes a really big move, the call buyer's bet can pay off handsomely, but typically the covered writer is the one who comes out ahead. If the stock stays flat, the call won't be exercised. Your stock is worth \$20, and the cost basis of your investment was \$18, so your return is 11% (plus dividend income). If the stock went above \$20, the call buyer pays you \$20 for the stock, so again you have a return of 11%.

Do this twice a year and you earn more than 22%, about twice what the average stock has returned historically.

Of course, if the stocks fall, you have a cushion. It can fall 10% to \$18 and you don't lose a cent and, if it falls more, your loss is smaller than it would be if you held the stock uncovered. Moreover, if the stock were to rise and you want to keep it, you usually will be able to buy back the call just before it expires...and make the same 11% profit.\*

*\*Just before expiration, the price of the call will fall to its tangible value. (E.g., if the stock was \$25, the call's tangible value would be \$5. Buy it back for \$5 and you raise your cost basis to \$23, but you now have stock worth \$25, so you have the same \$2 profit.*

The same principles relate to writing covered calls against convertibles. Moreover, since convertibles are less risky than common stock, when calls are written against them, you not only enhance your return but also further reduce your risk.

**Which option to choose.** A glance at an options page in a financial publication shows the wide variety of strike prices and expiration dates that are available. Ideally, options writers seek to sell options which are substantially overpriced. If you are a subscriber to Value Line Options, overpriced options are easily identified in the Part B: Options Evaluation section. If you are choosing options on your own, you can often find options that offer attractive returns.

The first step in choosing the call to write is to decide how bullish or bearish you want the position to be. In our example,

had you chosen a strike of \$25, you'd be moderately bullish, for the stock would have to rise before the call would be exercised. Bullish positions allow greater upside participation in a rise in the underlying common but provide smaller premiums and less downside protection. On the flip side, if a strike of \$15 is chosen, the position would be less bullish for the call would already be \$5 "in the money." The deeper in the money, the greater the downside protection and the smaller the potential profit on a rise in the stock.

Next, decide upon the length of time to expiration. Here again, you have a trade off. As the time to expiration increases, the premium you receive increases, but you're obligated to the buyer for a longer period of time.

**How to narrow your choices by comparing options premiums.** By using simple mathematics, the returns various options offer can be compared assuming the stock remains flat, rises or falls. Divide the expected price of the stock at expiration, or the strike, whichever is less, by the cost basis of the position, as follows:

$$\text{Return}^* = \frac{\text{The lesser of Stock Price or Strike}}{\text{Stock Price - Option Premium}}$$

*\*If you are considering positions with different times to expiration, the returns should be annualized for proper comparison.*

**Establishing a covered call position against a convertible.** Since each call is an option to "call away" 100 shares of common stock, when writing against common stock, you normally write one call per 100 shares of stock. If writing against convertibles, you might simply decide to write one call against the common stock equivalent of each 100 shares. Thus, if you were writing calls against a bond convertible into 25 shares, you'd write one call against four bonds. There is a difference, however, in writing calls against the common stock and against the convertibles. Most convertibles won't rise in step with the common so you must adjust for the convertible's leverage (columns 29 through 32 in Part 2). If, for example, the bond was considered the equivalent of only half the number of shares (50% x 25, or 12.5 shares), by adjusting the number of shares in this way, the price increase in the bond as the stock rises can be expected to fully compensate you for the rise in the value of the option that you sold.

In the following figure, we contrast the expected returns from establishing a covered call position on Fruit of the Loom common stock against establishing one against its convertible. At the time this analysis took place, the following terms applied:

Bond:	Fruit of the Loom 6.75s2002
Bond Price:	\$1,180
Conversion Ratio:	88.889 shares per bond
Number of Bonds:	10 (equal to 888.89 shares)
Exp'd Rise on a 25% rise in common:	20%
Effective # shares:	711 (20%/25% x 888.89)
<b>Number of Calls:</b>	<b>7</b>
<b>Call Expiration:</b>	<b>6 months</b>
<b>Strike Price:</b>	<b>12 1/2</b>
<b>Call Price:</b>	<b>\$1.75</b>
Stock Price:	\$13
Common Dividend/share/year:	\$0.30

Sell Calls Against Common Stock

Buy 700 Common Shares @ \$13	\$9,100
Sell 7 calls at \$1.75/share	- 1,225

Net Investment: \$7,875

At Expiration 6 months later:

<b>Change in Common:</b>	<b>-50%</b>	<b>-25%</b>	<b>0%</b>	<b>+25%</b>	<b>+50%</b>
Stock price:	\$6.50	\$9.75	\$13.00	\$16.25	\$19.50
Gain/Loss on Stock:	-\$4,550	-\$2,275	-	\$2,275	\$4,550
Value of Call:	0	0	-\$350	-\$2,625	-\$4,900
Option Premium:	\$1,225	\$1,225	\$1,225	\$1,225	\$1,225
Dividend:	\$105	\$105	\$105	\$105	\$105
Net Gain or Loss:	-\$3,220	-945	\$980	\$980	\$980
Return on Investment:	-41%	-12%	12%	12%	12%

Sell Calls Against Convertible

Buy 10 Bonds @ \$1,180	\$11,800
Sell 7 calls at \$1.75/share	- 1,225

Net Investment: \$10,575

At Expiration 6 months later:

<b>Change in Common:</b>	<b>-50%</b>	<b>-25%</b>	<b>0%</b>	<b>+25%</b>	<b>+50%</b>
Proj. Change in Convert:	-35%	-20%	0%	22%	45%
Gain/Loss on Convert:	-\$4,130	-\$2,360	-	\$2,596	\$5,310
Value of Call:	0	0	-\$350	-\$2,625	-\$4,900
Option Premium:	\$1,225	\$1,225	\$1,225	\$1,225	\$1,225
Interest:	\$338	\$338	\$338	\$338	\$338
Net Gain or Loss:	-\$2,567	-\$797	\$1,213	\$1,534	\$1,973
Return on Investment:	-24%	8%	11%	15%	19%

If we wrote calls against the common stock, we'd write one call per 100 shares or 7 calls against 700 shares. Writing against the convertible, we find we'd write 7 calls against 10 bonds. Writing against the convertible, however, we find we'd always do better than writing against the common. That's because the convertible has a higher yield, and because the convertible is favorably leveraged (i.e., it participates in more of any rise in the common than in a fall).

**Summary.** Covered call writers fare best if the underlying stock remains flat or rises. Writing calls against convertibles rather than common stocks offers further advantages as long as the issue is favorably leveraged. So, if you choose to write covered calls, check first to be sure that the common is appropriately ranked for year-ahead performance, and then see if there is a favorably leveraged convertible available.

## CHAPTER

## 10

## A WARRANT PRIMER

**What is a warrant?** A warrant gives you the right to buy the common shares of a company at a specified price. It is similar to a call option with the exception that a warrant is sold by the company whereas a call option is not. The life of a warrant is usually from three to five years, but some are perpetual.

WHAT WARRANT TERMS SHOULD I BECOME FAMILIAR WITH?		SEE THE CONVERTIBLES EVALUATIONS ON PAGES 28 - 31, COLUMNS...
<b>Exercise or strike price</b>	The price you pay for the stock when you surrender the warrant.	11
<b>Tangible value</b>	(Also called “intrinsic value”): the market value of stock for which the warrant can be exchanged, less the exercise price of the warrant.	31

**What gives a warrant its value?** Like an option, a warrant derives its value from the underlying stock. As the stock rises or falls, so does the warrant, but usually much faster. This “leverage” is what attracts investors who are willing to take greater risk for the opportunity to earn greater profits.

**What returns can I expect from warrants?** The return and risk of the warrants Value Line has recommended are shown below. These are not hypothetical estimates, but are based on the actual results of ALL our recommendations since we began evaluating and ranking warrants in 1972. (Year-by-year results appear in the Appendix at the back of the book.)

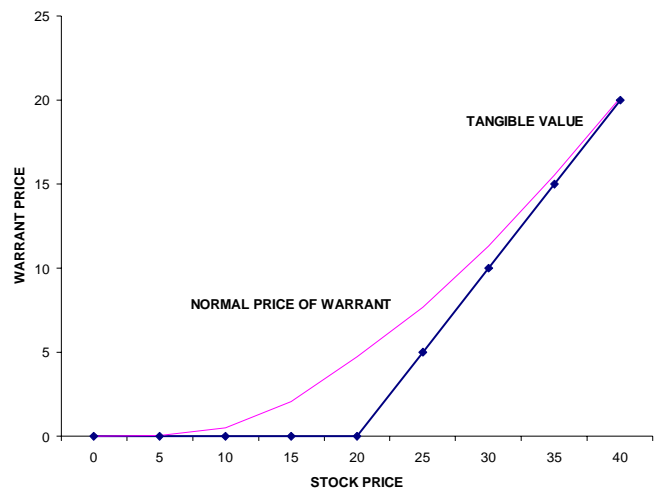
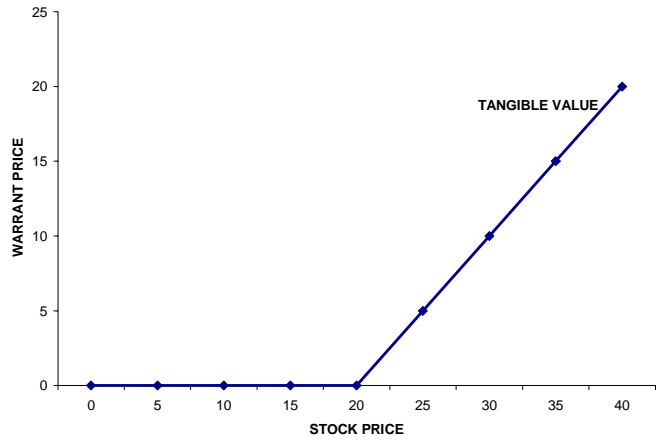
	RISK (VERSUS CM STOCKS)	ANNUAL PROFIT POTENTIAL	MINIMUM CAPITAL REQUIRED	# OF ISSUES IN PORTFOLIO
<b>WARRANTS</b>	255%	26%	\$10,000	10-15

As you can see, warrants are more than 2.5-times as risky as stocks. Not surprisingly, however, they have been far more profitable. (Stocks have provided an annual return, on average, of 10% to 12% a year.) Still, because of their high volatility, we recommend that only a small percent of one's portfolio be allocated to warrants...and then, only for investors who are comfortable with a higher level of risk. We remind investors that past performance is not a guarantee of future results.

**Why warrants have a favorable reward/risk ratio.**

In Chapter 3, you saw how convertibles have a favorable reward/risk ratio. Strangely, warrants have this same quality. A warrant's investment value, of course, is zero. Notice that setting it at zero, a diagram of a warrant's price path is identical to a convertible's. Here, for example, is how the diagram of a warrant exercisable at \$20 a share looks. Here, in place of the conversion value, the warrant's tangible value is the price floor.

The importance of seeking out issues that are undervalued and avoiding issues that are overvalued can be seen from the two dots in the diagram (just above the 15-20 price range for the stock). Notice that if the warrant is bought at the price indicated by the higher dot, where it is overpriced, the leverage would be far less favorable...and if it is overpriced enough, it would become unfavorable. But if the issue is underpriced, the leverage would be enhanced.



CHAPTER

11

BECOMING FAMILAR WITH  
AND USING THE WARRANT DATA  
AND EVALUATIONS IN PART 2

EVALUATION OF COMMON							WARRANT FACTS															
EXCHANGE		PERFORMANCE	RELATIVE	YIELD (%)	LIQUIDITY		CONVERSION	EFFECTIVE	PER SHARE	TOTAL	WHEN	EXPIRATION	ISSUE	RELATIVE	LIQUIDITY	DILUTION	EXCHANGE	SYMBOL				
SYMBOL	PRICE	RANK	VOLATILITY		GRADE	RATIO													PER SHARE	EXERCISE	EXERCISE	TERMS
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
W	AZA	NYS	50.63	3	125	NIL	a	1	.125	65.00	65.00	8.13		12/31/99	7.750	1%	c	FP	010	OTC	ALZAW	1
A	AES	NYS	48.94	2	105	NIL	a	2	2.000	14.72	14.72	29.43		7/31/00	1.432	2	b	FP	322	OTC	AESCW	2
R	AVII	OTC	4.06	-	500	NIL	a	3	1.000	13.50	13.50	13.50		6/4/02	2.000	18	c	FP		OTC	AVIIW	3
A	ASHE	OTC	4.19	-	370	NIL	b	4	1.000	7.91	7.91	7.91		2/8/00	.966	21	e	FP	188	OTC	ASHEW	4
R	DINE	OTC	6.31	-	120	NIL	a	5	1.000	14.60	14.60	14.60		1/7/05	4.000	10	c	FP	188	OTC	DINEW	5
A	AASI	OTC	2.94	-	290	NIL	a	6	1.000	6.50	6.50	6.50		12/2/01	.966	14	b	FP	188	OTC	AASIW	6
R	AASI	OTC	2.94	-	290	NIL	a	7	1.000	8.75	8.75	8.75		12/2/01	6.000	86	b	FP	188	OTC	AASIZ	7
A	AWA	NYS	15.88	5	e 145	NIL	a	8	1.000	12.74	12.74	12.74		8/25/99	10.385	23	b	FP		NYS	AWAW	8
R	ARGAC	OTC	0.28	-	500	NIL	c	9	1.000	5.00	5.00	5.00		2/12/02	1.620	13	e	FP	188	OTC	ARGWC	9
A	AMH	NYS	22.06	-	210	1.8	a	10	.672	24.42	24.42	16.41		4/3/02	.716	2	c	FP		NYS	AMRSW	10

Reproduced here are the warrant data and evaluations found on Pages 28 thru 21 of *The Value Line Convertibles Survey*. All of these data and evaluations are used by Value Line in ranking warrants and in making selections for the Especially Recommended list which appears on page 3 of *The Value Line Convertibles Survey*. Become familiar with these data and evaluations even if you rely primarily on the Especially Recommended list.

**NOTE:** A short explanation of the data in each column appears in the “tab” sheet in your 3-ring binder.

**Buying a warrant: where to begin the selection process.** It is easy to select warrants that are consistent with your investment objectives by using the information on the warrant pages. All warrants are listed alphabetically by the name of the issuing company in Column 22.

	COLUMN
PERFORMANCE RANK	
For the Warrant: .....	24
For the Underlying Stock: .....	4
RISK (Relative Volatility)	
In the Underlying Stock: .....	5
In the Warrant: .....	25

COLUMN

VALUATIONS

Over/Under Valued: ..... 26  
 Sensitivity to the Movement of the Underlying Stock: ..... 27-30  
 Tangible Value of Warrant: ..... 31  
 Premium over Tangible Value: ..... 32

EXERCISE PROVISIONS

Cost to exercise one warrant: ..... 11  
 Number of shares obtainable per warrant: ..... 8  
 Price of warrants per share of Stock: ..... 33

WARRANT EVALUATION					WARRANT ANALYSIS												
FOOTNOTE ↓ 21	NAME OF WARRANT ↓ 22	PRICE OF WARRANT ↓ 23	PERFORMANCE RANK ↓ 24	RELATIVE VOLATILITY(%) ↓ 25	OVER(+) UNDER(-) VALUED (%) ↓ 26	WARRANT'S PROJECTED % CHANGE FOR THESE CHANGES IN THE PRICE OF THE UNDERLYING SECURITY				TANGIBLE VALUE ↓ 31	PREMIUM (%) ↓ 32	PER SHARE COST OF WARRANT ↓ 33	L.V. GRADE ↓ 34	USABLE SECURITY DATA DESCRIPTION ↓ 35	PRICE ↓ 36	HEDGE RANK (%) ↓ 37	HEDGE RATIO (%) ↓ 38
						+50%	+25%	-25%	-50%								
1	● ALZA 99 wt	0.63	↕2	350	1	-50	+275	+110	-25	-55	NONE	10	5.00	E		A	4
2	● AES Corp. 00 wt	65.00	↕2	160	2	-5	+80	+45	-30	-65	68.45	-4	32.50	E		C	199
3	1 AVI Biopharma 02 wt	1.38	-	620	3	+12	+65	+30	-35	-65	NONE	34	1.38	G		C	44
4	Aasche Trans Svc 00 wt	0.38	↕-	995	4	-50	+225	+90	-17	-50	NONE	9	0.38	G		A	21
5	Advantica Rest 05 wt	1.63	-	185	5	+45	+65	+30	-45	-75	NONE	26	1.63	G		F	38
6	Adv Aerodynmc 01 wt A	0.66	-	460	6	-11	+95	+45	-35	-60	NONE	22	0.66	G		B	35
7	Adv Aerodynmc 01 wt B	0.50	-	480	7	-21	+110	+50	-30	-60	NONE	17	0.50	G		A	27
8	● America West 99 wt	7.25	↕5	e 230	8	+65	+70	+30	-50	-80	3.14	26	7.25	D		F	71
9	2 ● Amerigon 02 wt A	0.03	-	890	9	-50	+140	+60	-5	-35	NONE	11	0.03	G		A	16
10	Amerus Life 02 wt	4.38	-	350	10	-8	+105	+50	-35	-65	NONE	30	6.51	G		C+	33

COLUMN

Exercise Cost per Share of Stock: ..... 10  
 Exercise Cost per Share Assuming Use of "Usable" Bond: ..... 9  
 Description and Price of "Usable" Bond": ..... 35-36

TERM CHANGES

Date of Next Change: ..... 12  
 Date Warrant Expires\*: ..... 13

\*Note: Expiration dates are often extended.

Special Provisions (Footnotes): ..... 21

RECENT PRICES

The Warrant: ..... 23  
 The Underlying Stock: ..... 3

OTHER INFORMATION

Liquidity: ..... 16  
 Page of Last Write Up: ..... 18  
 Ticker Symbols and Exchanges on which Trades: ..... 1,2, 19,20  
 Investment Grade (Impact of Interest Rate Changes): ..... 34  
 Yield of Underlying Stock: ..... 6  
 Hedge Rank and Hedge Ratio (for Balanced Hedge): ..... 37,38



**In-, Out-, At The Money.** A warrant is “in the money” if its exercise price is below the price of the stock. It’s “out of the money” if its exercise price is above the price of the stock. It’s “at the money” if its exercise price is at (or close to) the price of the stock. For example, a warrant exercisable at \$5 would be:

STOCK PRICE	WARRANT IS:	WARRANT'S TANGIBLE VALUE IS:
Below \$5	Out of the money	Nil
\$5	At the money	Nil
\$6	In the money	\$1
\$7	In the money	\$2
etc.		

**Time Value.** Time value is what investors pay for the time remaining in the life of the warrant. The time value of a warrant is the difference between the price of the warrant and its tangible value. Thus, in the example above, if the warrant sold for \$2.50 when the stock was \$7, its time value would be \$0.50. As the warrant approaches expiration, its time value shrinks until, at expiration, it disappears entirely.

**How to Select Warrants to Suit Your Objectives.** Warrants are like options, giving holders the right (but not the obligation) to purchase a stock at a specified price until expiration of the warrant. The main difference between a warrant and an option is that a warrant is issued by the company (options are created by investors) and warrants generally have longer lives. In addition, unlike listed options, which are exercisable at set prices and for 100 shares of stock, a warrant may be exercisable at any price and may be for any number of shares or for a fraction of a share. Warrants are quite risky, usually about two to three times as risky as the average stock. What makes them attractive is LEVERAGE. A few dollars invested in a warrant can produce as much profit as many times that amount invested in stocks. On the downside, of course, there is a much greater risk of total loss. Still, like a convertible, a fairly priced warrant will be favorably leveraged: that is, the value of the warrant is likely to rise faster than it will fall on an equal move, up or down, in the underlying stock.

**Ranked vs. Unranked Warrants.** Since the value of a warrant is tied to the underlying stock, the performance prospects for the underlying stock are extremely important. But more important is the valuation of the warrant. An overvalued warrant may fail to rise — and might even fall — even if the stock rises, whereas an undervalued warrant may well rise even if the stock falls.

Because so many warrants today are issued by very small companies, the majority are not followed or ranked by the Value Line Investment Survey. In that case, in the absence of an opinion on the stock, we don’t rank the warrant though we evaluate it and show its under- or overvaluation, expected price movement relative to the stock and so forth, as if the underlying stock were neutrally ranked. If the stock is ranked by Value Line, we also provide a rank for the warrant. In general, a warrant will not be ranked 1 for purchase if it is unfavorably leveraged even if the stock is highly ranked. Conversely, a very favorably leveraged warrant can be ranked 1 for purchase even if the underlying stock is only neutrally ranked.

Of course, any warrant on the Especially Recommended list will be favorably ranked. Otherwise, if you are interested in a warrant on a stock that is ranked, be guided by the rank of the warrant. If the warrant has the same rank as the stock, it is deemed to be fairly valued; if it is more favorably ranked than the stock, it is undervalued; if it is less favorably ranked than the stock, it is deemed to be overvalued. If the stock and the warrant are not ranked, be guided by the under- or overvaluation of the warrant and, to a lesser extent, by the leverage projections.

**Can a warrant with a relatively short time to expiration and which is way out of the money be worth buying?**

Consider, for example, a warrant with six months to expiration that is exercisable at \$15 a share. The stock is at \$5. Thus, the warrant will expire worthless unless, within six months, the stock more than triples. Not very likely but, strangely, if that warrant is cheap enough, it may well be worth buying. To understand why, put yourself on the other end of the transaction. If you owned the warrant, would you give it away? Of course not. While it’s improbable that the stock will rise that much before expiration, it’s not impossible, and that possibility has a value — a value that will rise if the stock rises within the next few months. Thus, if that warrant were worth \$0.05 and you could buy it for a penny, it might well be a wise investment. Such an option would be very highly leveraged. A one-cent investment could produce a profit of five cents or more in a short time. But risk rises with leverage and in a case such as this, the risk would be extremely high...so in making your decision, be guided by the relative volatility (risk) of the warrant, as well the hoped-for gains.

**Do warrants always expire?** There are perpetual warrants which never expire. Because of tax or other considerations, an issuing company will often extend the life of a warrant that is out of the money and about to expire. Of course, there is no assurance that a company will do this, even one that has extended the life of that warrant in the past under similar circumstances.

**Final Notes.** Having pinpointed an undervalued warrant on an attractive company, carefully examine the warrant’s terms including expiration, strike price and call provisions (if any). An undervalued warrant that has more than two years to go (i.e., one which won’t lose its time value quickly) can be an attractive alternative to the underlying stock. Below is a

comparison of holding a favorably leveraged, at-the-money warrant versus holding the stock. It shows the outcomes we’d expect if, within six months, the stock rose or fell 25% or 50%. (This warrant, which our model indicated was 30% undervalued when the stock was \$6.13, had an exercise price of \$6.00 and four years to expiration.)

% CHANGE COMMON	+50%	+25%	-25%	-50%
Expected Change in Warrant	+160%	+70%	-30%	-60%
\$1,000 Invested in Stock:	\$500	\$250	(\$250)	(\$500)
\$313 Invested In Warrant:	\$500	\$219	(\$94)	(\$188)

*As you can see, a favorably leveraged warrant can offer the same profit potential on a fraction of the capital. Bear in mind, however, that at the time of this evaluation, this warrant was about twice as risky as the stock, but that as the life of the warrant becomes shorter, the time value of the warrant shrinks and the risk increases further.*

## CHAPTER

## 12

## HEDGING

**Hedging is an advanced strategy which typically reduces risk yet offers attractive profits. We caution, however, that it requires an understanding of the fundamentals which bear on the movement of convertibles and warrants.**

**Hedging convertibles.** While any favorably leveraged convertible has a built-in hedge in that its price will likely fall less than the underlying common, there are opportunities to further reduce risk by structuring a portfolio to make a profit whichever way the market goes. One of the more effective convertible hedges involves the short selling of the underlying common against a long position in the convertible. Market makers in convertibles as well as many institutions hedge in this way.

Depending upon how it is set up, a convertible hedge is likely to yield an equal profit regardless of whether the underlying stock rises or falls. As an alternative, the hedge can be tailored to generate a larger profit on a rise in the stock while protecting the position from loss if the market falls, or generate a larger profit if the stock falls while insulating the position from loss if the stock rises.

Profits in a hedge of this sort come as a result of movement in the underlying stock, so the more volatile the underlying stock, the more profitable the hedge is likely to be. A convertible that is to form the basis for a hedge should also meet three criteria:

- 1- It should not be a likely call candidate;
- 2- It must be favorably leveraged;
- 3- It should offer a yield advantage over the common.

**The balanced hedge.** A balanced hedge is designed to generate a profit whether the market moves up or down. The ratio of stock to short against the convertible is determined by the convertible's leverage projections. For example, consider a bond whose leverage projections are as follows:

Change in Common:	+50%	+25%	-25%	-50%
Est'd Change in Convertible:	+45%	+20%	-14%	-24%

To hedge against a 25% rise or 25% fall in the common, add the appropriate leverage projections (disregarding the minus sign) and multiply by 2. Here, that's  $20\% + 14\% \times 2 = 68\%$ , so we'd short common worth 68% of the value of the convertible. If we held one bond trading at \$1,000, we'd short common worth \$680. The results we'd expect are as follows:

<b>Move in common:</b>	<b>+25%</b>	<b>0%</b>	<b>-25%</b>
<b>Projected move in Cv:</b>	<b>+20%</b>	<b>0%</b>	<b>-14%</b>
Profit/Loss on Common:	-\$170	\$0	+\$170
Profit/Loss on Convert:	+\$200	\$0	-\$140
Profit on Hedge:	\$30	\$0	\$30
Return on Investment*:	3%*	0%*	3%*

**\*Return on Investment.** The return on investment generated by the hedge depends on the size of the investment and the yield advantage of the convertible compared with the stock. For a retail investor who put up the full cost of the bond, the investment would be \$1,000. So, a 3% return on a 25% rise or fall in the common would be projected. Although a retail investor can't reduce his cash outlay requirement by the \$680 credit from the short sale of stock, some brokers will pay active investors interest on the credit which will add to the return. Institutions with seats on the exchange can reduce their cash outlay by this credit, so their rate of return would be substantially greater, which makes this strategy very attractive to institutions. The return is further enhanced by the yield differential between the convertible and the common. If the bond yielded 8% and the common 2%, the hedge would earn bond income of \$80 a year while paying out dividends on the shorted stock of \$14 (2% x \$680) for a further profit of \$66.

To hedge against a 50% move in the common, add the convertible's leverage projections for a 50% rise and a 50% fall in the common but don't multiply by 2. Here, that's 45% + 24% = 69%, so we'd short the common worth 69% of the value of the convertible. Against a bond trading at \$1,000, we'd short the common worth \$690 and expect these results:

<b>Move in common:</b>	<b>+50%</b>	<b>0%</b>	<b>-50%</b>
<b>Projected move in Conv:</b>	<b>+45%</b>	<b>0%</b>	<b>-24%</b>
Profit/Loss on Common:	-\$345	\$0	+\$345
Profit/Loss on Convert:	+\$450	\$0	-\$240
Profit on Hedge:	\$105	\$0	\$105
Return on Investment*:	10.5%*	0%*	10.5%*

**Biased hedges.** The hedge can be structured to generate all (or most) of the profit if the market rises (or falls), yet insulate the position from loss if the market moves the other way. For an expected 25% rise, multiply the convertible's leverage for a 25% drop in the common (ignore the sign) by four; for a 25% drop, multiply the leverage for a 25% rise by four. For an expected 50% rise, multiply the leverage for a 50% drop by 2; for a 50% drop, multiply the leverage for a 50% rise by 2. Here are the results we'd expect:

	BULLISH HEDGE				BEARISH HEDGE			
	25% RISE		50% RISE		25% DROP		50% DROP	
Amount of Cm. Shorted:	\$560	\$560	\$480	\$480	\$800	\$800	\$900	\$900
Move in Common:	+25%	-25%	+50%	-50%	+25%	-25%	+50%	-50%
Projected Move in Conv:	+20%	-14%	+45%	-24%	+20%	-14%	+45%	-24%
Profit/Loss on Common:	-\$140	+\$140	-\$240	+\$240	-\$200	+\$200	-\$450	+\$450
Profit/Loss on Convert:	+\$200	-\$140	+\$450	-\$240	+\$200	-\$140	+\$450	-\$240
Profit on Hedge:	\$60	\$0	+\$210	\$0	\$0	\$60	+\$0	\$210
Return on Investment*:	6%*	0%*	21%*	0%*	*	6%*	*	21%*

**The importance of favorable leverage.** The expected return from a convertibles hedge is equal to the difference between the projected up and down movement of the convertibles. That expected return, however, should be judged against the relatively modest market risk. But other risks do exist, including the risk that the convertibles might not move as expected relative to the common, so only convertibles with a hedge rank of "A" (Column 12) should be considered for a balanced hedge. The number of shares to short against 10 bonds or 100 preferred shares is shown in Column 13.

**Warrant hedges.** Warrant hedges are constructed similarly. Except in a reverse hedge (where the warrant is shorted against a long position in the common), there cannot be a yield advantage in a warrant hedge, but the more favorable leverage often present in a warrant can more than make up for the income loss. Consider, for example, a warrant expected to rise 150% or

fall 50% on a 25% rise or fall in the common. For a balanced hedge, short the common that's equal to 400% of the value of the warrants (150% + 50% x 2). Thus, if we held warrants worth \$1,000, we'd short the common worth \$4,000. In a hedge of this sort, if the long position is fully paid for and is immediately convertible, no additional margin is required. The results we'd expect would be as follows:

<b>Move in Common:</b>	<b>+25%</b>	<b>-25%</b>
<b>Projected Move in Wt:</b>	<b>+150%</b>	<b>-50%</b>
Profit/Loss on Common:	-\$1,000	+\$1,000
Profit/Loss on Convert:	+\$1500	-\$500
	<hr/>	<hr/>
Profit on Hedge:	\$500	\$500
Return on Investment*:	50%*	50%*

As a warrant advances toward expiration, its price will move toward its tangible value and so its leverage will change...unless its life is extended. Only warrants ranked "A" for hedging (Column 37) are recommended for a balanced hedge. The number of shares of the underlying stock to short per 100 warrants is shown in Column 38.

## CHAPTER

## 13

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## APPENDIX 1

## ANNUAL PERFORMANCE RESULTS FOR ESPECIALLY RECOMMENDED LIQUID ISSUES RANKED 1 AND 2

YEAR	WARRANTS	— VOLATILITY CATEGORY —				ESP. REC.				
		ABOVE AVERAGE	MODEST	LOW	1 & 2 RANKED CONVERTIBLES	ALL CV'S	1 & 2 RANKED CV'S & WTS	VL COMPOSITE*	DJIA*	S & P 500*
1979	+115.0%	+20.0%	+37.0%	+18.0%	+25.9%	+43.0%	+39.7%	+4.0%	-3.2%	-1.1%
1979	+48.0	+51.0	+48.0	+23.0	+41.3	+43.0	+42.9	+24.0	+4.5	+12.3
1980	-27.0	+72.0	+40.0	+36.0	+48.7	+37.0	+37.4	+19.0	+15.2	+25.8
1981	+109.7	-3.5	+20.0	+7.5	+9.7	+26.0	+24.4	-4.9	-9.9	-14.5
1982	+22.6	+61.5	+52.4	+23.1	+37.9	+38.0	+39.3	+15.5	+23.1	+24.3
1983	+60.1	+10.9	+10.9	+17.1	+15.7	+26.3	+21.1	+22.6	+17.4	+16.1
1984	-24.5	-4.4	+4.0	+9.9	+5.6	+0.7	+0.2	-9.4	-4.4	+0.9
1985	+35.7	+51.4	+34.2	+29.8	+34.2	+25.4	+32.5	+18.8	+26.0	+24.2
1986	+62.0	+40.4	+13.4	+22.5	+26.3	+14.3	+28.4	+6.8	+23.4	+14.2
1987	-15.4	-2.0	+11.8	+3.0	+4.8	-9.6	+2.5	-10.9	+3.9	+2.0
1988	+24.0	+29.5	+25.7	+20.0	+21.0	+14.0	27.5	+14.1	+8.1	+9.7
1989	+87.0	+22.5	+24.4	+18.4	+19.9	+7.6	+26.4	+12.7	+29.9	+29.6
1990	-49.8	+31.9	-7.4	+1.1	+2.7	-13.5	-0.6	-24.8	-4.6	-7.0
1991	+60.1	+90.1	+50.6	+44.2	+46.1	+28.2	+66.6	+33.2	+17.9	+23.6
1992	+103.5	+27.7	+42.7	+20.1	+28.4	+20.4	+32.2	+8.7	+7.5	+8.0
1993	-5.3	+21.2	+23.7	+6.8	+17.5	+21.1	+16.3	+9.8	+14.7	+8.0
1994	+70.6	+11.7	-1.4	-4.8	-1.9	-3.9	+1.9	-5.7	+1.1	-2.3
1995	+287.7	+29.6	+33.8	+32.3	+32.2	+27.2	+36.1	+19.4	+33.0	+33.0
1996	+31.7	+40.3	+14.7	+20.5	+21.8	+16.1	+22.9	+13.9	+28.4	+23.6
1997	+167.4	+13.9	+8.1	+15.3	+14.7	+16.2	+20.6	+17.4	+27.0	+23.9
1998	+382.4	+35.4	+2.2	-11.3	+1.7	-4.3	+17.9	-5.7	+15.6	+25.4
1999	+70.4	+58.7	-3.4	+1.8	+10.9	+19.5	+15.3	-0.8	+23.7	+18.9
2000	+214.1	+0.8	-0.1	+10.5	+5.3	-10.3	+8.9	-9.4	-6.8	-10.4

\* Does not include income.

## ANNUAL PERFORMANCE RESULTS FOR ALL ISSUES (CONVERTIBLES AND WARRANTS) BY RANK GROUP

RANK	12/29/72 TO	12/31/73 TO	12/30/74 TO	12/26/75 TO	12/27/76 TO	12/30/77 TO	12/29/78 TO	12/28/79 TO	12/26/80 TO	12/28/81 TO	12/27/82 TO	12/30/83 TO
	12/31/73	12/30/74	12/26/75	12/27/76	12/30/77	12/29/78	12/28/79	12/26/80	12/28/81	12/27/82	12/30/83	12/26/84
1)	+5.0%	+17.2%	+119.9%	+75.3%	+47.4%	+131.4%	+91.5%	+112.6%	+49.8%	+72.6%	+56.0%	+24.3%
2)	-15.7%	-4.2%	+50.1%	+57.9%	+21.5%	+22.2%	+37.9%	+55.4%	+33.4%	+47.2%	+31.8%	+5.2%
3)	-21.4%	-22.4%	+28.8%	+31.9%	+6.7%	-5.7%	+21.5%	+19.0%	+1.1%	+31.3%	+31.1%	-4.4%
4)	-33.9%	-36.6%	+16.4%	+12.7%	-20.3%	-7.2%	-0.4%	+0.4%	-10.9%	+10.7%	+20.9%	-10.8%
5)	-55.6%	-61.1%	-1.9%	-3.2%	-57.7%	-54.9%	-35.8%	-25.6%	-33.5%	-27.2%	-6.5%	-32.3%
Value Line Composite	-35.5%	-35.5%	+47.1%	+30.6%	+3.0%	+4.8%	+24.2%	+18.6%	-6.9%	+15.6%	+22.6%	-9.0%
RANK	12/30/83 TO	12/28/84 TO	12/26/85 TO	12/26/86 TO	12/23/87 TO	12/30/88 TO	12/29/89 TO	12/28/90 TO	12/27/91 TO	12/28/92 TO	12/27/93 TO	12/23/94 TO
RANK	2/28/84	12/26/85	12/26/86	12/23/87	12/30/88	12/29/89	12/28/90	12/27/91	12/28/92	12/27/93	12/23/94	12/22/95
1)	+24.3%	+90.4%	+54.1%	+44.9%	+45.6%	+55.8%	+7.0%	+96.0%	+43.9%	+28.7%	+8.6%	+32.3%
2)	+5.2%	+41.3%	+29.2%	+2.4%	+25.3%	+26.7%	-4.9%	+51.2%	+38.7%	+22.6%	+3.7%	+43.2%
3)	-4.4%	+26.2%	+18.0%	-7.7%	+17.9%	+13.5%	-17.7%	+22.1%	+27.2%	+15.3%	-11.2%	+31.0%
4)	-10.8%	+14.3%	-8.6%	-22.2%	-2.5%	-7.6%	-37.5%	-9.0%	-3.0%	+9.5%	-27.2%	+23.7%
5)	-32.3%	-22.9%	-24.7%	-44.8%	+5.2%	-24.1%	-45.4%	-12.4%	-54.1%	-13.3%	-23.2%	-24.3%
Value Line Composite	-9.0%	+19.5%	+8.3%	-10.9%	+16.5%	+11.2%	-24.9%	+24.5%	+8.7%	+10.9	-5.7%	+19.4%
RANK	12/22/95 TO	12/26/96 TO	12/26/97 TO	12/28/98 TO	12/23/99 TO							
RANK	2/26/96	12/26/97	12/28/98	12/23/99	12/29/00							
1)	+38.5%	+37.0%	+35.7%	+47.5%	+2.5%							
2)	+30.1%	+31.3%	+8.2%	+21.2%	-1.5%							
3)	+15.7%	+17.3%	-8.5%	+25.4%	-3.9%							
4)	+4.2%	+15.6%	-12.8%	+13.6%	-24.5%							
5)	-23.2%	-10.2%	-39.7%	-23.4%	-23.1%							
Value Line Composite	-14.0%	+17.4%	+5.8%	+11.0%	+10.8%							

## APPENDIX 2

### HOW VALUE LINE'S PERFORMANCE RESULTS ARE CALCULATED

Value Line's performance results by rank group are computed by preparing a week-to-week price ratio for each issue and, where appropriate, adding an income component. These ratios are then combined by rank group and the weekly results are compounded for the quarter and for the year.

Value Line's performance results for its Especially Recommended Issues, which include the results of both 1-ranked and 2-ranked issues, are also computed by preparing a week-to-week price ratio for each issue and, where appropriate, adding an income component. These ratios are then combined by rank and risk group. Only the more liquid issues, issues that are most easy to trade, issues with liquidity grades of 3 or better, are included in the performance results shown in Appendix 1. (Issues with lower liquidity grades are recommended as a convenience for subscribers who wish to purchase them, but these issues will often be difficult to buy - and later sell - at sensible prices.)

We point out, however, that there is a lag between the time that Value Line publishes its recommendations and the time a subscriber can act on them (even those who take advantage of our Hot Line). In addition, these results assume that at the start of each week, an investor held an equal dollar value of each appropriately-ranked issue. Consequently, while we believe that the methods chosen to compute these results are realistic, the results of a subscriber who acted upon them may have had better or worse results than the figures indicate.

In viewing these results, bear in mind that although Value Line's recommendations have been successful in the past, and while we expect they will continue to be in the future, this is not a guarantee of future success. Those wishing to examine Value Line's performance results for years prior to the last six will be furnished a copy.



## APPENDIX 3

### HOW VALUE LINE'S EVALUATION MODEL WORKS, AND A LOOK AT COMPETING SYSTEMS

Since introduced in 1972, the Value Line convertible evaluation model has had an unparalleled record. In recent years, a number of brokerage houses have introduced evaluation models of their own. Generally, each new model has become increasingly intricate. As such, it would be natural to assume that the evaluations they produce would be even more precise. Here's a look at how these evaluation systems work and an overview of how the Value Line model works for comparison.

**A Wealth Of Mathematics And Detail.** What has typically distinguished each new evaluation model that comes on the scene has been an increased wealth of mathematics and detail. Each new model has seemed to offer the user an opportunity to place an absolute value on a larger number of items that might influence the price of a convertible. Among these are the underlying company's future earnings potential, its dividend payout, the underlying stock's future volatility, the probability of whether the issue will or will not be called under various economic and market conditions, and so forth. The model, which is often a marriage of a bond model and a warrant pricing model (a convertible, at its elemental level, is a combination of a straight bond and a warrant), attempts to integrate each of the input values in order to assign an appropriate price to the issue.

**What Value Does One Input?** In theory, if used faithfully, the expectation would be that each new model would produce a more precise evaluation of a convertible than its predecessor. One of the difficulties in using a model of this sort, however, was illustrated several years ago at an investment seminar on options. The panel included Gary Gastineau, author of several books on options, and a creator of a respected model for evaluating options not quite as well known as the *Black-Scholes model*.

In describing his model, Mr. Gastineau argued that an option's value reflects three primary determinants: the life of the option, the relationship between its strike price and the price of the stock, and the future volatility of the underlying stock. Of the three, the first two are known. Only the future volatility of the stock isn't known. We can, he asserted, determine what investors expect the future volatility to be by inserting the price of the option into the formula and solving

the model for future volatility. Once the value investors currently place on the stock's future volatility is determined, he continued, a comparison can be made between that value and the stock's historic volatility. That would permit the investor to judge whether either of the two is correct, or whether it would be more reasonable to use yet another volatility figure in pricing the option.

In the question and answer session which followed, Mr. Gastineau was asked how one might be able to judge which volatility was the more reasonable. His reply: "If you're looking for an easy way, I don't have the answer."

**Theory vs Reality.** Even if one were able to determine the correct values for each variable to input into a model, what does one do if the price indicated by the model disagrees with the price at which the issue normally trades? That question was asked of a head convertible trader a few years ago when his firm introduced what still may be the most complex of all models for evaluating convertibles. His answer: Issues have been known to be "mispriced" for extended periods, even as long as 10 years. When this model disagrees with the market, I have to go with the market's valuation.

If that's the case, what use, someone might logically have asked, is such a model? Indeed, there are few investors who will not recognize this trader's dilemma. Who has not bought a common stock that seemed "underpriced" according to any logical evaluation formula only to watch in frustration as it remained "underpriced" for years? Certainly in any screen of high growth stocks (stocks whose share earnings have grown at an average rate of 15% a year or more over the last 10 years and are projected to grow at least as fast over the next three to five years), even if an adjustment is made for risk, there is no observable relationship between growth rates and price/earnings ratios as there would be if P/E ratios were determined logically. (According to J.B. Williams' "Theory of Investment Value," the value of a stock is equal to the sum of its future dividends, including the final liquidating "dividend," discounted to the present at a rate of interest proportional to the risk, or variability of future returns. The theory says, in effect, that the price/earnings ratio of a stock should be proportional to the growth rate of earnings and inversely proportional to the risk or variability of those earnings.)

**The Dilemma.** The user of a theoretical pricing model then faces the problem of determining a precise value for each of the many inputs he must make, and once having determined those values, what to do if the valuation produced by his model is out of sync with the market's valuation.

**A Profile Of The Convertibles Market.** Recognizing this paradox, and as a result of studies of how convertibles move relative to their underlying stocks, Value Line took a different course in 1972 when it set out to develop a model to evaluate convertibles. Our studies had shown that the prices of convertibles as a group follow a set path (or track) relative to the prices of the underlying stocks, but that the price path followed by any single issue relative to its underlying stock is often unique, much as there is a unique relationship between any one stock and its P/E ratio. The studies also showed that when conditions changed, so too did the path along which the price of the convertible traveled, and that such changes followed patterns that were reasonably predictable.

We further noted that when an individual issue, or the entire universe of convertibles, wandered off its "proper" path (that is, became "mispriced"), its tendency was to return to its "proper" path promptly, but that the longer it remained mispriced, the longer it would take to return.

Observers of the market will realize, of course, that what these observations revealed is simply what one would expect. While the price of all convertibles as a group will travel a predictable path relative to their underlying stocks, the relationship between any one issue and its underlying stock is often unique. Further, the price movement of individual issues will reflect temporary conditions of supply and demand, market sentiment and trading inefficiencies...factors unique to individual issues as well as others affecting all issues as a group such as, but not limited to, changes in interest rates, in credit ratings, etc.

What we have, then, is a universe of convertibles in which, under normal conditions, all issues as a group are found to be reasonably in line with their underlying stocks. Of those that are not, about half will be overpriced and half underpriced. In relatively rare instances, one may remain mispriced for an extended period, suggesting an enduring shift in market sentiment for that issue. But most often, prices snap back into line reasonably quickly, indicating that those pricing aberrations simply reflect a temporary shift in market sentiment or an inefficiency in the market, or, to look at it another way, an investment opportunity.

There are other times, however, when, even after appropriate adjustments, the majority of issues show up as overpriced or underpriced. Even in such cases, however, we find that issues rarely remain "mispriced" for an extended period.

Rather, most prices snap back into line reasonably quickly, so that such pricing aberrations usually reflect temporary inefficiencies in the market, or temporary changes in sentiment, or once again, investment opportunities.

**Value Line's Approach.** Constructing a model to evaluate individual convertibles, then, requires first a means to locate the position of the universe of convertibles in the entire investment spectrum and, additionally, the means to follow it as it shifts position in that spectrum. The Value Line model locates the position of the universe from a composite picture of 585 issues, and by tracking those issues over time. It uses all data available including the credit ratings of each issue, their premiums over conversion and investment values, the volatilities of their underlying stocks, market sentiment affecting the individual issues, call terms and likelihood of call. In addition, it looks at background influences—interest rates, market sentiment, and the recent propensity of companies to call in issues. Within this universe, the model positions each issue, making allowance for the uniqueness of each as evidenced by historical patterns. Once located, the model responds promptly to changes that alter the position of an individual issue within the universe, such as a rise or fall in interest rates, but it is resilient enough not to respond quickly to changes that, more often, are temporary in nature. While in theory it's possible for a strictly mathematical model to successfully assess the value of an individual issue, the burden placed on the user of such a model is enormous. In contrast, the Value Line model allows one to input values only if one wishes to. Thus, a user of the model may adjust the values of selected inputs at his discretion to require the model to evaluate a single issue or the entire universe of issues on whatever basis is desired.

**Future Volatility.** As referred to earlier, the evaluation of an option is based in part on an estimate of the future volatility of the underlying stock. The same applies as well to convertibles. How to fix this value is a matter of some controversy. Value Line's convertible model uses the stock's average volatility over the last five years as its historical yardstick and compares that with the estimated future volatility. It chooses a value between these two depending on the duration of the shift in the volatility away from the historical norm. (Note: Four- or three-year averages can work well under certain circumstances, too. Shorter-term averages, however, can produce results that are suspect. In February 1988, for example, one model showed that a particular convertible was deeply undervalued and an excellent buy. Two months later, that same issue showed up as highly overvalued. The term that had been used to calculate volatility was six months. Thus, the higher initial evaluation was based on a period which included the 1987 Crash when volatility was abnormally high, and the later far-lower reading encompassed a period in which the volatility had contracted sharply.)

**The Case For “Market Sentiment,”** Earlier we noted that some analysts assert that there are three prime determinants of an option’s value: time to expiration, the difference between the price of the stock and the strike price of the option, and the future volatility of the stock. Of these, they contend, the “single unknown” is the future volatility of the underlying stock. The future volatility of the underlying stock is of importance because the more volatile the stock, the greater the magnitude of its price swings, and so the greater the chance that an option will become valuable during its lifetime. The same thing, of course, can be observed about a convertible: the more volatile the underlying stock, the greater the chance that the conversion privilege will pay off handsomely during the life of the issue.

To attribute future price swings entirely to the stock’s volatility, however, is to suggest that other things being equal, investors price options solely on the basis of the volatility of the underlying stock. Such an assumption denies what logic tells us about the typical investor. Most investors, certainly, respond at least as much to expectations of a rise or a fall in the price of a stock than to expectations of a change in anything as abstract as volatility. Consider: if it were only the expected future volatility of the underlying stock that drove option prices, then a rise or fall in the stock would always be equally likely and the premiums of puts and calls—puts being a bet on a drop in price, calls a bet on a rise—would always rise and fall in tandem. But that’s not what happens. When investors are bullish, call premiums rise and put premiums fall. And when they’re bearish, the reverse occurs. Clearly, this is sentiment moving prices, not volatility. We see this also in the price movement of futures on market indexes which rise to a premium when sentiment is bullish and fall to a discount when it turns bearish.

With no convenient way to quantify “sentiment,” most other models simply ignore it. The Value Line Model, however, adjusts for both volatility and sentiment and so allows not only for the breadth of future price movement, as indicated by volatility, but also the direction of price movement, as indicated by bullish or bearish sentiment.

**Turning Evaluations Into Rankings.** Value Line’s convertible ranking system combines the evaluations developed by our model with the performance prospects for the underlying stock. Using statistical price distribution patterns, which describe how stocks of various ranks and volatilities have performed in the past relative to the market, the convertible ranking system projects the probable price of the underlying stock into the future. The leverage projections developed in the evaluation of the convertible, in turn, provide a projected price for the convertible. To rank the issue, we compare its projected total return, from appreciation and income, to its risk. To be ranked 1 (Highest), an issue of average risk must offer as much total return as the average 1-ranked stock. A convertible would also be ranked 1, however, if it offered a lower total return and its risk was proportionately lower. Conversely, if its risk was greater than average, the total return it offered would have to be higher. Thus, the number of issues of any given rank at any time depends on the attractiveness of each individual issue at that time.

**Summing Up.** To determine the fair value of a convertible by use of a model in which one must place a value on dozens of factors requires not only a deep understanding of each of the factors, but also an ability to look into the future. With the Value Line convertible evaluation model, that’s not necessary. Value Line’s model determines the fair value of a convertible by tracking, from week to week, the position of the convertible universe in the entire spectrum of available investments, and by tracking, from week to week, the position of each convertible within the universe of convertibles. Thus the model immediately identifies when convertibles as a group become over- or underpriced, or when any single issue becomes mispriced, and by how much. The performance of the issues it has evaluated in past years indicates how successful this approach has proven.

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# N O T E S

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